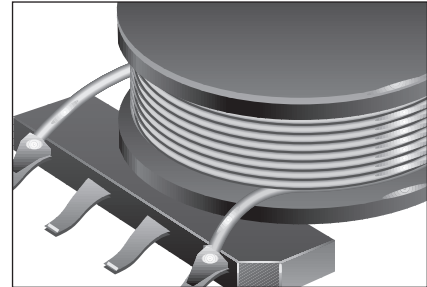


**Inductive Components** **BOURNS®**

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  - LM-NP/LP-1000 Series .....156
  - SM-LP-5001 Series.....158
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  - RF2/RF3/RF4 Series .....159
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    - RLB 0712, 0912, 0914, 1314 Series .....192
  - Shielded Inductors
    - FSR 1013 Series .....195



## LM-NP/-LP 1000 Series Line Matching Modules

Model	SMT	Leaded	Sealed	Open	Page No.
LM-NP/LP-1000 Series		•	•		156
SM-LP-5001 Series	•		•		158

## Wideband RF Transformers

Model	SMT	Leaded	Sealed	Open	Page No.
RF2 Series	•	•	•		159
RF3 Series	•	•	•		159
RF4 Series	•	•	•		159

## Balun Transformers

Model	SMT	Leaded	Sealed	Open	Page No.
0604 Sizes	•			•	161
0303 Sizes	•			•	161

## SMT Chip Inductors

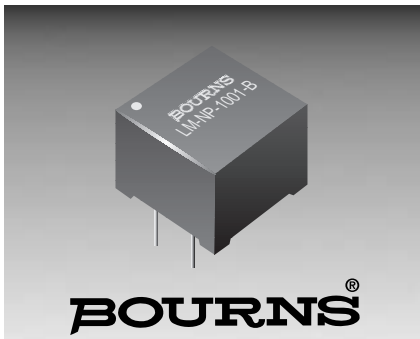
Model	SMT	Leaded	Sealed	Open	Page No.
CM 45 Series	•		•		163
CM 32 Series	•		•		163
CM 25 Series	•		•		163
CM 20 Series	•		•		163
CM 16 Series	•		•		163
CM 10 Series	•		•		172

# Standard Series Of Values In A Decade



According to IEC Publication 63

E 192	E 96	E 48	E 192	E 96	E 48	E 192	E 96	E 48	E 192	E 96	E 48	E 192	E 96	E 48	
100	100	100	169	169	169	287	287	287	487	487	487	825	825	825	
101			172			291			493			835			
102	102		174	174		294	294		499	499		845	845		
104			176			298			505			856			
105	105	105	178	178	178	301	301	301	511	511	511	866	866	866	
106			180			305			517			876			
107	107		182	182		309	309		523	523		887	887		
109			184			312			530			898			
110	110	110	187	187	187	316	316	316	536	536	536	909	909	909	
111			189			320			542			920			
113	113		191	191		324	324		549	549		931	931		
114			193			328			556			942			
115	115	115	196	196	196	332	332	332	562	562	562	953	953	953	
117			198			336			569			965			
118	118		200	200		340	340		576	576		976	976		
120			203			344			583			988			
121	121	121	205	205	205	348	348	348	590	590	590				
123			208			352			597						
124	124		210	210		357	357		604	604					
126			213			361			612			E24	E12	E6	E3
127	127	127	215	215	215	365	365	365	619	619	619	10	10	10	10
129			218			370			626			11			
130	130		221	221		374	374		634	634		12	12		
132			223			379			642			13			
133	133	133	226	226	226	383	383	383	649	649	649	15	15	15	
135			229			388			657			16			
137	137		232	232		392	392		665	665		18	18		
138			234			397			673			20			
140	140	140	237	237	237	402	402	402	681	681	681	22	22	22	22
142			240			407			690			24			
143	143		243	243		412	412		698	698		27	27		
145			246			417			706			30			
147	147	147	249	249	249	422	422	422	715	715	715	33	33	33	
149			252			427			723			36			
150	150		255	255		432	432		732	732		39	39		
152			258			437			741			43			
154	154	154	261	261	261	442	442	442	750	750	750	47	47	47	47
156			264			448			759			51			
158	158		267	267		453	453		768	768		56	56		
160			271			459			777			62			
162	162	162	274	274	274	464	464	464	787	787	787	68	68	68	
164			277			470			796			75			
165	165		280	280		475	475		806	806		82	82		
167			284			481			816			91			



### Features

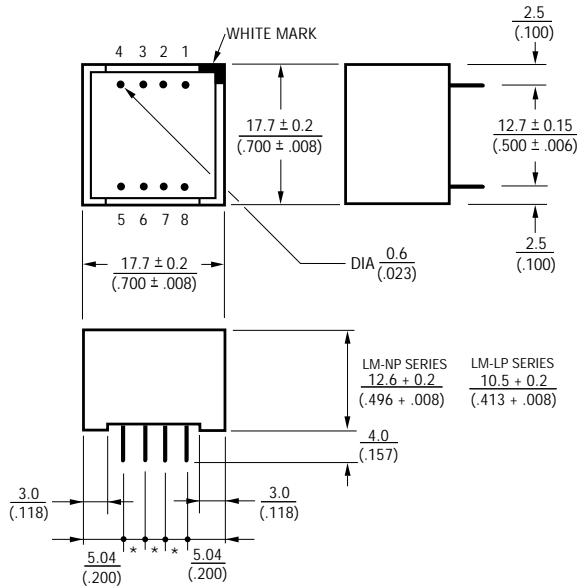
- Fully encapsulated
- Low profile
- High dielectric strength
- Ten models available
- Ex stock
- Competitively priced

### Applications

- Line matching
- Fax modem

## LM-NP/-LP 1000 Series - Line Matching Models

### Product Dimensions



\*:pitch = 1/10" = 2.54 (.100) (for number of pins see pin assignment)

### Note:

The LM-NP/-LP-1000 Series Line Matching Transformers meet the return loss specifications of BS 6305.

It is important, however, to use the circuit recommended by BS 6305 for return loss measurements.

The LM-NP-1000 Series are EN 41003 approved.

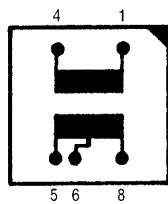
DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$

### Pin Assignment and Winding Configurations (Bottom View)

LM-NP-1001-B  
LM-LP-1001

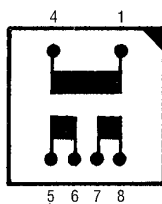


LM-NP-1002  
LM-LP-1002



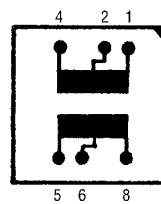
one-winding  
center-tapped\*

LM-NP-1003  
LM-LP-1003



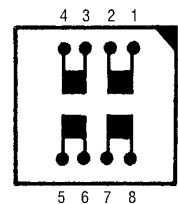
one winding  
split\*

LM-NP-1004  
LM-LP-1004



both windings  
center-tapped

LM-NP-1005  
LM-LP-1005



both windings  
split

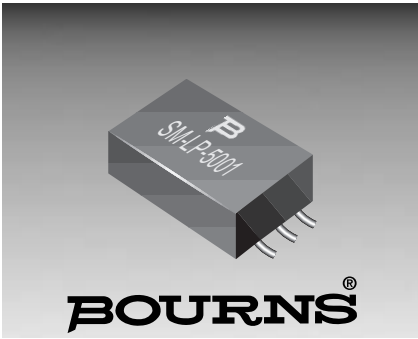
\* Due to the unique design and the most advanced manufacturing techniques the 2 coils are fully identical, meaning there is no real primary nor secondary winding. Depending on the application, the transformers can be used either way.

# LM-NP/-LP 1000 Series - Line Matching Models



## Part Numbers And Specifications

Parameters		Unit	LM-NP 1001	LM-NP 1002	LM-NP 1003	LM-NP 1004	LM-NP 1005	LM-LP 1001	LM-LP 1002	LM-LP 1003	LM-LP 1004	LM-LP 1005
Ref. Temperature Data		°C	25	25	25	25	25	25	25	25	25	25
Impedance (min./at 1.0 kHz)	Primary	Ω	600	600	600	600 (150, 150)	600 (150+150)	600	600	600	600 (150, 150)	600 (150+150)
	Secondary	Ω	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)	600	600 (150,150)	600 (150+150)	600 (150,150)	600 (150+150)
Inductance (min./at 0.2 kHz)	Primary	H	2.8	2.8	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)	2.8	2.8	2.8	2.8 (0.7, 0.7)	2.8 (0.7+0.7)
	Secondary	H	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8	2.8 (0.7,0.7)	2.8 (0.7+0.7)	2.8 (0.7,0.7)	2.8 (0.7+0.7)
DC-Resistance (typical/±10%)	Primary	Ω	66	66	66	66 (33,33)	66 (33+33)	90	90	90	90 (45,45)	90 (45+45)
	Secondary	Ω	66	66 (33,33)	66 (33+33)	66 (33,33)	66 (33+33)	90	90 (45,45)	90 (45+45)	90 (45,45)	90 (45+45)
Turns Ratio (≤ ±2%)		—	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1	1:1
Winding Configurations		—	—	one winding center tapped	one winding split	both windings center tapped	both windings split	—	one winding center tapped	one winding split	both windings center tapped	both windings split
Insertion Loss (at 2.0 kHz)		dB	≤ 1.5					≤ 2.0				
Return Loss	Transformer (0.2 - 4.0 kHz) In Networks	dB	≥ 10.0					≥ 8.0				
			≥ 21.0					≥ 20.0				
Shunt Loss (typical)		kΩ	9.0					9.0				
Frequency Response (typ./0.2 - 3.5 kHz)		dB	- 0.3					- 0.5				
Wide Band Response (0.2 - 10.0 kHz)		dB	- 2.5					- 4.5				
Power Level		dBm	- 45.0 to + 3.0					- 43.0 to + 3.0				
Longitudinal Balance (0.3 - 5.0 kHz)		dB	-80.0					- 70.0				
Distortion (0 dB/at 1.0 kHz)		%	≤ 0.1					≤ 0.25				
Leakage Induction (typical)		mH	14.0					14.0				
Dielectric Strength (P/S)		kVDC	6.5					6.5				
Temperature Range	Operation	°C	-10 to +60					-10 to +60				
	Storage	°C	-20 to +70					-20 to +70				
Specifications Met		BS 6204: Construction and flammability (UL 94 VO) BS 6301: Isolation BS 6305: Return loss (1982/paragraph 4.3.2.2/b)						CCITT: Rec. T/CD 1-1 (Sept. 1982)				



### Features

- Subminiature in SMT
- 7.36mm seated height
- Tested at 4600 Vrms, 1 minute
- Distortion of only 0.015%
- Vacuum encapsulated
- EN 60950, EN 41003, BS 415, BABT and UL approved

### Applications

- Modems (V32)
- Laptop Computers
- Telecommunications
- Instrumentation

## SM-LP-5001 Series -Surface Mount Line Matching Transformers

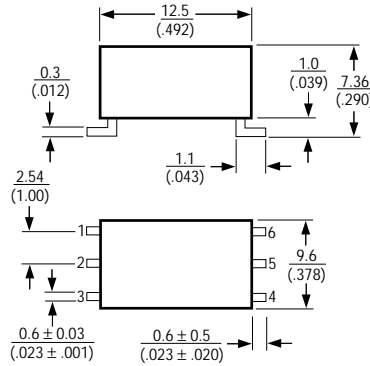
#### Electrical Specifications

Nominal Impedance.....	600Ω
Turns Ratio.....	1:1
Insertion Loss .....	2.0 dB max. at 2 kHz
Frequency Response .....	±0.25 dB max. 200-4 kHz
Return Loss .....	24 dB min. 200-4 kHz*
Balance .....	80 dB min.
Distortion .....	-76 dB max. @ 600 Hz, -10 dBm
Dielectric Strength	
.....	4600 Vrms for 1 min.
Insulation Resistance	
.....	100 MΩ @ 500 V
DC Resistance**	
Primary .....	115Ω
Secondary .....	115Ω
Shunt Inductance.....	3.8 H min.
Shunt Loss .....	7500Ω min.
Leakage Inductance.....	6-7 mH @ 1 kHz
Power Level .....	10 dBm
Operating Temperature .....	0°C to 70°C
Storage Temperature .....	-40°C to +125°C

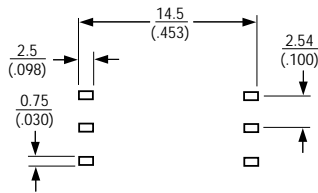
\*For use with recommended circuit (BS6305 impedance Class A non-speech or Class B speech).

\*\*SM-LP-5001 is symmetrical, meaning there is no real primary nor secondary winding.

#### Product Dimensions



#### Suggested PCB Layout

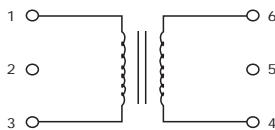


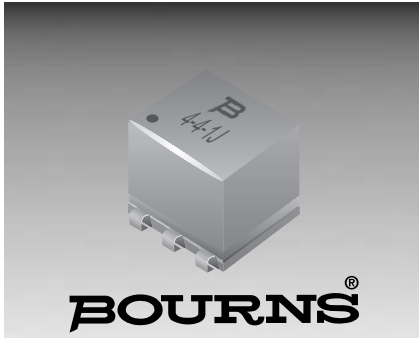
DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$

LEAD COPLANARITY:  $\frac{0.15}{(.006)}$  MAX.

UNLESS OTHERWISE SPECIFIED, TOLERANCE:  $\frac{\pm 0.25}{(.010)}$  MAX.

#### Schematic





**Features**

- Fully encapsulated
- Low profile
- Low insertion loss
- Frequency range 10 kHz to 500 MHz
- Impedance levels from 12.5 Ω to 800 Ω (nominal 50 Ω)

■ 6 pin DIP and SMD

**RF2, RF3, RF4 Series - Through-Hole and SMD**

**Electrical Specifications @ 25°C**

Type D	Part Number		Ratio Impedance	Frequency MHz	Insertion Loss			Schematic
	Type W	Type J			3dB MHz	2dB MHz	1dB MHz	
2-1-1D	2-1-1W	2-1-1J	1	.050-200	.050-200	.080-150	.20-80	
2-1-6D	2-1-6W	2-1-6J	1	.003-300	.003-300	.010-150	.02-50	
2-2-1D	2-2-1W	2-2-1J	2	.070-200	.070-200	.100-100	.50-50	
2-2.5-6D	2-2.5-6W	2-2.5-6J	2.5	.010-100	.010-100	.020-50	.05-20	
2-3-1D	2-3-1W	2-3-1J	3	.050-250	.050-250	.100-200	.50-70	
2-4-1D	2-4-1W	2-4-1J	4	.200-350	.200-350	.350-300	2-100	
2-4-6D	2-4-6W	2-4-6J	4	.020-250	.020-250	.050-150	.10-100	
2-5-1D	2-5-1W	2-5-1J	5	.300-300	.300-300	.600-200	5-100	
2-8-1D	2-8-1W	2-8-1J	8	.030-140	.030-140	.100-90	1-60	
2-13-1D	2-13-1W	2-13-1J	13	.300-120	.300-120	.700-80	5-20	
2-16-6D	2-16-6W	2-16-6J	16	.030-75	.030-75	.060-30	10-20	
3-1-1D	3-1-1W	3-1-1J	1	.150-400	.150-400	.350-200	2-50	
3-1-6D	3-1-6W	3-1-6J	1	.010-150	.010-150	.020-100	.05-50	
3-1.5-1D	3-1.5-1W	3-1.5-1J	1.5	.100-300	.100-300	.200-150	.50-80	
3-1.5-6D	3-1.5-6W	3-1.5-6J	1.5	.020-100	.020-100	.050-50	.10-25	
3-2.5-6D	3-2.5-6W	3-2.5-6J	2.5	.010-100	.010-100	.020-50	.05-20	
3-4-6D	3-4-6W	3-4-6J	4	.020-200	.020-200	.050-150	.10-100	
3-9-1D	3-9-1W	3-9-1J	9	.150-200	.150-200	.300-150	2-40	
3-16-1D	3-16-1W	3-16-1J	16	.300-120	.300-120	.700-80	.50-20	
3-36-1D	3-36-1W	3-36-1J	36	.030-20	.030-20	.050-10	.10-5	
4-1-6D	4-1-6W	4-1-6J	1	.004-500	.004-500	.020-200	.10-50	
4-1.5-1D	4-1.5-1W	4-1.5-1J	1.5	.075-500	.075-500	.200-100	.10-50	
4-2.5-6D	4-2.5-6W	4-2.5-6J	2.5	.010-50	.010-50	.025-25	.05-10	
4-4-1D	4-4-1W	4-4-1J	4	.050-200	.050-200	.200-50	1-30	
4-25-1D	4-25-1W	4-25-1J	25	.020-30	.020-30	.050-20	.10-10	

**Note:**

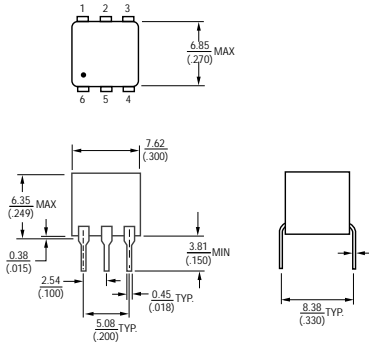
RF2 and RF3 are standard units. RF4 only on request.

# RF2, RF3, RF4 Series - Through-Hole and SMD



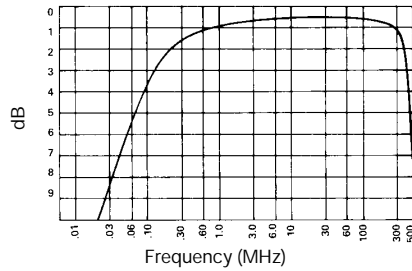
## Product Dimensions

Type D

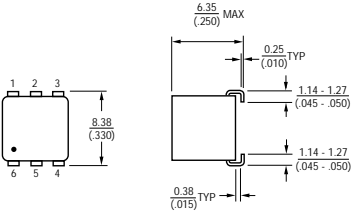


## Typical Frequency Response

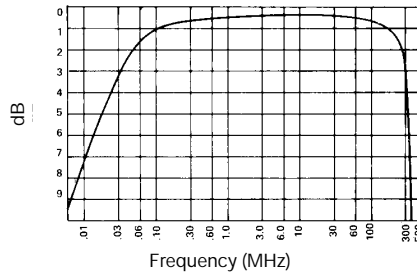
2-4-1 3 dB Bandwidth 0.200-350 MHz



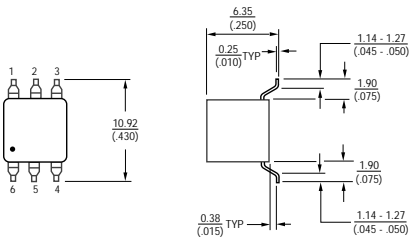
Type J



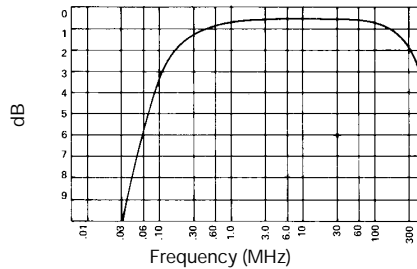
2-3-1 3 dB Bandwidth 0.050-250 MHz



Type W

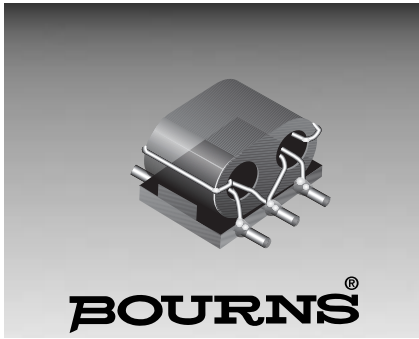


3-1-1 3 dB Bandwidth 0.150-400 MHz



DIMENSIONS ARE: METRIC (INCHES)





### Features

- SMD gull-wing
- High frequency
- Low Z tolerance  $\pm 10\%$

### Applications

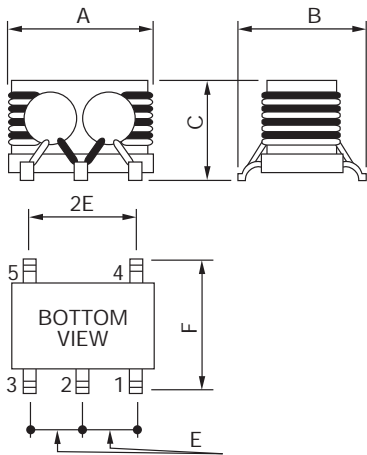
- Single antenna systems
- Master antenna systems
- Wideband communication systems
- SAT-systems
- Digital satellite broadcasting
- Used in antenna amplifiers

## 0303/0604 Series - Chip Balun Transformers

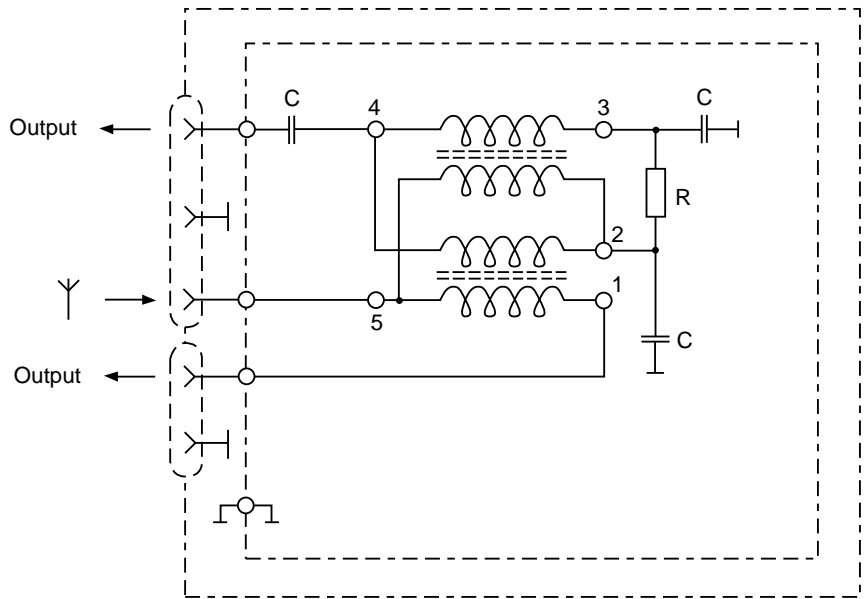
### Dimensions

	A	B	C	E	F
BRN-SBC-9	$\frac{3.8 \pm 0.3}{(.150 \pm .012)}$	$\frac{4.8 \pm 0.5}{(.189 \pm .020)}$	$\frac{3.3 \pm 0.5}{(.130 \pm .020)}$	$\frac{1.27 \pm 0.2}{(.050 \pm .008)}$	$\frac{4.3 \pm 0.3}{(.169 \pm .012)}$
BRN-SBC-108	$\frac{6.0 \pm 0.3}{(.236 \pm .012)}$	$\frac{6.5 \pm 0.5}{(.256 \pm .020)}$	$\frac{4.2 \pm 0.5}{(.165 \pm .020)}$	$\frac{2.0 \pm 0.2}{(.079 \pm .008)}$	$\frac{5.8 \pm 0.3}{(.228 \pm .012)}$

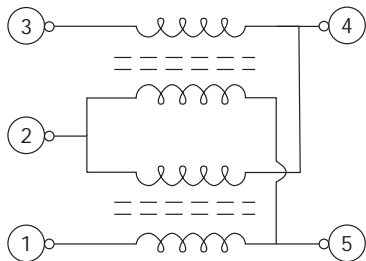
### Configuration



DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$



### Schematic



*Direct distribution of high frequency energy by directional couplers*

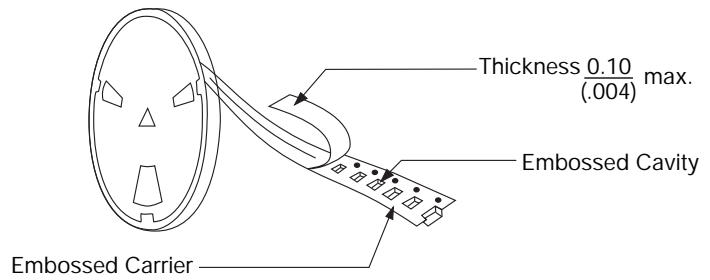
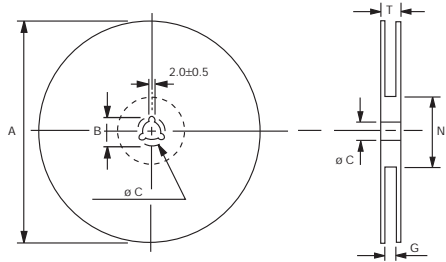
### Electrical Data Z (4-5)

<b>BRN-SBC-9</b>	
100MHz .....	1000 $\Omega$
350 MHz .....	100 $\Omega$
500 MHz .....	72 $\Omega$
800 MHz .....	41 $\Omega$
1 GHz .....	31 $\Omega$
<b>BRN-SBC-108</b>	
47 MHz .....	160 $\Omega$
230 MHz .....	270 $\Omega$
470 MHz .....	275 $\Omega$
860 MHz .....	290 $\Omega$

# Chip Balun Transformer Packaging Specifications



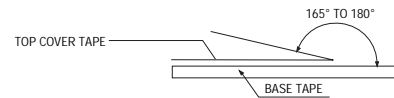
## Packaging Specifications



## Reel Dimensions

Type	A	B	C	G	N	T
16 (.63)	178 (7.008)	24.0 ±1 (.945±.039)	13.0±0.5 (.512±.020)	14 (.551)	50 <sup>-0</sup> (1.969 <sup>-0</sup> )	18.4 (.724)
24 (.945)	178 (7.008)	24.0 ±1 (.945±.039)	13.0±0.5 (.512±.020)	18 (.709)	50 <sup>-0</sup> (1.969 <sup>-0</sup> )	22.4 (.882)

## Strength Of Cover Tape



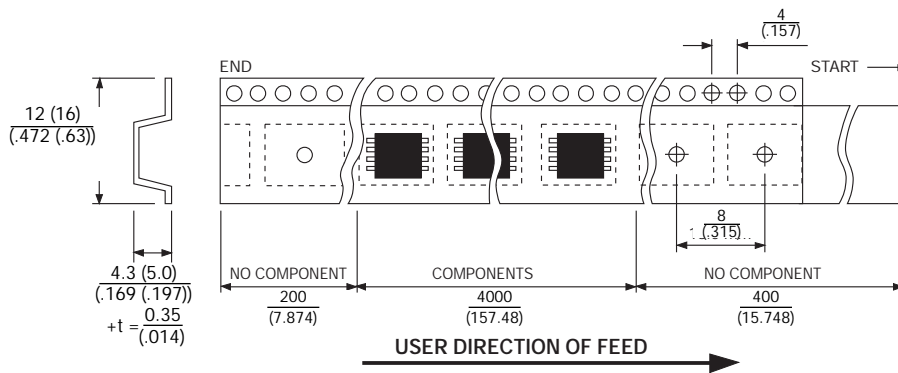
The force for tearing off cover tape is 10 to 130 grams in the arrow direction.

\*\*SBC0303: 12 (.472), 500 Pcs./Reel  
 \*\*SBC0604: 16 (.63), 500 Pcs./Reel

DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$

## Materials

Paper  
 Plastics





**BOURNS®**

### Features

- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic surface mounting
- Wide inductance range (1.5nH to 1000uH)

### Applications

- Mobilphone
- Cellularphone
- CTV, VCR, HIC, FDD

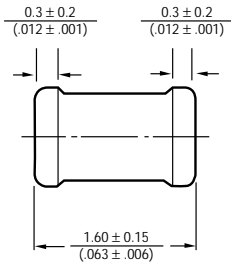
## CM45, CM32, CM25, CM20, CM16 SMT Chip Inductors

### Standard Specifications

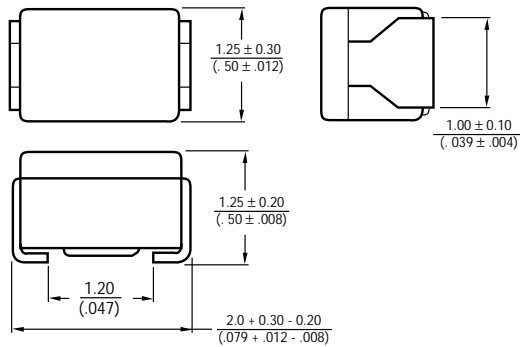
	CM16	CM20	CM25	CM32	CM45
Temperature Rise	20°C max.				
Ambient Temperature	80°C max.				
Operating Temperature	-20°C TO +100°C				
Storage Temperature	-40°C to +100°C				
Resistance To Soldering Heat	260°C, 5 seconds				

DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$

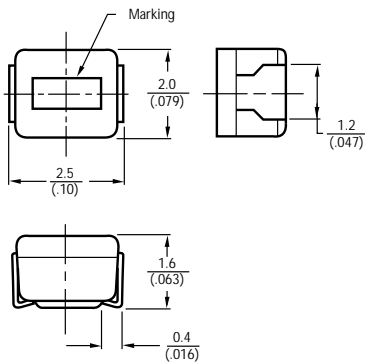
CM160808



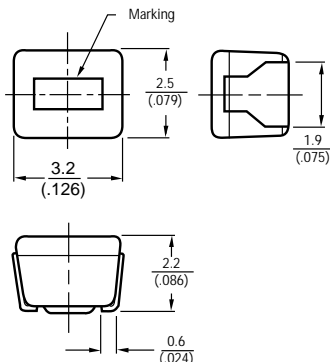
CM201212



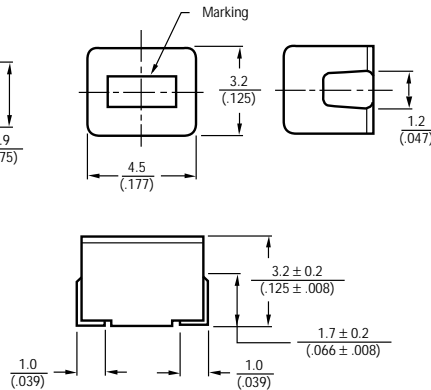
CM252016



CM322522

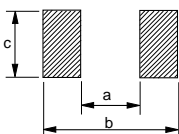


CM453232



Material	CM160808	CM201212	CM252016	CM32*	CM45
Core (Coil) material	Alumina ceramic	Polymer 3.9nH to 1000nH	Polymer 10nH to 180nH	*Polymer 47nH to 180nH	
Ferrite			220nH to 100uH	220nH up	100nH up
Coil type	Copper plating				
Enclosure	Resin				

### Recommended Land Pattern Dimensions



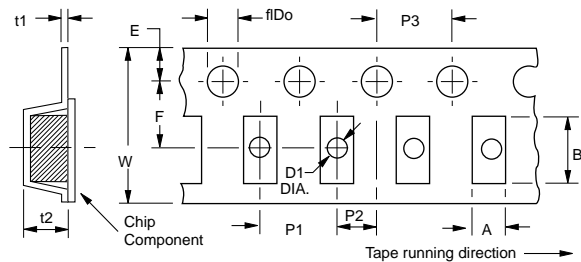
Model	a	b	c
CM16	0.8 to 1.0 (.032 to .039)	2.0 to 2.6 (.079 to .102)	0.7 to 0.9 (.028 to .035)
CM20	1.0 to 1.2 (.039 to .047)	3.0 to 3.8 (.118 to .150)	0.9 to 1.3 (.028 to .051)
CM25	1.4 to 1.5 (.055 to .059)	3.5 to 4.0 (.138 to .157)	1.2 to 1.6 (.047 to .063)
CM32	1.6 to 2.0 (.063 to .079)	4.0 to 4.6 (.157 to .181)	1.9 to 2.4 (.075 to .094)
CM45	2.4 to 2.6 (.094 to .102)	5.5 to 6.0 (.217 to .236)	2.0 to 3.0 (.079 to .118)

# CM45, CM32, CM25, CM20, CM16 SMT Chip Inductors

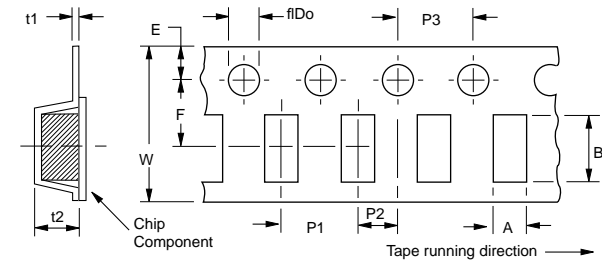


## Packaging Specifications

CM16, CM20, CM25, CM32



CM45

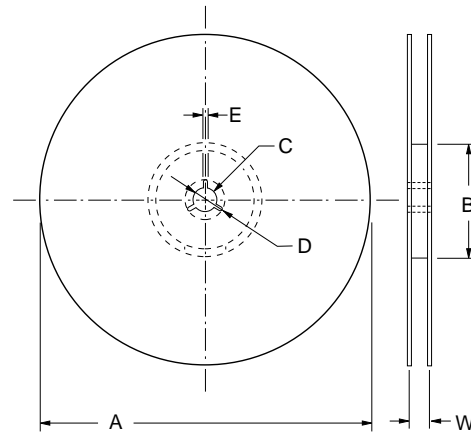


Model	A	B	W	F	E	P1	P2	P3	øD0	øD1	t1	t2
CM16	1.00(.039)	1.80(.071)	8.00(.315)	3.50(.138)	1.75(.069)	4.00(.157)	2.00(.079)	4.00(.157)	1.50(.059)	0.60(.024)	0.27(.011)	1.20(.047)
CM20	1.45(.057)	2.25(.089)	8.00(.315)	3.50(.138)	1.75(.069)	4.00(.157)	2.00(.079)	4.00(.157)	1.50(.059)	1.00(.039)	0.25(.010)	1.55(.061)
CM25	2.40(.094)	2.90(.114)	8.00(.315)	3.50(.138)	1.75(.069)	4.00(.157)	2.00(.079)	4.00(.157)	1.50(.059)	1.10(.043)	0.25(.010)	1.85(.073)
CM32	2.80(.110)	3.60(.142)	8.00(.315)	3.50(.138)	1.75(.069)	4.00(.157)	2.00(.079)	4.00(.157)	1.50(.059)	—	0.25(.010)	2.40(.094)
CM45	3.60(.142)	4.90(.193)	12.00(.472)	5.50(.217)	1.75(.069)	8.00(.315)	2.00(.079)	4.00(.157)	1.50(.059)	—	0.30(.012)	3.50(.138)

## Packaging

Model	Quantity	Weight
CM16	3000 pcs	90g
CM20	3000 pcs	90g
CM25	2000 pcs	100g
CM32	2000 pcs	190g
CM45	500 pcs	100g

## Reel Size



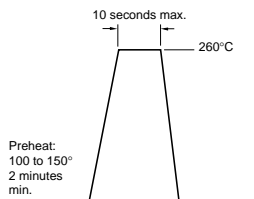
## Dimensions

Model	A	B	C	D	E	W
CM16	178 (7.008)	60min.	13(.512)	21(.827)	2(.079)	9(.354)
CM20	178 (7.008)	60min.	13(.512)	21(.827)	2(.079)	9(.354)
CM25	178 (7.008)	60min.	13(.512)	21(.827)	2(.079)	9(.354)
CM32	178 (7.008)	60min.	13(.512)	21(.827)	2(.079)	9(.354)
CM45	178 (7.008)	60min.	13(.512)	21(.827)	2(.079)	13(.512)

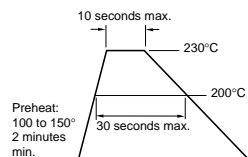
## Soldering

Flow Soldering	Recommended 260°C, 5sec. max (2 waves solder method)
Infra-red	Recommended 200°C, 60 sec. and peak max 240°C, 5 sec max.
	In case the 2 electrodes are not melt simultaneously, the chip inductor may not be mounted on the right place. It is recommended to fix it by adhesive.
Vapor-phase	Recommended 215°C, 20 to 60 sec max.

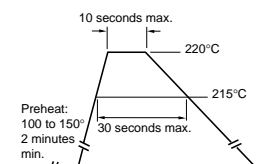
## Flow Soldering



## Infra-red Soldering



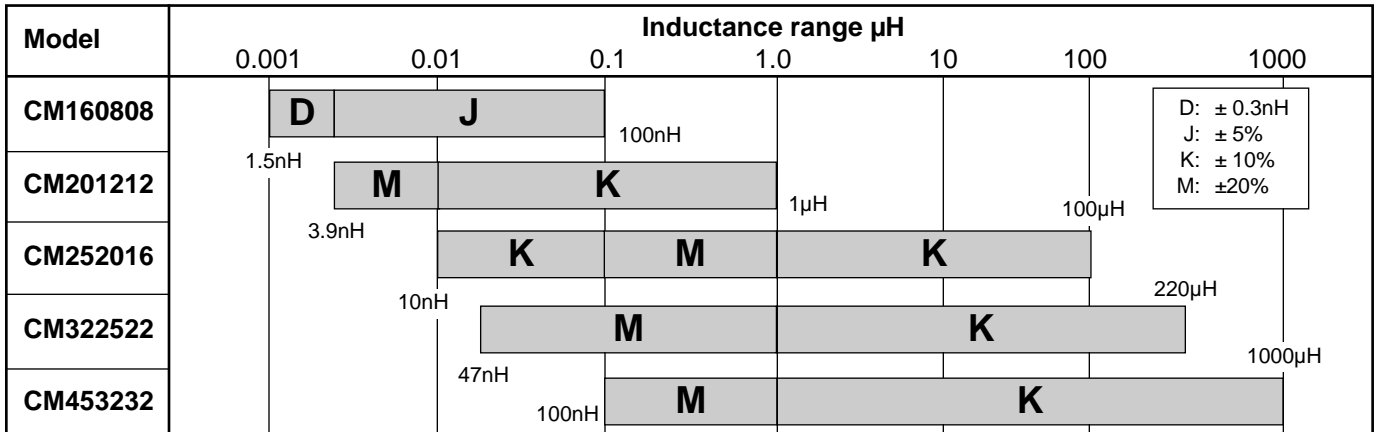
## Vapor-phase Soldering



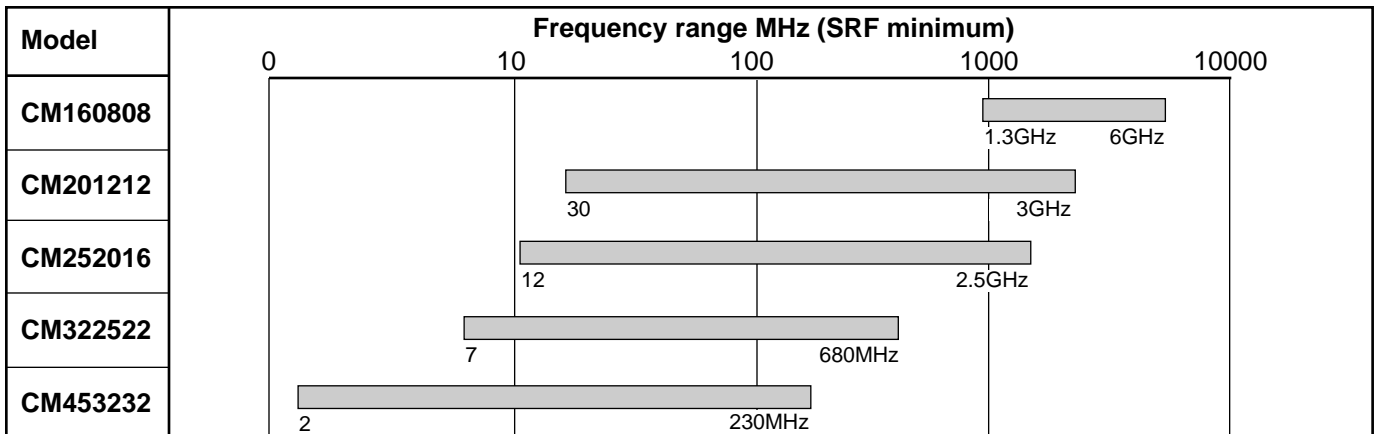
# CM45, CM32, CM25, CM20, CM16 SMT Chip Inductors



## Inductance



## Frequency



# Chip Inductor - CM453232 Series Wirewound

**BOURNS®**

Part number	Inductance uH	Tolerance	Q min.	Test. F. MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM453232-R10M	0.10	±20%	35	25.2	300	0.18	800
CM453232-R12M	0.12	±20%	35	25.2	280	0.2	770
CM453232-R15M	0.15	±20%	35	25.2	250	0.22	730
CM453232-R18M	0.18	±20%	35	25.2	220	0.24	700
CM453232-R22M	0.22	±20%	40	25.2	200	0.25	665
CM453232-R27M	0.27	±20%	40	25.2	180	0.26	635
CM453232-R33M	0.33	±20%	40	25.2	165	0.28	605
CM453232-R39M	0.39	±20%	40	25.2	150	0.30	575
CM453232-R47M	0.47	±20%	40	25.2	145	0.32	545
CM453232-R56M	0.56	±20%	40	25.2	140	0.36	520
CM453232-R68M	0.68	±20%	40	25.2	135	0.40	500
CM453232-R82M	0.82	±20%	40	25.2	130	0.45	475
CM453232-1R0K	1.0	±10%	50	7.96	100	0.50	450
CM453232-1R2K	1.2	±10%	50	7.96	80	0.55	430
CM453232-1R5K	1.5	±10%	50	7.96	70	0.60	410
CM453232-1R8K	1.8	±10%	50	7.96	60	0.65	390
CM453232-2R2K	2.2	±10%	50	7.96	55	0.70	380
CM453232-2R7K	2.7	±10%	50	7.96	50	0.75	370
CM453232-3R3K	3.3	±10%	50	7.96	45	0.80	355
CM453232-3R9K	3.9	±10%	50	7.96	40	0.90	330
CM453232-4R7K	4.7	±10%	50	7.96	35	1.00	315
CM453232-5R6K	5.6	±10%	50	7.96	33	1.10	300
CM453232-6R8K	6.8	±10%	50	7.96	27	1.2	285
CM453232-8R2K	8.2	±10%	50	7.96	25	1.4	270
CM453232-100K	10	±10%	50	2.52	20	1.6	250
CM453232-120K	12	±10%	50	2.52	18	2	225
CM453232-150K	15	±10%	50	2.52	17	2.5	200
CM453232-180K	18	±10%	50	2.52	15	2.8	190
CM453232-220K	22	±10%	50	2.52	13	3.2	180
CM453232-270K	27	±10%	50	2.52	12	3.6	170
CM453232-330K	33	±10%	50	2.52	11	4	160
CM453232-390K	39	±10%	50	2.52	10	4.5	150
CM453232-470K	47	±10%	50	2.52	10	5	140
CM453232-560K	56	±10%	50	2.52	9	5.5	135
CM453232-680K	68	±10%	50	2.52	9	6	130
CM453232-820K	82	±10%	50	2.52	8	7	120
CM453232-101K	100	±10%	40	2.52	8	8	110
CM453232-121K	120	±10%	40	0.796	6	8	110
CM453232-151K	150	±10%	40	0.796	5	9	105
CM453232-181K	180	±10%	40	0.796	5	9.5	102
CM453232-221K	220	±10%	40	0.796	4	10	100
CM453232-271K	270	±10%	40	0.796	4	12	92
CM453232-331K	330	±10%	40	0.796	3.5	14	85
CM453232-391K	390	±10%	40	0.796	3	18	80
CM453232-471K	470	±10%	40	0.796	3	26	62
CM453232-561K	560	±10%	30	0.796	3	30	50
CM453232-681K	680	±10%	30	0.796	3	30	50
CM453232-821K	820	±10%	30	0.796	2.5	35	30
CM453232-102K	1000	±10%	30	0.252	2.5	40	30

# Chip Inductor - CM322522 Series Wirewound



Part number	Inductance uH	Tolerance	Q min.	Test. F. MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM322522-47NM	0.047	±20%	10	100	680	0.20	450
CM322522-56NM	0.056	±20%	10	100	600	0.22	420
CM322522-68NM	0.068	±20%	10	100	540	0.25	400
CM322522-82NM	0.082	±20%	10	100	500	0.27	380
CM322522-R10M	0.10	±20%	10	100	450	0.30	360
CM322522-R12M	0.12	±20%	10	25.2	400	0.67	240
CM322522-R15M	0.15	±20%	10	25.2	350	0.72	230
CM322522-R18M	0.18	±20%	10	25.2	320	0.81	220
CM322522-R22M	0.22	±20%	25	25.2	230	0.29	360
CM322522-R27M	0.27	±20%	25	25.2	210	0.32	345
CM322522-R33M	0.33	±20%	25	25.2	190	0.35	330
CM322522-R39M	0.39	±20%	25	25.2	175	0.39	305
CM322522-R47M	0.47	±20%	25	25.2	160	0.44	290
CM322522-R56M	0.56	±20%	25	25.2	150	0.49	275
CM322522-R68M	0.68	±20%	25	25.2	135	0.55	260
CM322522-R82M	0.82	±20%	25	25.2	125	0.61	245
CM322522-1R0K	1.0	±10%	30	7.96	115	0.69	230
CM322522-1R2K	1.2	±10%	30	7.96	100	0.75	215
CM322522-1R5K	1.5	±10%	30	7.96	90	0.75	210
CM322522-1R8K	1.8	±10%	30	7.96	85	0.82	200
CM322522-2R2K	2.2	±10%	30	7.96	80	0.95	190
CM322522-2R7K	2.7	±10%	30	7.96	75	1.1	180
CM322522-3R3K	3.3	±10%	30	7.96	65	1.2	180
CM322522-3R9K	3.9	±10%	30	7.96	60	1.3	175
CM322522-4R7K	4.7	±10%	30	7.96	55	1.5	165
CM322522-5R6K	5.6	±10%	30	7.96	50	1.6	160
CM322522-6R8K	6.8	±10%	30	7.96	45	1.8	150
CM322522-8R2K	8.2	±10%	30	7.96	40	2.0	140
CM322522-100K	10	±10%	30	2.52	36	2.1	140
CM322522-120K	12	±10%	30	2.52	33	2.5	125
CM322522-150K	15	±10%	30	2.52	30	2.8	120
CM322522-180K	18	±10%	30	2.52	27	3.3	110
CM322522-220K	22	±10%	30	2.52	25	3.7	105
CM322522-270K	27	±10%	30	2.52	22	5.0	90
CM322522-330K	33	±10%	30	2.52	20	5.6	85
CM322522-390K	39	±10%	30	2.52	20	6.4	80
CM322522-470K	47	±10%	30	2.52	15	7.0	75
CM322522-560K	56	±10%	30	2.52	15	8.0	70
CM322522-680K	68	±10%	30	2.52	15	9.0	65
CM322522-820K	82	±10%	30	2.52	11	10	60
CM322522-101K	100	±10%	20	0.796	10	10	60
CM322522-121K	120	±10%	20	0.796	10	11	55
CM322522-151K	150	±10%	20	0.796	8	15	50
CM322522-181K	180	±10%	20	0.796	7	17	50
CM322522-221K	220	±10%	20	0.796	7	21	45

TIGHTER TOLERANCE AVAILABLE ON REQUEST. CONSULT FACTORY.  
 COMMENT :47nH TO 180nH 'AIR CORE' / 220nH TO 220uH 'FERRITE CORE'

# Chip Inductor - CM252016 Series Wirewound

**BOURNS**<sup>®</sup>

Part number	Inductance uH	Tolerance	Q min.	Test. F. MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM252016-10NK	0.010	±10%	10	100	2500	0.32	280
CM252016-12NK	0.012	±10%	10	100	2200	0.34	270
CM252016-15NK	0.015	±10%	10	100	1800	0.38	255
CM252016-18NK	0.018	±10%	10	100	1550	0.4	250
CM252016-22NK	0.022	±10%	15	100	1350	0.43	240
CM252016-27NK	0.027	±10%	15	100	1150	0.47	230
CM252016-33NK	0.033	±10%	15	100	1000	0.51	220
CM252016-39NK	0.039	±10%	15	100	890	0.55	215
CM252016-47NK	0.047	±10%	15	100	770	0.59	205
CM252016-56NK	0.056	±10%	15	100	670	0.63	200
CM252016-68NK	0.068	±10%	15	100	590	0.68	190
CM252016-82NK	0.082	±10%	15	100	520	0.73	185
CM252016-R10K	0.10	±10%	10	25.2	460	0.80	175
CM252016-R12K	0.12	±10%	10	25.2	400	0.87	170
CM252016-R15K	0.15	±10%	10	25.2	340	0.98	160
CM252016-R18K	0.18	±10%	10	25.2	300	1.05	155
CM252016-R22M	0.22	±20%	25	25.2	230	0.70	190
CM252016-R27M	0.27	±20%	25	25.2	210	0.75	180
CM252016-R33M	0.33	±20%	25	25.2	190	0.85	170
CM252016-R39M	0.39	±20%	25	25.2	175	0.95	160
CM252016-R47M	0.47	±20%	25	25.2	160	1.00	155
CM252016-R56M	0.56	±20%	25	25.2	150	1.10	150
CM252016-R68M	0.68	±20%	25	25.2	135	1.25	140
CM252016-R82M	0.82	±20%	25	25.2	125	1.40	130
CM252016-1R0K	1.0	±10%	25	7.96	115	0.65	195
CM252016-1R2K	1.2	±10%	25	7.96	100	0.75	180
CM252016-1R5K	1.5	±10%	25	7.96	90	0.85	170
CM252016-1R8K	1.8	±10%	25	7.96	85	0.95	160
CM252016-2R2K	2.2	±10%	25	7.96	80	1.05	155
CM252016-2R7K	2.7	±10%	25	7.96	75	1.2	145
CM252016-3R3K	3.3	±10%	25	7.96	65	1.3	135
CM252016-3R9K	3.9	±10%	25	7.96	60	1.4	130
CM252016-4R7K	4.7	±10%	25	7.96	55	1.6	125
CM252016-5R6K	5.6	±10%	25	7.96	50	1.8	120
CM252016-6R8K	6.8	±10%	25	7.96	45	1.9	115
CM252016-8R2K	8.2	±10%	25	7.96	40	2.2	105
CM252016-100K	10	±10%	25	2.52	32	3.5	80
CM252016-120K	12	±10%	25	2.52	30	3.8	75
CM252016-150K	15	±10%	25	2.52	28	4.4	70
CM252016-180K	18	±10%	25	2.52	25	5.0	65
CM252016-220K	22	±10%	25	2.52	22	5.8	60
CM252016-270K	27	±10%	20	2.52	21	6.3	115
CM252016-330K	33	±10%	20	2.52	20	7.1	110
CM252016-390K	39	±10%	20	2.52	18	9.5	90
CM252016-470K	47	±10%	20	2.52	17	11.0	80
CM252016-560K	56	±10%	20	2.52	16	12.1	75
CM252016-680K	68	±10%	20	2.52	15	16.6	70
CM252016-820K	82	±10%	20	2.52	13	19.0	65
CM252016-101K	100	±10%	15	0.796	12	21.0	60

TIGHTER TOLERANCE AVAILABLE ON REQUEST. CONSULT FACTORY.

COMMENT : 10nH TO 180nH 'AIR CORE' / 220nH TO 220uH 'FERRITE CORE'



# Chip Inductor - CM201212 Series Wirewound



Part number	Inductance uH	Tolerance	Q min.	Test. F. MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM201212-3N9M	0.0039	±20%	6	100	6000	0.1	540
CM201212-4N7M	0.0074	±20%	6	100	6000	0.1	540
CM201212-5N6M	0.0056	±20%	6	100	5000	0.12	540
CM201212-6N8M	0.0068	±20%	8	100	5000	0.15	540
CM201212-8N2M	0.0082	±20%	8	100	5000	0.16	540
CM201212-10NK	0.010	±10%	10	100	3300	0.20	540
CM201212-12NK	0.012	±10%	10	100	3300	0.23	535
CM201212-15NK	0.015	±10%	12	100	3000	0.25	520
CM201212-18NK	0.018	±10%	12	100	3000	0.27	480
CM201212-22NK	0.022	±10%	15	100	2600	0.29	465
CM201212-27NK	0.027	±10%	15	100	2500	0.32	455
CM201212-33NK	0.033	±10%	15	100	2000	0.37	395
CM201212-39NK	0.039	±10%	15	100	2000	0.38	390
CM201212-47NK	0.047	±10%	15	100	1600	0.42	385
CM201212-56NK	0.056	±10%	15	100	1500	0.45	360
CM201212-68NK	0.068	±10%	15	100	1400	0.52	340
CM201212-82NK	0.082	±10%	15	100	1100	0.60	330
CM201212-R10K	0.10	±10%	8	25.2	800	0.78	285
CM201212-R12K	0.12	±10%	8	25.2	600	0.99	275
CM201212-R15K	0.15	±10%	10	25.2	600	1.47	230
CM201212-R18K	0.18	±10%	10	25.2	600	1.61	195
CM201212-R22K	0.22	±10%	10	25.2	500	1.84	170
CM201212-R27K	0.27	±10%	10	25.2	300	1.95	165
CM201212-R33K	0.33	±10%	10	25.2	200	2.16	160
CM201212-R39K	0.39	±10%	10	25.2	150	2.35	150
CM201212-R47K	0.47	±10%	10	25.2	150	2.57	145
CM201212-R56K	0.56	±10%	10	25.2	100	2.65	140
CM201212-R68K	0.68	±10%	10	25.2	100	2.99	130
CM201212-R82K	0.82	±10%	10	25.2	80	3.35	125
CM201212-1R0K	1.0	±10%	8	7.96	80	3.82	120

TIGHTER TOLERANCE AVAILABLE ON REQUEST. CONSULT FACTORY.

# Chip Inductor - CM160808 Series Wirewound



Part number	Inductance nH	Tolerance	Q min.	Test. F. MHz	SRF min. MHz	RDC ohm max	IDC mA max
CM160808-1N5D	1.5	± 0.3nH	8	100	6000	0.07	500
CM160808-1N8D	1.8	± 0.3nH	8	100	6000	0.08	500
CM160808-2N2D	2.2	± 0.3nH	8	100	6000	0.09	500
CM160808-2N7D	2.7	± 0.3nH	8	100	6000	0.10	500
CM160808-3N3D	3.3	± 0.3nH	9	100	5500	0.12	500
CM160808-3N9J	3.9	±5%	9	100	5500	0.15	450
CM160808-4N7J	4.7	±5%	9	100	4800	0.17	450
CM160808-5N6J	5.6	±5%	9	100	4600	0.18	430
CM160808-6N8J	6.8	±5%	9	100	3550	0.20	430
CM160808-8N2J	8.2	±5%	9	100	3500	0.28	400
CM160808-10NJ	10	±5%	10	100	2800	0.32	400
CM160808-12NJ	12	±5%	10	100	2800	0.35	400
CM160808-15NJ	15	±5%	10	100	2500	0.41	350
CM160808-18NJ	18	±5%	10	100	2300	0.45	350
CM160808-22NJ	22	±5%	10	100	2000	0.50	300
CM160808-27NJ	27	±5%	10	100	2000	0.55	300
CM160808-33NJ	33	±5%	10	100	1800	0.60	300
CM160808-39NJ	39	±5%	11	100	1800	0.80	300
CM160808-47NJ	47	±5%	11	100	1800	0.95	250
CM160808-56NJ	56	±5%	12	100	1800	1.2	250
CM160808-68NJ	68	±5%	12	100	1500	1.3	250
CM160808-82NJ	82	±5%	12	100	1500	1.5	250
CM160808-R10J	100	±5%	12	100	1300	1.8	200

COMMENT: 'AIR CORE' CERAMIC WITH COPPER PLATING

# CM322522/CM453232 Series - SMT Chip Inductors



## Chip Inductor Lab Kits

### CM322522

BOURNS Part No.	Inductance (µH)	Q min.	Test freq. (MHz)
CM322522 - R10M	0.10 ±20%	30	25.2
- R15M	0.15 ±20%	30	25.2
- R22M	0.22 ±20%	30	25.2
- R33M	0.33 ±20%	30	25.2
- R47M	0.47 ±20%	30	25.2
- R68M	0.68 ±20%	30	25.2
- 1R0K	1.0 ±10%	30	7.96
- 1R5K	1.5 ±10%	30	7.96
- 2R2K	2.2 ±10%	30	7.96
- 3R3K	3.3 ±10%	30	7.96
- 4R7K	4.7 ±10%	30	7.96
- 6R8K	6.8 ±10%	30	7.96
- 100K	10.0 ±10%	30	2.52
- 150K	15.0 ±10%	30	2.52
- 220K	22.0 ±10%	30	2.52
- 330K	33.0 ±10%	30	2.52
- 470K	47.0 ±10%	30	2.52
- 680K	68.0 ±10%	30	2.52
- 101K	100 ±10%	20	0.796
- 151K	150 ±10%	20	0.796
- 221K	220 ±10%	20	0.796

### CM453232

BOURNS Part No.	Inductance (µH)	Q min.	Test freq. (MHz)
CM453232 - R10M	0.10 ±20%	35	25.2
- R15M	0.15 ±20%	35	25.2
- R22M	0.22 ±20%	40	25.2
- R33M	0.33 ±20%	40	25.2
- R47M	0.47 ±20%	40	25.2
- R68M	0.68 ±20%	40	25.2
- 1R0K	1.0 ±10%	50	7.96
- 1R5K	1.5 ±10%	50	7.96
- 2R2K	2.2 ±10%	50	7.96
- 3R3K	3.3 ±10%	50	7.96
- 4R7K	4.7 ±10%	50	7.96
- 6R8K	6.8 ±10%	50	7.96
- 100K	10.0 ±10%	50	2.52
- 150K	15.0 ±10%	50	2.52
- 220K	22.0 ±10%	50	2.52
- 330K	33.0 ±10%	50	2.52
- 470K	47.0 ±10%	50	2.52
- 680K	68.0 ±10%	50	2.52
- 101K	100 ±10%	40	0.796
- 151K	150 ±10%	40	0.796
- 221K	220 ±10%	40	0.796
- 331K	330 ±10%	40	0.796
- 471K	470 ±10%	40	0.796
- 681K	680 ±10%	30	0.796
- 102K	1000 ±10%	30	0.252

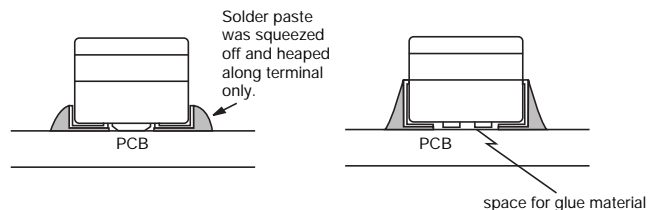
## Standard Specifications

	CM322522	CM453232
Temperature rise	20°C max.	20°C max.
Ambient temperature	80°C max.	80°C max.
Operating temperature	-20 to +100°C	-25 to +100°C
Storage temperature	-40 to +100°C	-40 to +100°C
Terminal tensile strength	0.5 kg min.	1 kg min.
Current rating:		
Current cause inductance drop within 10%	0 to +55°C	0 to +50°C
Resistance to soldering heat	260°C for 10 sec	260°C for 10 sec
Resistance to solvent	Mil-Std-202 F	Mil-Std-202 F

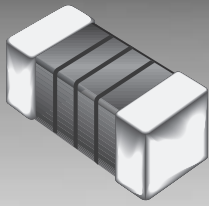
See page 163 for CM322522 and CM453232 dimensions.  
See page 165 for Q vs. Frequency Response, and Inductance Change vs. Temperature Response Charts.

## Housing Design

The housing design gives you an improvement in solderability and glueing between the inductor and PCB.



The Lab Kits are including E6 series, 10 pieces per value.  
CM45-LAB1: available  
CM32-LAB1: available



**BOURNS®**

### Features

- High resistance to heat and humidity
- Resistance to mechanical shock and pressure
- Accurate dimensions for automatic mounting
- Inductance as low as 1nH

### Applications

- Mobilphone
- Cellularphone
- CTV, VCR, HIC, HDD, FDD

## CM100505 Series - Chip Inductor

### Electrical Specifications

Bourns Part No.	Inductance		Q	Test F.	SRF min	RDC	IDC
	nH	Tol.%					
CM100505-1N0D	1.00	±0.3nH	8	100	6000	0.05	400
CM100505-1N2D	1.20	±0.3nH	8	100	6000	0.06	400
CM100505-1N5D	1.50	±0.3nH	8	100	6000	0.07	400
CM100505-1N8D	1.80	±0.3nH	8	100	6000	0.08	400
CM100505-2N2D	2.20	±0.3nH	8	100	6000	0.09	400
CM100505-2N7D	2.70	±0.3nH	8	100	5500	0.10	400
CM100505-3N3D	3.30	±0.3nH	8	100	5500	0.12	400
CM100505-3N9D	3.90	± 5	8	100	5200	0.15	360
CM100505-4N7D	4.70	± 5	8	100	4800	0.17	360
CM100505-5N6D	5.60	± 5	8	100	4600	0.19	340
CM100505-6N8J	6.80	± 5	8	100	4000	0.30	320
CM100505-8N2J	8.20	± 5	8	100	3500	0.35	320
CM100505-10NJ	10.00	± 5	8	100	2800	0.41	320
CM100505-12NJ	12.00	± 5	8	100	2800	0.45	320
CM100505-15NJ	15.00	± 5	8	100	2500	0.60	240
CM100505-18NJ	18.00	± 5	8	100	2200	0.70	240
CM100505-22NJ	22.00	± 5	8	100	2000	0.80	200
CM100505-27NJ	27.00	± 5	8	100	1800	1.2	200
CM100505-33NJ	33.00	± 5	8	100	1800	1.4	170
CM100505-39NJ	39.00	± 5	8	100	1800	1.7	150
CM100505-47NJ	47.00	± 5	8	100	1800	2.1	140

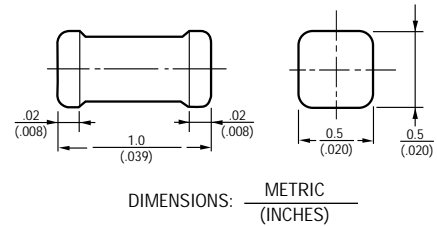
### General Specifications

Temperature Rise .....20°C max.  
 Ambient Temperature ..... 80°C max.  
 Operating Temperature ..-20°C to +100°C  
 Storage Temperature ....-40°C to +100°C  
 Resistance to Soldering Heat  
 .....260°C, 5 seconds

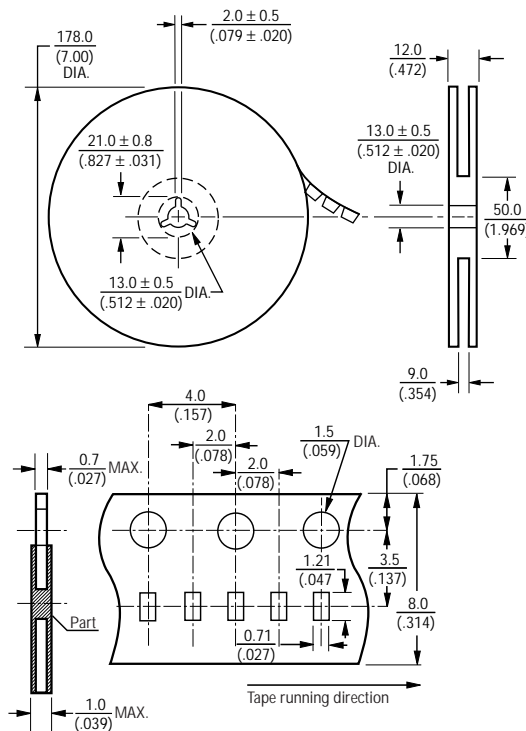
### Materials

Core Material.....Alumina Ceramic  
 Coil Type .....Copper plating laser cut  
 Enclosure.....Resin  
 Packaging.....10,000 pcs per reel

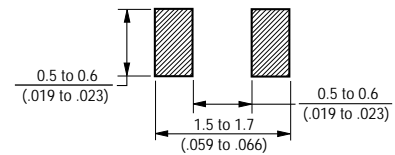
### Product Dimensions



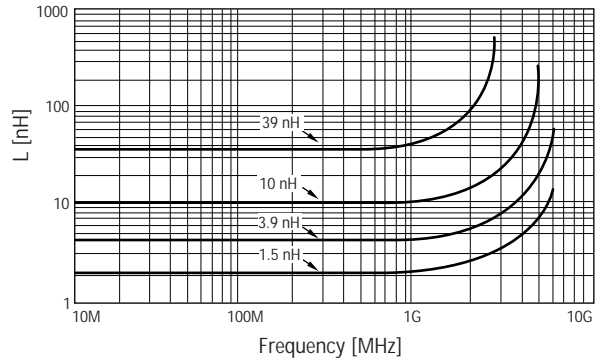
### Packaging Specifications



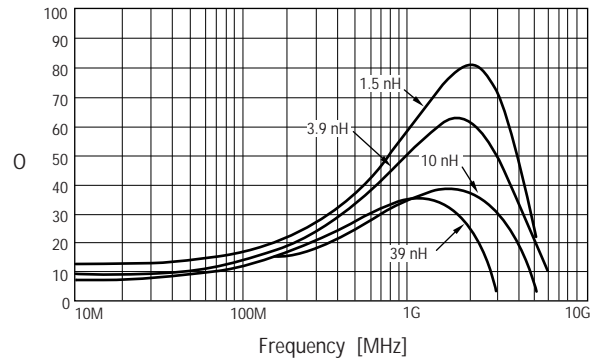
### Recommended Layout



L vs Frequency Characteristics



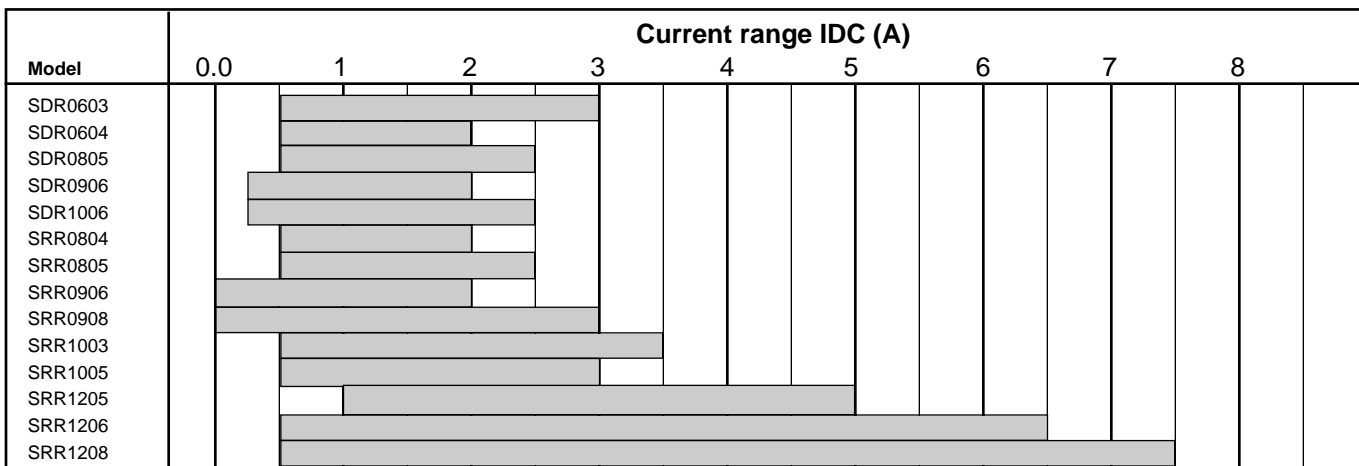
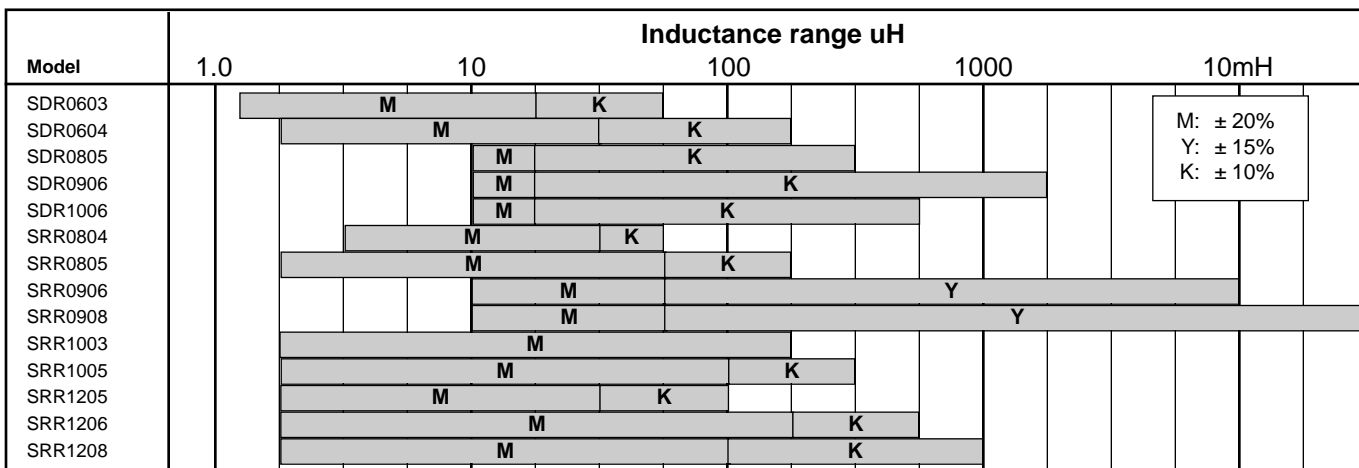
Q vs Frequency Characteristics



# Surface Mount Power Inductor Product Selection Guide



Bourns Model No.	Shielded	Non-Shielded	Product Size (mm)		In Stock	Samples Available
			Length	Height		
SDR0603		•	5.6	3.7	No	Yes
SDR0604		•	5.6	4.5	Yes	Yes
SDR0805		•	7.5	5.0	Yes	Yes
SDR0906		•	10.5	6.0	No	Yes
SDR1006		•	9.5	5.5	Yes	Yes
SRR0804	•		10.5	3.7	No	Yes
SRR0805	•		10.5	4.5	Yes	Yes
SRR0906	•		10.5	6.0	No	Yes
SRR0908	•		10.5	7.5	No	Yes
SRR1003	•		12.7	2.7	No	Yes
SRR1005	•		12.7	4.9	No	Yes
SRR1205	•		12.7	5.0	No	Yes
SRR1206	•		12.7	6.0	No	Yes
SRR1208	•		12.7	8.0	No	Yes





**BOURNS®**

### Features

- Available in E12 series
- Small design of only 5.8mm maximum diameter
- Low 3.8mm profile

## SDR0603 Series - SMD Power Inductors

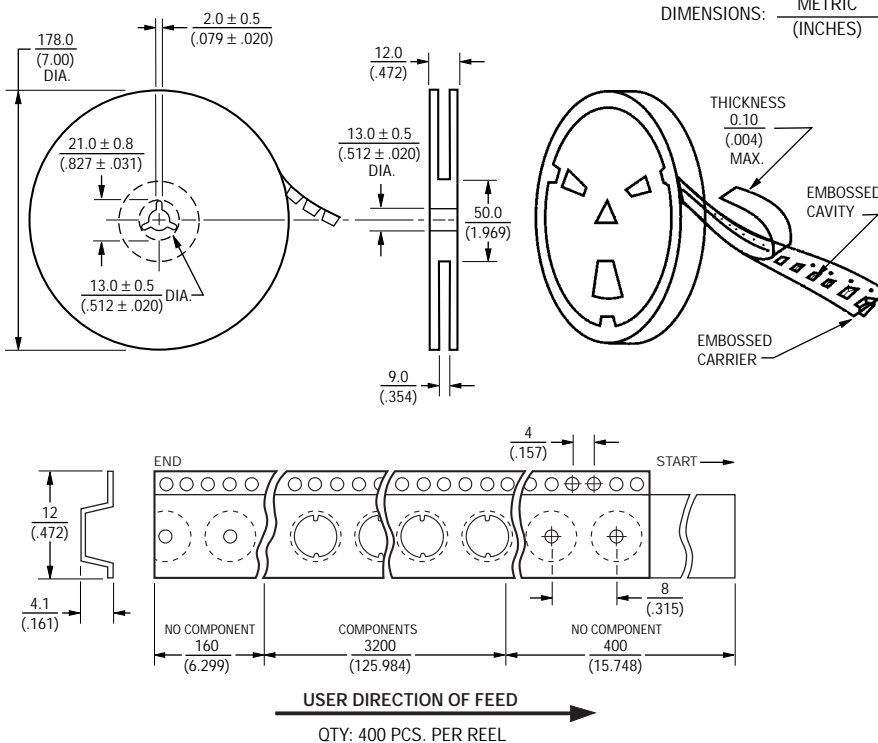
### Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

### Electrical Specifications

Bourns Part No.	L ( $\mu$ H)	Q Ref	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. ( $\Omega$ )	IDC Max. (A)
			L	Q			
SDR0603-1R5M	1.5 $\pm$ 20%	24	1000	7.96M	85.0	0.040	3.00
SDR0603-2R5M	2.5 $\pm$ 20%	21	1000	7.96M	74.0	0.045	2.35
SDR0603-3R9M	3.9 $\pm$ 20%	22	1000	7.96M	62.0	0.050	2.10
SDR0603-5R0M	5.0 $\pm$ 20%	19	1000	7.96M	50.0	0.070	1.60
SDR0603-6R8M	6.8 $\pm$ 20%	19	1000	7.96M	44.0	0.110	1.38
SDR0603-7R5M	7.5 $\pm$ 20%	19	1000	7.96M	38.0	0.120	1.29
SDR0603-100M	10 $\pm$ 20%	24	1000	2.52M	34.0	0.150	1.14
SDR0603-120M	12 $\pm$ 20%	23	1000	2.52M	30.0	0.160	1.02
SDR0603-150M	15 $\pm$ 15%	22	1000	2.52M	28.0	0.180	0.93
SDR0603-180M	18 $\pm$ 15%	23	1000	2.52M	24.0	0.250	0.82
SDR0603-220M	22 $\pm$ 15%	20	1000	2.52M	20.0	0.275	0.75
SDR0603-270M	27 $\pm$ 15%	19	1000	2.52M	19.0	0.300	0.67
SDR0603-330K	33 $\pm$ 10%	23	1000	2.52M	15.0	0.450	0.61
SDR0603-390K	39 $\pm$ 10%	22	1000	2.52M	13.0	0.460	0.56
SDR0603-470K	47 $\pm$ 10%	20	1000	2.52M	13.0	0.550	0.52
SDR0603-560K	56 $\pm$ 10%	17	1000	2.52M	12.0	0.615	0.48
SDR0603-680K	68 $\pm$ 10%	17	1000	2.52M	12.0	0.720	0.44
SDR0603-820K	82 $\pm$ 10%	15	1000	2.52M	11.0	0.840	0.40

### Packaging Specifications



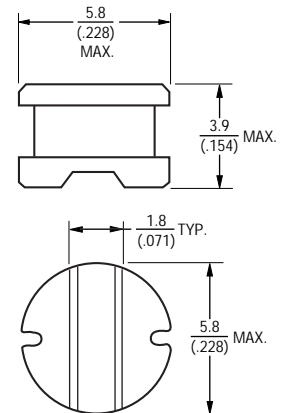
### General Specifications

Test Voltage .....1V  
 Reflow Soldering .....230°C, 10 sec. max.  
 Operating Temperature...-20°C to +80°C  
 Storage Temperature .....-25°C to +85°C

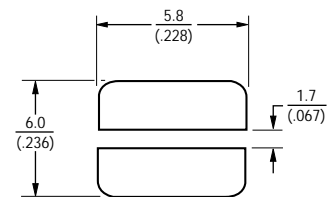
### Materials

Core .....Ferrite DR core  
 Wire .....Enamelled copper  
 Terminal Electrode .....Ag & Sn/Pb  
 Temperature Rise.....40°C max.  
 at rated IDC

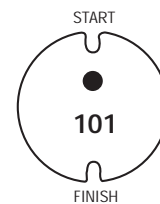
### Product Dimensions



### Recommended Layout



### Typical Part Marking





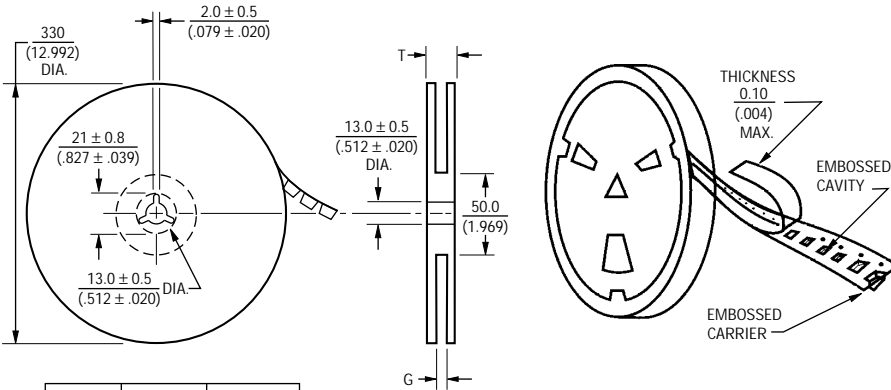




# SDR0805/SDR1006 Series



## Packaging Specifications



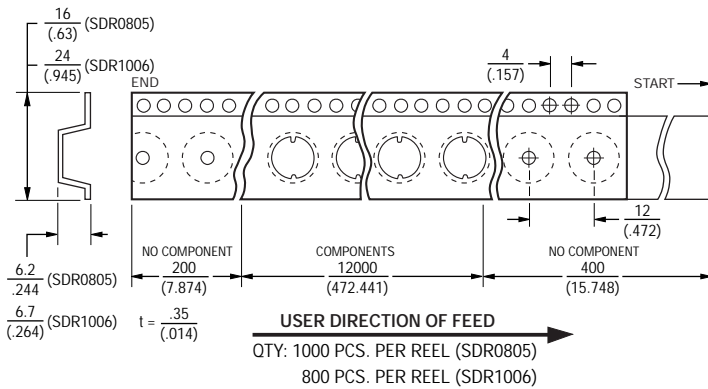
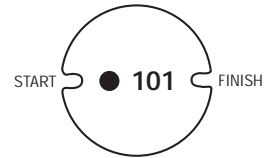
Type	G	T
SDR0805	$\frac{18}{(.709)}$	$\frac{22.4}{(.883)}$
SDR1006	$\frac{26}{(1.024)}$	$\frac{30.4}{(1.20)}$

DIMENSIONS:        METRIC  
       (INCHES)

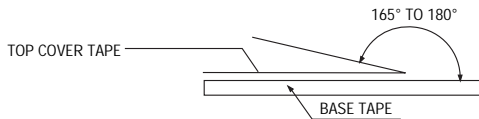
## Materials

Paper  
Plastics

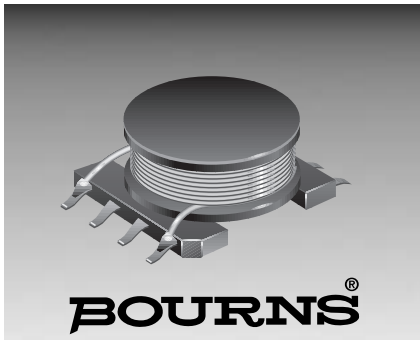
## Typical Part Marking



## Strength Of Cover Tape



The force for tearing off cover tape is 10 to 130 grams in the arrow direction.



**BOURNS®**

### Features

- High inductance up to 1.2mH
- E12 series available

### Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

## SDR0906 Series - SMD Power Inductors

### Electrical Specifications

Bourns Part No.	L (µH)	Q Ref	Test frequency HZ		SRF (MHz) typ.	RDC Ω max.	IDC A max.
			L	Q			
SDR0906 - 100 M	10 ± 20%	35	1K	2.520M	25.0	0.09	2.10
- 120 M	12 ± 20%	35	1K	2.520M	23.0	0.10	2.00
- 150 M	15 ± 20%	35	1K	2.520M	22.0	0.11	1.90
- 180 M	18 ± 20%	35	1K	2.520M	19.0	0.12	1.80
- 220 M	22 ± 20%	35	1K	2.520M	16.0	0.13	1.60
- 270 K	27 ± 10%	35	1K	2.520M	15.0	0.15	1.40
- 330 K	33 ± 10%	35	1K	2.520M	13.5	0.18	1.25
- 390 K	39 ± 10%	25	1K	2.520M	13.0	0.19	1.15
- 470 K	47 ± 10%	25	1K	2.520M	12.2	0.23	1.10
- 560 K	56 ± 10%	25	1K	2.520M	12.0	0.26	1.05
- 680 K	68 ± 10%	20	1K	2.520M	10.0	0.31	1.00
- 820 K	82 ± 10%	20	1K	2.520M	9.2	0.33	0.95
- 101 K	100 ± 10%	15	1K	0.796M	9.0	0.39	0.90
- 121 K	120 ± 10%	15	1K	0.796M	8.0	0.43	0.85
- 151 K	150 ± 10%	15	1K	0.796M	7.5	0.56	0.75
- 181 K	180 ± 10%	15	1K	0.796M	7.0	0.64	0.70
- 221 K	220 ± 10%	20	1K	0.796M	6.0	0.85	0.60
- 271 K	270 ± 10%	20	1K	0.796M	5.5	1.00	0.55
- 331 K	330 ± 10%	20	1K	0.796M	5.3	1.27	0.50
- 391 K	390 ± 10%	15	1K	0.796M	5.0	1.40	0.45
- 471 K	470 ± 10%	15	1K	0.796M	4.8	1.63	0.40
- 561 K	560 ± 10%	15	1K	0.796M	4.5	2.10	0.32
- 681 K	680 ± 10%	15	1K	0.796M	4.0	2.40	0.28
- 821 K	820 ± 10%	15	1K	0.796M	3.5	2.75	0.24
- 102 K	1000 ± 10%	60	1K	0.252M	2.5	3.50	0.22
- 122 K	1200 ± 10%	60	1K	0.252M	2.0	4.00	0.20

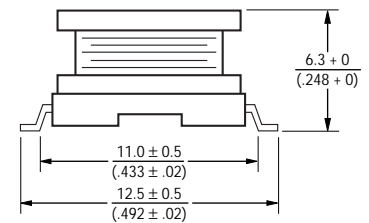
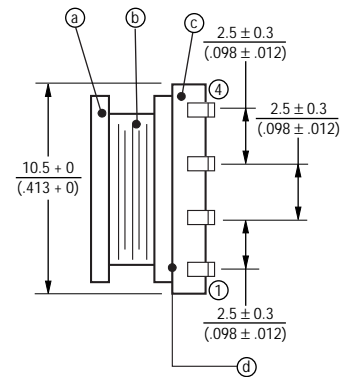
### General Specifications

Test Frequency.....1KHz  
 Test Voltage.....1V  
 Reflow Soldering.....230°C; 10 sec. max.  
 Operating Temp.....-20°C to +80°C  
 Storage Temp.....-25°C to +85°C

### Materials

Core .....Ferrite DR core  
 Wire .....Enamelled copper wire  
 Base.....Pept FR530  
 Adhesive .....Epoxy resin  
 Temperature Rise:.....40°C max.  
 at rated current

### Product Dimensions

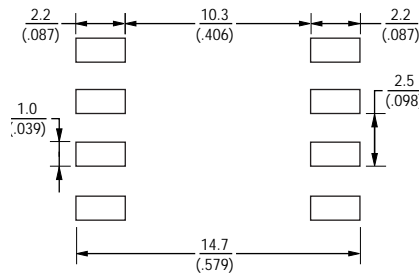


DIMENSIONS: METRIC (INCHES)

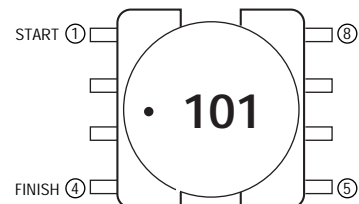
### Electrical Schematic



### Recommended Layout



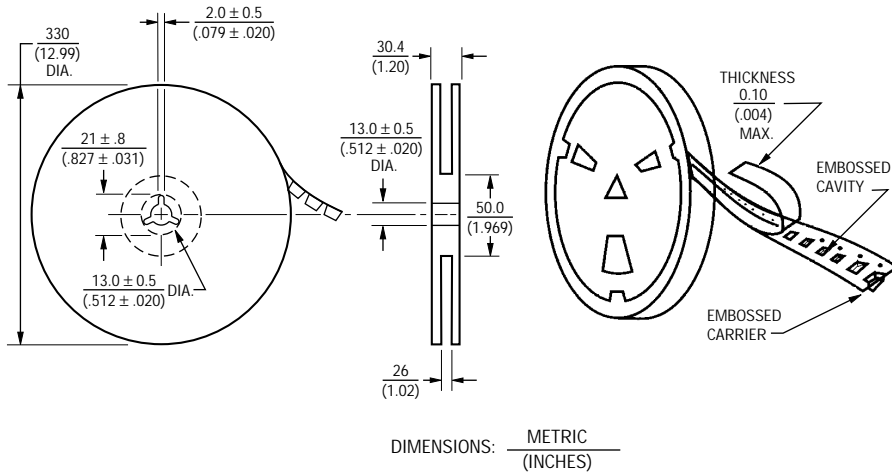
### Typical Part Marking



# SDR0906 Series - SMD Power Inductors

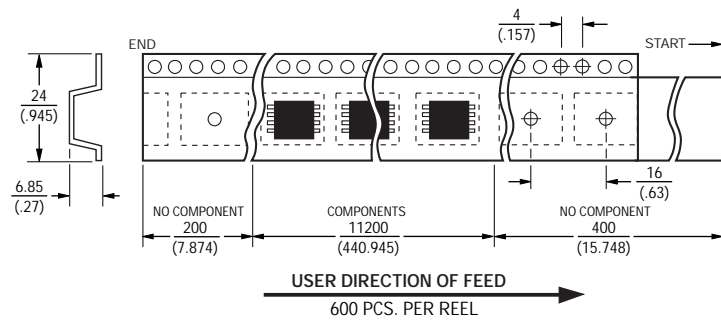


## Packaging Specifications

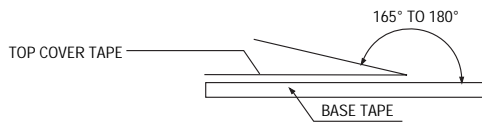


## Materials

Paper  
Plastics



## Strength Of Cover Tape



The force for tearing off cover tape is 10 to 130 grams in the arrow direction.





## Features

- Available in E6 series
- Low unit height of 4.8mm
- High current

## Applications

- Input/Output DC/DC converter
- Power supplies for:
  - Portable comm. equipment
  - Camcorders
  - LCD TV
  - Car radios

# SRR0604 Series - Shielded Power Inductors

## Electrical Specifications

Bourns Part No.	L ( $\mu$ H)	Q Nom.	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. ( $\Omega$ )	I <sub>rms</sub> Max. (A)
			L	Q			
SRR0604-3R3M	3.3 $\pm$ 20%	13	1000	7.96M	90.0	0.05	2.30
SRR0604-4R7M	4.7 $\pm$ 20%	10	1000	7.96M	50.0	0.06	2.00
SRR0604-6R8M	6.8 $\pm$ 20%	10	1000	7.96M	27.0	0.07	1.60
SRR0604-100M	10 $\pm$ 20%	13	1000	2.52M	30.0	0.12	1.30
SRR0604-150M	15 $\pm$ 20%	13	1000	2.52M	30.0	0.13	1.10
SRR0604-220M	22 $\pm$ 20%	13	1000	2.52M	25.0	0.19	0.90
SRR0604-330K	33 $\pm$ 10%	12	1000	2.52M	21.0	0.25	0.70
SRR0604-470K	47 $\pm$ 10%	10	1000	2.52M	18.0	0.35	0.60
SRR0604-680K	68 $\pm$ 10%	8	1000	2.52M	15.0	0.52	0.50
SRR0604-101K	100 $\pm$ 10%	16	1000	0.796M	13.0	0.65	0.40
SRR0604-151K	150 $\pm$ 10%	16	1000	0.796M	12.0	1.00	0.30
SRR0604-221K	220 $\pm$ 10%	14	1000	0.796M	10.0	1.70	0.25
SRR0604-331K	330 $\pm$ 10%	12	1000	0.796M	7.0	2.10	0.20
SRR0604-471K	470 $\pm$ 10%	12	1000	0.796M	6.5	3.30	0.18
SRR0604-681K	680 $\pm$ 10%	10	1000	0.796M	6.0	4.80	0.15
SRR0604-102K	1000 $\pm$ 10%	13	1000	0.252M	5.5	6.10	0.12

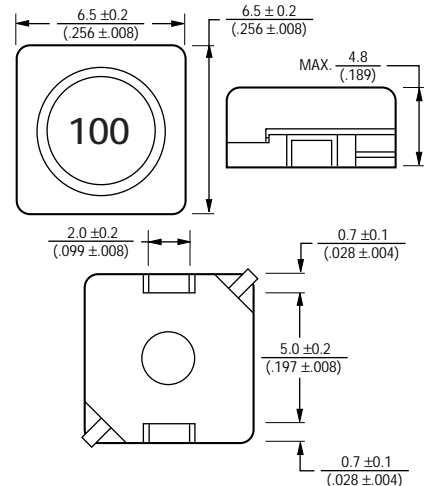
## General Specifications

Test Voltage .....1 Volt  
 Reflow Soldering .....260°C; 10 sec max.  
 Operating Temperature.....-20°C to +80°C  
 Storage Temperature .....-25°C to +85°C  
 Quantity .....400 pcs per reel

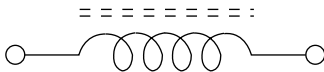
## Materials

Core Material .....Ferrite DR & RI  
 Wire .....Enameled Copper  
 Base .....LCP E4008  
 Terminal .....Nickel Bronze  
 Rated Current ....Ind. drop 10% typ at I sat  
 Temperature Rise ....40°C max at rated I rms

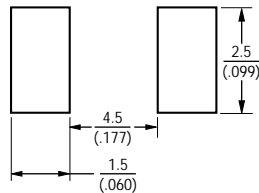
## Product Dimensions



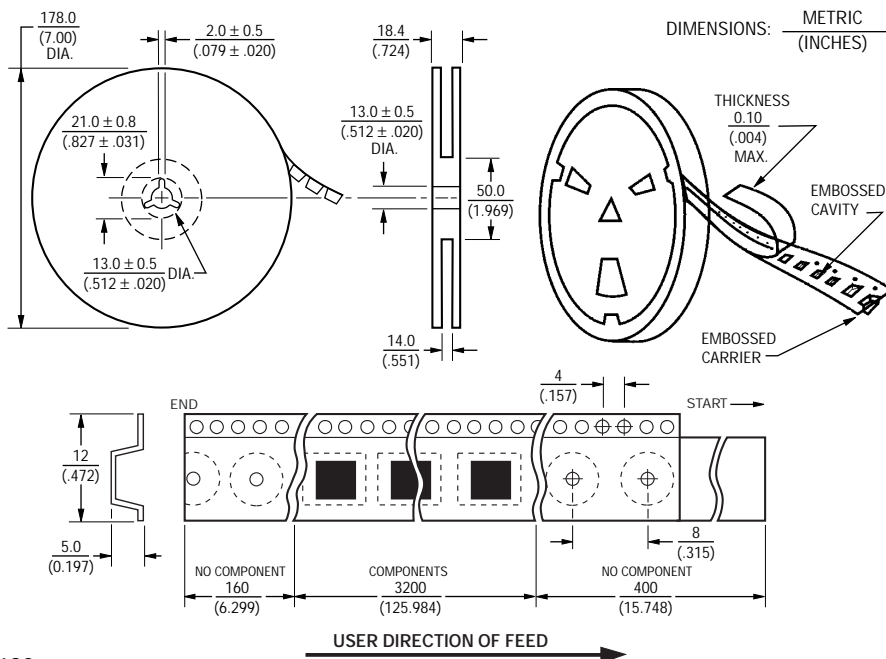
## Electrical Schematic



## Recommended Layout



## Packaging Specifications





**BOURNS®**

## Features

- Available in E12 series
- Low profile - Available in both 3.8mm and 4.7mm unit heights
- High current

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

# SRR0804/0805 Series - Shielded Power Inductor

### Electrical Specifications

Bourns Part No.	L (µH)	Q nom.	Test frequency Hz		SRF (MHz) typ.	RDC (Ω) max.	IDC (A) max.
			L	Q			
SRR0804 - 5R0M	5.0 ± 20%	20	1000	7.96M	50.0	0.080	1.70
- 7R5M	7.5 ± 20%	20	1000	7.96M	40.0	0.100	1.40
- 100M	10 ± 20%	38	1000	2.52M	32.0	0.120	1.20
- 120M	12 ± 20%	38	1000	2.52M	28.0	0.150	1.10
- 150M	15 ± 20%	38	1000	2.52M	25.0	0.170	1.00
- 180Y	18 ± 15%	35	1000	2.52M	23.0	0.190	0.90
- 220Y	22 ± 15%	30	1000	2.52M	22.0	0.250	0.80
- 270Y	27 ± 15%	28	1000	2.52M	18.0	0.270	0.70
- 330Y	33 ± 15%	26	1000	2.52M	17.0	0.300	0.65
- 390Y	39 ± 15%	26	1000	2.52M	16.0	0.380	0.60
- 470K	47 ± 10%	24	1000	2.52M	14.0	0.460	0.55
- 560K	56 ± 10%	24	1000	2.52M	12.0	0.600	0.50
- 680K	68 ± 10%	22	1000	2.52M	11.0	0.700	0.45
- 820K	82 ± 10%	20	1000	2.52M	10.0	0.800	0.40

Bourns Part No.	L (µH)	Q nom.	Test frequency Hz		SRF (MHz) typ.	RDC (Ω) max.	IDC (A) max.
			L	Q			
SRR0805 - 2R2M	2.2 ± 20%	18	1000	7.96M	75.0	0.040	2.50
- 3R9M	3.9 ± 20%	20	1000	7.96M	50.0	0.055	2.10
- 5R6M	5.6 ± 20%	20	1000	7.96M	40.0	0.065	1.95
- 8R2M	8.2 ± 20%	20	1000	7.96M	32.0	0.080	1.75
- 100M	10 ± 20%	40	1000	2.52M	28.0	0.100	1.50
- 120M	12 ± 20%	40	1000	2.52M	24.0	0.120	1.40
- 150M	15 ± 20%	40	1000	2.52M	22.0	0.140	1.30
- 180Y	18 ± 15%	40	1000	2.52M	19.0	0.160	1.20
- 220Y	22 ± 15%	38	1000	2.52M	17.0	0.180	1.10
- 270Y	27 ± 15%	35	1000	2.52M	15.5	0.200	1.00
- 330Y	33 ± 15%	35	1000	2.52M	13.5	0.240	0.92
- 390Y	39 ± 15%	35	1000	2.52M	12.0	0.260	0.84
- 470Y	47 ± 15%	32	1000	2.52M	10.5	0.280	0.75
- 560K	56 ± 10%	30	1000	2.52M	9.5	0.380	0.68
- 680K	68 ± 10%	28	1000	2.52M	9.0	0.440	0.60
- 820K	82 ± 10%	28	1000	2.52M	8.5	0.550	0.54
- 101K	100 ± 10%	45	1000	0.796M	7.5	0.600	0.50
- 121K	120 ± 10%	42	1000	0.796M	7.0	0.750	0.45

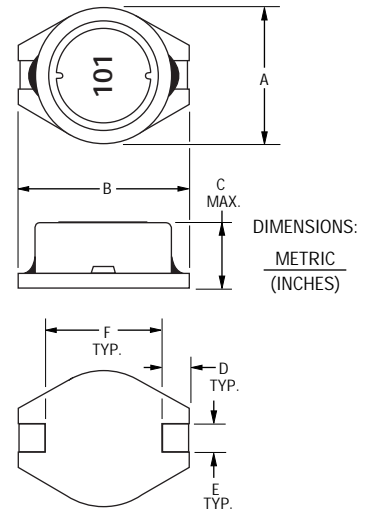
### General Specifications

Test Voltage .....1V  
 Reflow soldering .....230°C; 10 sec max.  
 Operating Temp. ....-20°C to +80°C  
 Storage Temp.....-25°C to +85°C

### Materials

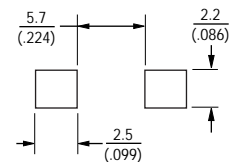
Core .....Ferrite DR&RI  
 Wire .....Enamelled copper  
 Base .....LCP E4008  
 Terminal Electrode.....Nickel Bronze  
 Temperature Rise.....40°C max.  
 at rated IDC

### Product Dimensions



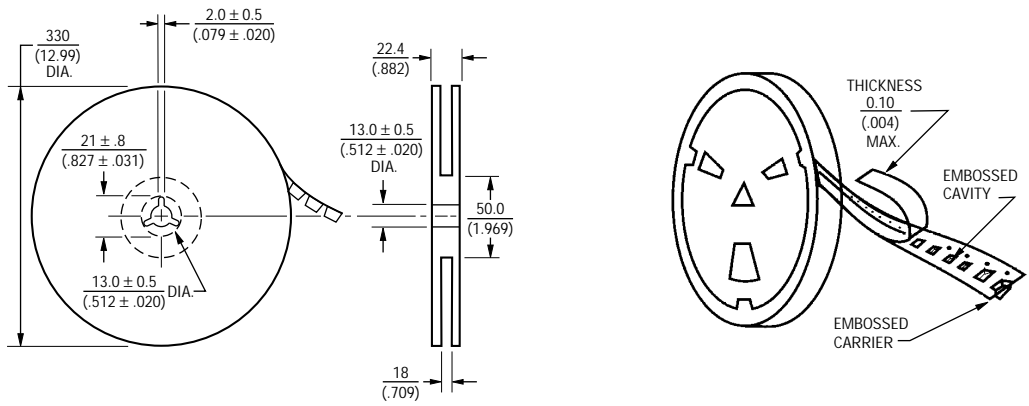
	SRR0804	SRR0805
A:	$\frac{8.0 \pm 0.2}{(315 \pm .008)}$	$\frac{8.0 \pm 0.2}{(315 \pm .008)}$
B:	$\frac{10.5 \pm 0.1}{(413 \pm .004)}$	$\frac{10.5 \pm 0.1}{(413 \pm .004)}$
C:	$\frac{3.8}{(.150)}$	$\frac{4.7}{(.185)}$
D:	$\frac{2.1}{(.082)}$	$\frac{2.1}{(.082)}$
E:	$\frac{2.0}{(.079)}$	$\frac{2.0}{(.079)}$
F:	$\frac{6.0}{(.236)}$	$\frac{6.0}{(.236)}$

### Recommended Layout

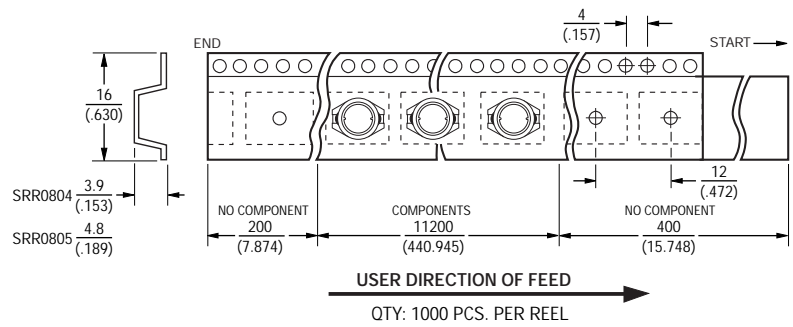


# SRR0804/0805 Series - Shielded Power Inductor

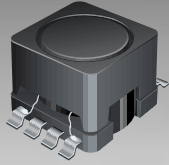
## Packaging Specifications



DIMENSIONS:        METRIC  
       (INCHES)







**BOURNS®**

## Features

- Available in E6 series
- High inductance up to 10mH
- Low 6.0mm profile
- Gull wing leads

## Applications

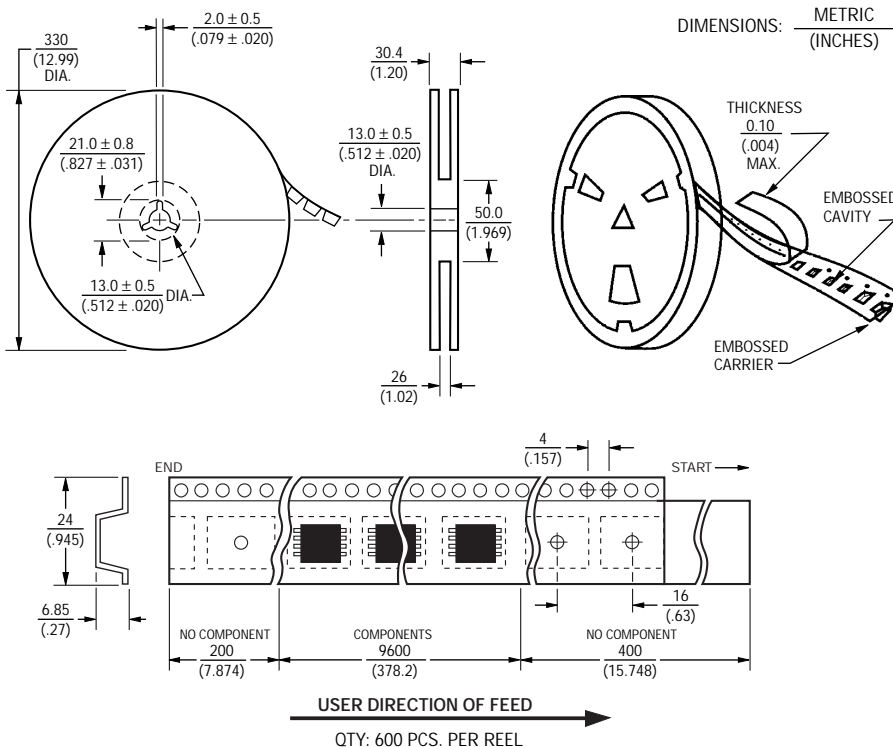
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

# SRR0906 Series - SMD Shielded Power Inductors

## Electrical Specifications

Bourns Part No.	L ( $\mu$ H)	Q Ref	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. ( $\Omega$ )	IDC Max. (A)
			L	Q			
SRR0906-100M	10 $\pm$ 20%	35	1000	2.52M	29.0	0.080	1.80
SRR0906-150M	15 $\pm$ 20%	35	1000	2.52M	23.0	0.100	1.60
SRR0906-220M	22 $\pm$ 20%	35	1000	2.52M	19.0	0.130	1.40
SRR0906-330M	33 $\pm$ 20%	35	1000	2.52M	15.0	0.150	1.20
SRR0906-470M	47 $\pm$ 20%	35	1000	2.52M	12.0	0.180	1.00
SRR0906-680M	68 $\pm$ 20%	35	1000	2.52M	9.0	0.350	0.85
SRR0906-101Y	100 $\pm$ 15%	40	1000	0.796M	7.5	0.420	0.70
SRR0906-151Y	150 $\pm$ 15%	40	1000	0.796M	6.0	0.550	0.60
SRR0906-221Y	220 $\pm$ 15%	40	1000	0.796M	5.0	1.000	0.48
SRR0906-331Y	330 $\pm$ 15%	40	1000	0.796M	4.5	1.300	0.40
SRR0906-471Y	470 $\pm$ 15%	35	1000	0.796M	4.0	1.600	0.35
SRR0906-681Y	680 $\pm$ 15%	60	1000	0.796M	2.7	3.200	0.25
SRR0906-102Y	1000 $\pm$ 15%	100	1000	0.252M	2.3	4.000	0.22
SRR0906-152Y	1500 $\pm$ 15%	100	1000	0.252M	2.0	5.200	0.18
SRR0906-222Y	2200 $\pm$ 15%	100	1000	0.252M	1.5	8.500	0.16
SRR0906-332Y	3300 $\pm$ 15%	100	1000	0.252M	1.3	11.000	0.12
SRR0906-472Y	4700 $\pm$ 15%	100	1000	0.252M	1.0	19.000	0.10
SRR0906-682Y	6800 $\pm$ 15%	100	1000	0.252M	0.9	24.000	0.09
SRR0906-103Y	10000 $\pm$ 15%	100	1000	79.60K	0.7	38.000	0.07

## Packaging Specifications



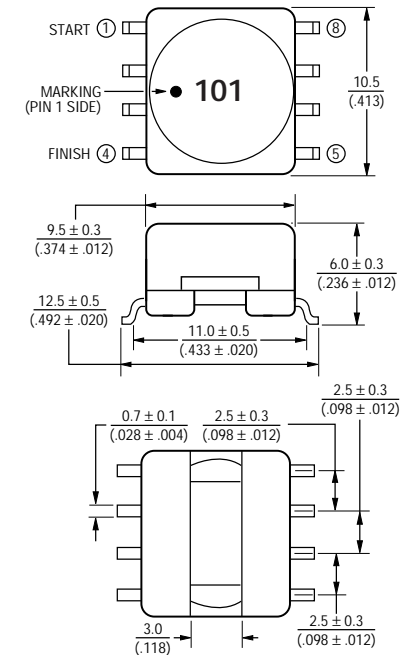
## General Specifications

Test Voltage ..... 1V  
 Reflow Soldering ..... 230°C, 10 sec. max.  
 Operating Temperature ..... -20°C to +80°C  
 Storage Temperature ..... -25°C to +85°C

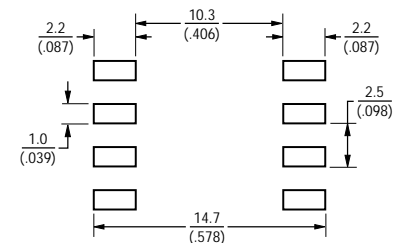
## Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enamelled copper  
 Base ..... LCP  
 Terminal ..... Nickel Bronze  
 Adhesive ..... Epoxy resin  
 Temperature Rise ..... 40°C max.  
 at rated IDC

## Product Dimensions

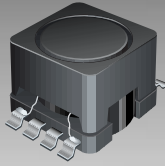


## Recommended Layout



## Electrical Schematic





**BOURNS**<sup>®</sup>

## Features

- Available in E6 series, E12 series optional
- High inductance up to 15mH
- High current up to 3A
- Gull wing leads

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

# SRR0908 Series - SMD Shielded Power Inductors

## Electrical Specifications

Bourns Part No.	Inductance (µH)	Q Nom.	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. (Ω)	IDC Max. (mA)
			L	Q			
SRR0908-100M	10 ± 20%	33	1K	2.520M	11.0	0.040	3000
-120M	12.5 ± 20%	40	1K	2.520M	11.0	0.050	2500
-150M	15 ± 20%	45	1K	2.520M	8.50	0.065	2200
-180M	18 ± 20%	40	1K	2.520M	8.50	0.075	2000
-220M	22 ± 20%	35	1K	2.520M	6.00	0.080	1900
-270M	27 ± 20%	45	1K	2.520M	6.00	0.090	1800
-330M	33 ± 20%	40	1K	2.520M	5.00	0.100	1700
-390M	39 ± 20%	45	1K	2.520M	5.00	0.135	1500
-470M	47 ± 20%	40	1K	2.520M	4.00	0.150	1400
-560M	56 ± 20%	35	1K	2.520M	3.00	0.165	1350
-680M	68 ± 20%	30	1K	2.520M	2.50	0.184	1250
-820M	82 ± 20%	30	1K	2.520M	2.40	0.260	1050
-101Y	100 ± 15%	40	1K	0.796M	6.00	0.280	1000
-121Y	120 ± 15%	42	1K	0.796M	5.70	0.340	900
-151Y	150 ± 15%	45	1K	0.796M	4.60	0.450	800
-181Y	180 ± 15%	35	1K	0.796M	4.20	0.500	700
-221Y	220 ± 15%	35	1K	0.796M	3.80	0.600	650
-271Y	270 ± 15%	30	1K	0.796M	3.40	0.700	600
-331Y	330 ± 15%	30	1K	0.796M	3.00	0.800	550
-391Y	390 ± 15%	33	1K	0.796M	2.60	1.000	500
-471Y	470 ± 15%	30	1K	0.796M	2.30	1.150	450
-561Y	560 ± 15%	35	1K	0.796M	2.20	1.500	380
-681Y	680 ± 15%	30	1K	0.796M	2.00	1.700	350
-821Y	820 ± 15%	35	1K	0.796M	1.90	2.200	320
-102Y	1000 ± 15%	85	1K	0.252M	1.80	2.500	300
-152Y	1500 ± 15%	12	1K	0.252M	1.30	4.000	250
-222Y	2200 ± 15%	95	1K	0.252M	1.00	5.000	200
-332Y	3300 ± 15%	95	1K	0.252M	0.90	8.000	150
-472Y	4700 ± 15%	90	1K	0.252M	0.80	12.000	120
-682Y	6800 ± 15%	90	1K	0.252M	0.60	16.500	100
-103Y	10000 ± 15%	110	1K	79.60K	0.50	26.000	95
-153Y	15000 ± 15%	130	1K	79.60K	0.40	40.000	75

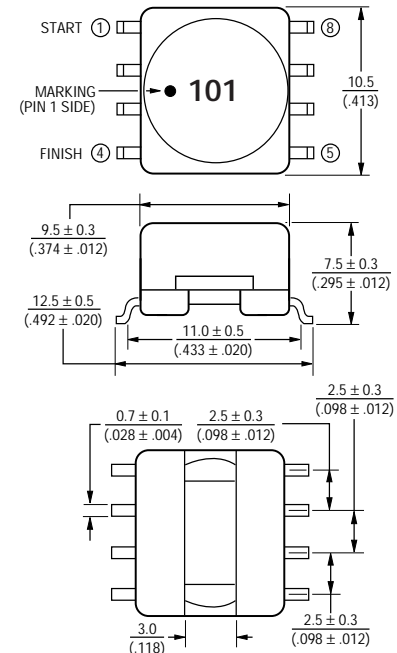
## General Specifications

Test Voltage .....1V  
 Reflow Soldering.....230°C, 10 sec. max.  
 Operating Temperature....-20°C to +80°C  
 Storage Temperature .....-25°C to +85°C

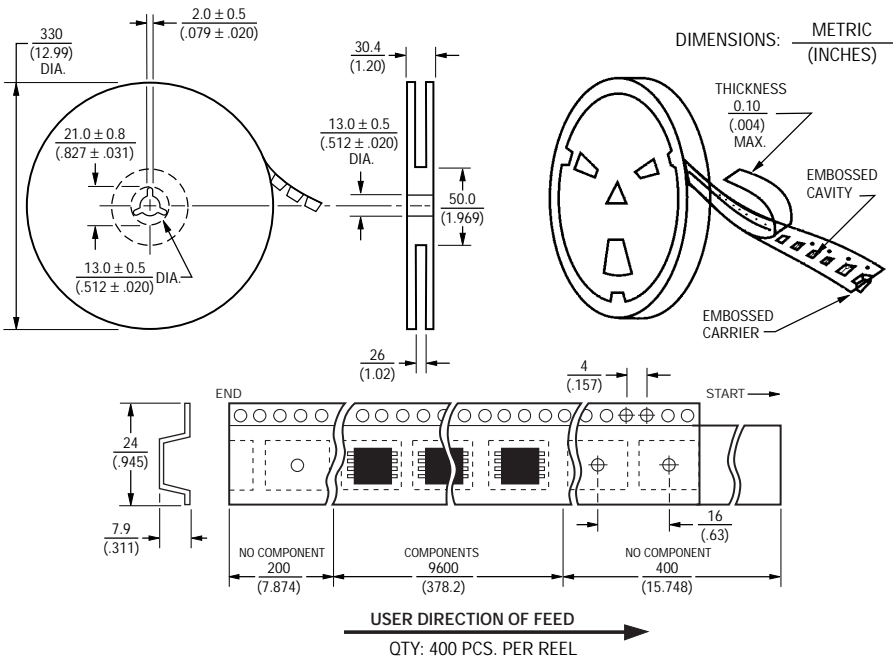
## Materials

Core .....Ferrite DR and RI core  
 Wire .....Enamelled copper  
 Base.....LCP  
 Terminal .....Nickel Bronze  
 Adhesive .....Epoxy resin  
 Temperature Rise.....40°C max.  
 at rated IDC

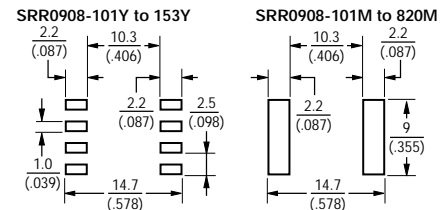
## Product Dimensions



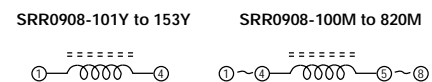
## Packaging Specifications



## Recommended Layout



## Electrical Schematic





### Features

- Available in E6 series
- Low profile of 3mm
- High current

### Applications

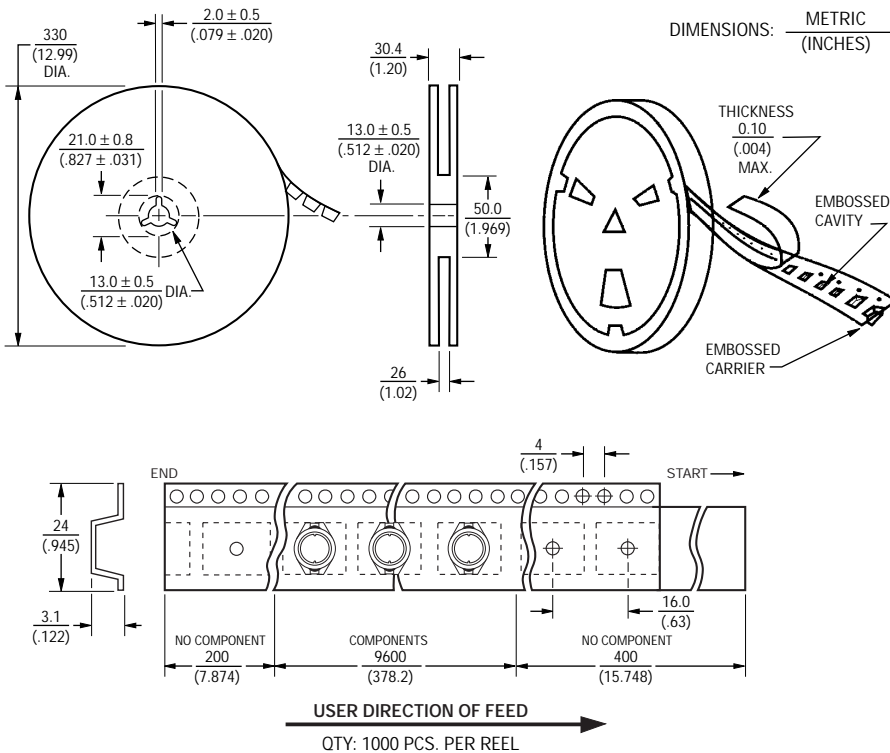
- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

## SRR1003 Series - Shielded Power Inductors

### Electrical Specifications

Bourns Part No.	L ( $\mu$ H)	Q Nom.	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. ( $\Omega$ )	I <sub>rms</sub> Max. (A)	I <sub>sat</sub> Max. (A)
			L	Q				
SRR1003-2R2M	2.2 $\pm$ 20%	11	1000	7.96M	90.0	0.045	2.760	3.40
SRR1003-4R7M	4.7 $\pm$ 20%	9	1000	7.96M	50.0	0.078	1.900	2.30
SRR1003-7R5M	7.5 $\pm$ 20%	10	1000	7.96M	32.0	0.100	1.440	1.70
SRR1003-100M	10 $\pm$ 20%	11	1000	7.96M	28.0	0.145	1.240	1.50
SRR1003-150M	15 $\pm$ 20%	11	1000	7.96M	25.0	0.200	1.020	1.20
SRR1003-220M	22 $\pm$ 20%	11	1000	7.96M	22.0	0.300	0.800	1.00
SRR1003-330M	33 $\pm$ 20%	10	1000	7.96M	17.0	0.450	0.700	0.85
SRR1003-470M	47 $\pm$ 20%	8	1000	7.96M	14.0	0.650	0.600	0.72
SRR1003-680M	68 $\pm$ 20%	6	1000	7.96M	11.0	0.800	0.480	0.58
SRR1003-101M	100 $\pm$ 20%	15	1000	2.52M	10.0	1.400	0.400	0.48
SRR1003-151M	150 $\pm$ 20%	15	1000	2.52M	8.0	1.800	0.320	0.40
SRR1003-221M	220 $\pm$ 20%	10	1000	2.52M	6.0	2.200	0.260	0.32

### Packaging Specifications



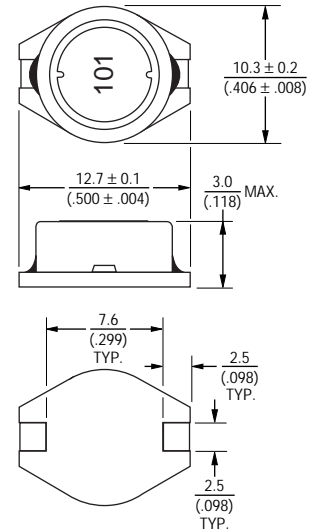
### General Specifications

Test Voltage ..... 1V  
 Reflow Soldering ..... 230°C, 10 sec. max.  
 Operating Temperature .... -20°C to +80°C  
 Storage Temperature ..... -25°C to +88°C

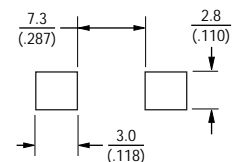
### Materials

Core ..... Ferrite DR and RI core  
 Wire ..... Enamelled copper  
 Base ..... LCP E4008  
 Terminal ..... Nickel Bronze  
 Rated Current  
 ..... Ind. drop 10% typ. at I<sub>sat</sub>  
 Temperature Rise ..... 40°C max.  
 at rated I<sub>rms</sub>

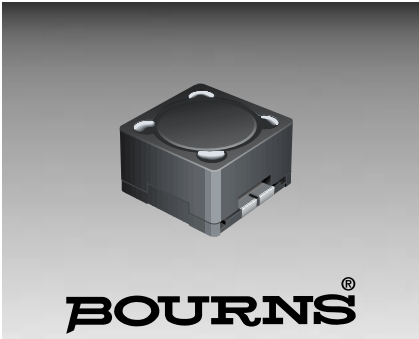
### Product Dimensions



### Recommended Layout







**BOURNS®**

### Features

- E6 series optional
- Unit height of 5mm
- Current up to 5A
- J-hook leads

### Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

## SRR1205 Series - Shielded High Power Inductors

### Electrical Specifications

Bourns Part No.	L (μH)	Q Nom.	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. (Ω)	IDC Max. (A)
			L	Q			
SRR1205-2R5M	2.5 ± 20%	18	1000	7.96M	27.0	24	5.0
SRR1205-4R7M	4.7 ± 20%	20	1000	7.96M	21.0	35	4.0
SRR1205-100M	10 ± 20%	21	1000	2.52M	15.0	54	3.0
SRR1205-250M	25 ± 20%	18	1000	2.52M	8.0	120	2.0
SRR1205-500Y	50 ± 15%	18	1000	2.52M	7.0	200	1.5
SRR1205-750Y	75 ± 15%	17	1000	2.52M	6.0	330	1.2
SRR1205-101K	100 ± 10%	12	1000	0.796M	5.0	400	1.0

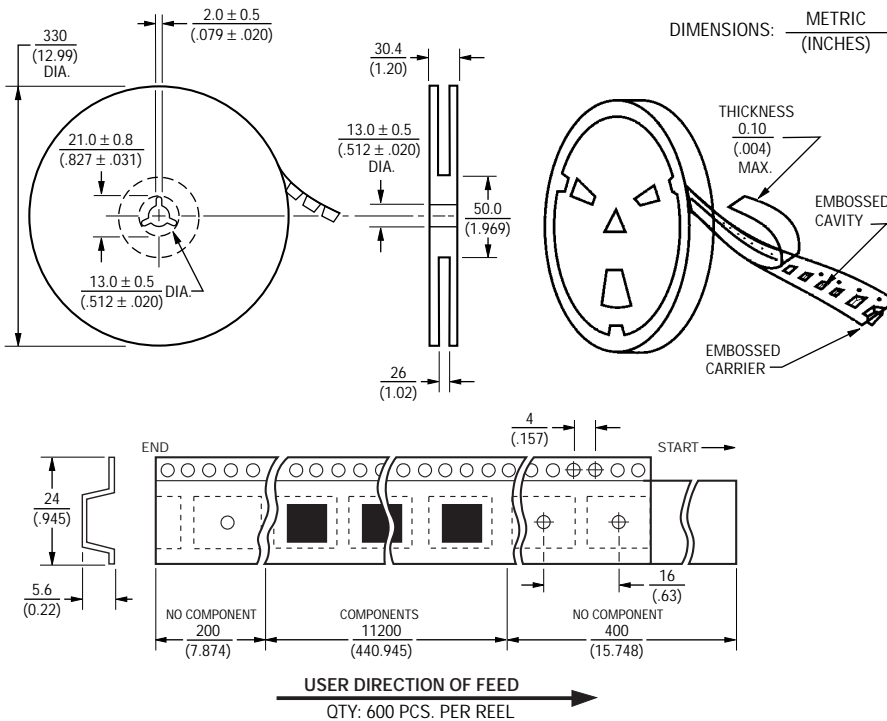
### General Specifications

Test Voltage .....1V  
 Reflow Soldering.....230°C, 10 sec. max.  
 Operating Temperature ....-20°C to +80°C  
 Storage Temperature .....-25°C to +85°C

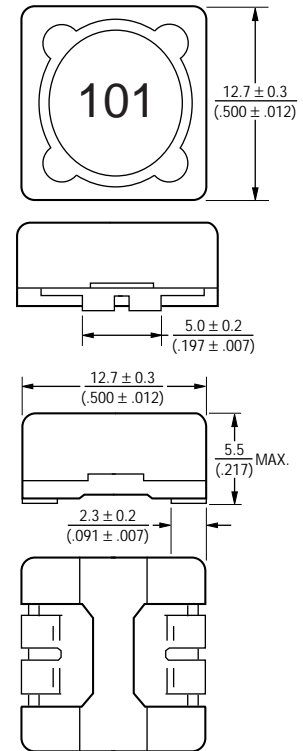
### Materials

Core .....Ferrite DR and RI core  
 Wire .....Enamelled copper  
 Base .....LCP E4008  
 Terminal .....Nickel Bronze  
 Temperature Rise.....40°C max.  
 at rated IDC

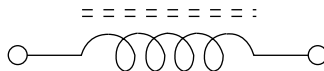
### Packaging Specifications



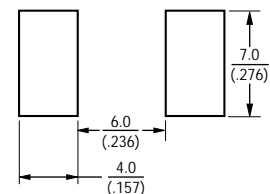
### Product Dimensions



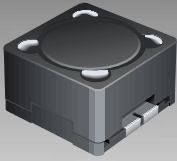
### Electrical Schematic



### Recommended Layout







**BOURNS®**

## Features

- Available in E6 series
- Unit height of 8mm
- Current up to 7.5A

## Applications

- Input/output of DC/DC converters
- Power supplies for:
  - Portable communications equipment
  - Camcorders
  - LCD TV
  - Car radios

# SRR1208 Series - Shielded High Power Inductors

## Electrical Specifications

Bourns Part No.	L (µH)	Q Nom.	Test Frequency Hz		SRF Typ. (MHz)	RDC Max. (Ω)	IDC Max. (A)
			L	Q			
SRR1208-2R5M	2.5 ± 20%	20	1000	7.96M	40.0	11	7.5
SRR1208-4R5M	4.5 ± 20%	24	1000	7.96M	35.0	14	6.5
SRR1208-6R5M	6.5 ± 20%	25	1000	7.96M	32.0	18	6.0
SRR1208-100M	10 ± 20%	20	1000	2.52M	28.0	21	5.0
SRR1208-120M	12 ± 20%	19	1000	2.52M	27.0	25	4.8
SRR1208-150M	15 ± 20%	21	1000	2.52M	26.0	36	4.0
SRR1208-180M	18 ± 20%	21	1000	2.52M	24.0	40	3.8
SRR1208-220M	22 ± 20%	23	1000	2.52M	21.0	43	3.5
SRR1208-270M	27 ± 20%	23	1000	2.52M	20.0	48	3.0
SRR1208-330Y	33 ± 15%	23	1000	2.52M	19.0	62	2.8
SRR1208-390Y	39 ± 15%	25	1000	2.52M	18.0	76	2.5
SRR1208-470Y	47 ± 15%	24	1000	2.52M	17.0	85	2.2
SRR1208-560Y	56 ± 15%	23	1000	2.52M	16.0	110	2.0
SRR1208-680Y	68 ± 15%	20	1000	2.52M	15.0	135	1.8
SRR1208-820Y	82 ± 15%	18	1000	2.52M	14.0	150	1.6
SRR1208-101Y	100 ± 15%	15	1000	0.796M	13.0	170	1.5
SRR1208-221K	220 ± 10%	13	1000	0.796M	12.0	380	1.1
SRR1208-331K	330 ± 10%	13	1000	0.796M	11.0	650	0.85
SRR1208-471K	470 ± 10%	14	1000	0.796M	10.0	850	0.7
SRR1208-102K	1000 ± 10%	11	1000	0.252M	8.0	1650	0.5

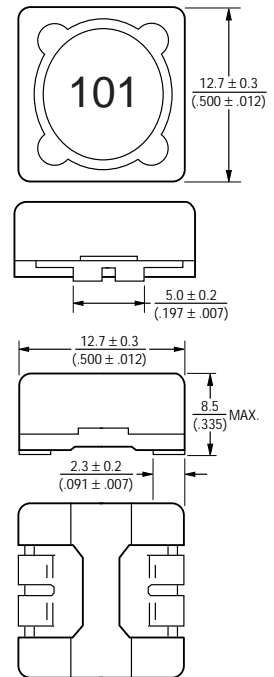
## General Specifications

Test Voltage .....1V  
 Reflow Soldering.....230°C, 10 sec. max.  
 Operating Temperature....-20°C to +80°C  
 Storage Temperature .....-25°C to +85°C

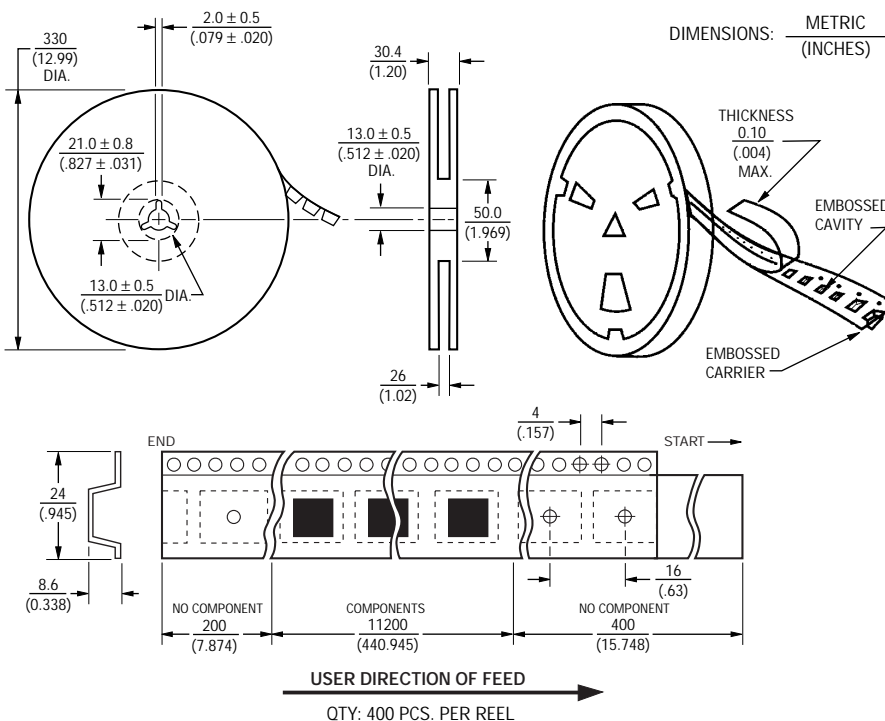
## Materials

Core .....Ferrite DR and RI core  
 Wire .....Enamelled copper  
 Base .....LCP E4008  
 Terminal .....Nickel Bronze  
 Temperature Rise.....40°C max.  
 at rated IDC

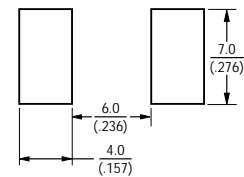
## Product Dimensions



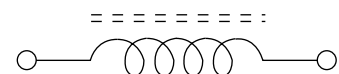
## Packaging Specifications



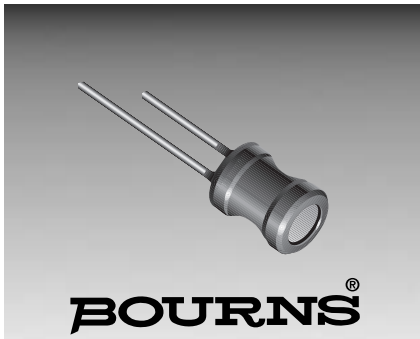
## Recommended Layout



## Electrical Schematic







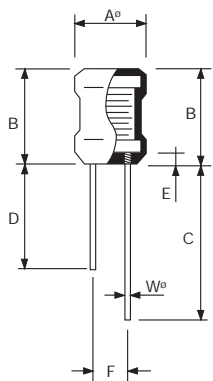
### Features

- Four types available
- High rated current for high current circuits
- RLB0712 and RLB0912 can be tape and reel packaged for automated assembly
- Available in E12 series

## RLB0712/RLB0912/RLB0914/RLB1314 Series

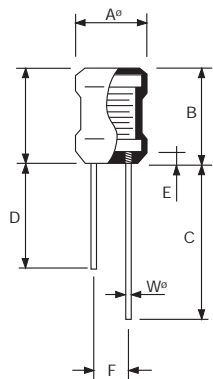
### Configuration

#### RLB0712



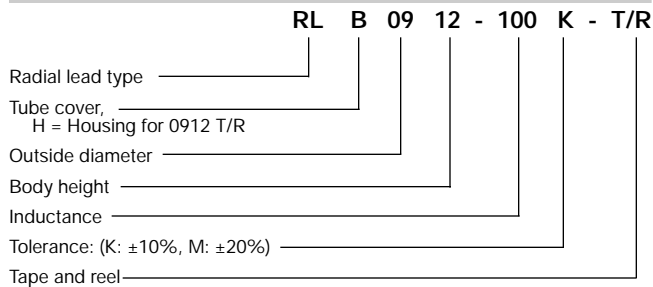
- A:  $\frac{7.5^{+0}}{(.295^{+0})}$
- B:  $\frac{12.0^{+0}}{(.472^{+0})}$
- C:  $\frac{15.0^{+0}}{(.59^{+0})}$
- D:  $\frac{10.0^{+0}}{(.394^{+0})}$
- E:  $\frac{3.0^{+0}}{(.118^{+0})}$
- F:  $\frac{3.0^{+0.8}}{(.118^{+0.032})}$  (BULK)
- W:  $\frac{0.65^{+0.05}}{(.026^{+0.002})}$

#### RLB0914

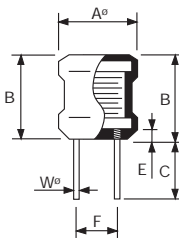


- A:  $\frac{9.0^{+1/-0.8}}{(.354^{+.039/-0.031})}$  max.
- B:  $\frac{12.5^{+1/-1.5}}{(.492^{-.039/-0.059})}$  max.
- C:  $\frac{25.0^{+1/-5}}{(.984^{+.039/-0.197})}$  min.
- D:  $\frac{20.0^{+1/-5}}{(.787^{+.039/-0.197})}$  min.
- E:  $\frac{3.0}{(.118)}$  max.
- F:  $\frac{5.0^{+0.08}}{(.197^{+0.032})}$
- W:  $\frac{0.65^{+0.05}}{(.026^{+0.002})}$

### How to Order

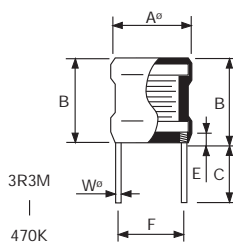


#### RLB0912

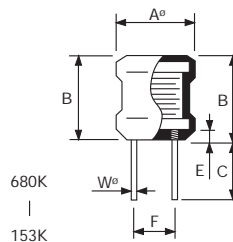


- A:  $\frac{9.5}{(.374)}$  max.
- B:  $\frac{12.0}{(.472)}$  max.
- C:  $\frac{5.0}{(.197)}$  min.
- E:  $\frac{3.0}{(.118)}$  max.
- F:  $\frac{5.0^{+0.08}}{(.197^{+0.003})}$  (BULK)
- W:  $\frac{5^{+0.5}}{(.197^{+0.02})}$  (TAPED)

#### RLB1314



- A:  $\frac{13}{(.512)}$  max.
- B:  $\frac{14.0}{(.551)}$  max.
- C:  $\frac{15.0^{+5.0}}{(.59^{+0.197})}$  min.
- E:  $\frac{3.0}{(.118)}$  max.
- F: } per electrical spec. sheet
- W: }



These radial lead fixed inductors are mainly used in applications for high current circuits.

DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$



**RLB0712 Series Electrical Characteristics**

BOURNS Part No.	Inductance (µH)	Q min.	Test freq. (Hz)		SRF (MHz) min.	RDC (Ω) max.	IDC (mA) max.
			L	Q			
RLB 0712 - 100K	10 ± 10%	20	1 k	2.520 M	16.0	0.07	1100
- 120K	12 ± 10%	20	1 k	2.520 M	12.0	0.08	1000
- 150K	15 ± 10%	20	1 k	2.520 M	10.0	0.09	900
- 180K	18 ± 10%	20	1 k	2.520 M	10.0	0.10	750
- 220K	22 ± 10%	20	1 k	2.520 M	9.0	0.12	700
- 270K	27 ± 10%	20	1 k	2.520 M	8.0	0.13	650
- 330K	33 ± 10%	20	1 k	2.520 M	7.0	0.15	600
- 390K	39 ± 10%	20	1 k	2.520 M	6.0	0.16	550
- 470K	47 ± 10%	20	1 k	2.520 M	6.0	0.18	450
- 560K	56 ± 10%	20	1 k	2.520 M	5.0	0.21	400
- 680K	68 ± 10%	20	1 k	2.520 M	5.0	0.24	360
- 820K	82 ± 10%	20	1 k	2.520 M	5.0	0.35	340
- 101K	100 ± 10%	20	1 k	0.796 M	4.0	0.40	320
- 121K	120 ± 10%	20	1 k	0.796 M	4.0	0.45	300
- 151K	150 ± 10%	20	1 k	0.796 M	3.5	0.50	280
- 181K	180 ± 10%	20	1 k	0.796 M	3.0	0.75	260
- 221K	220 ± 10%	20	1 k	0.796 M	3.0	0.90	240
- 271K	270 ± 10%	20	1 k	0.796 M	2.5	1.00	220
- 331K	330 ± 10%	20	1 k	0.796 M	2.5	1.10	200
- 391K	390 ± 10%	20	1 k	0.796 M	2.0	1.20	180
- 471K	470 ± 10%	20	1 k	0.796 M	2.0	1.50	160
- 561K	560 ± 10%	20	1 k	0.796 M	2.0	1.80	150

Packaging: 500 pieces per bag

**RLB0912 Series Electrical Characteristics**

BOURNS Part No.	Inductance (µH)	Q min.	Test freq. (Hz)		SRF (MHz) min.	RDC (Ω) max.	IDC (A) max.
			L	Q			
*RLB 0912 - 1R5M	1.5 ± 20%	30	1 k	7.960 M	78.0	0.008	5.4
- 2R2M	2.2 ± 20%	30	1 k	7.960 M	63.0	0.010	4.5
- 3R3M	3.3 ± 20%	30	1 k	7.960 M	50.0	0.018	3.6
- 4R7M	4.7 ± 20%	30	1 k	7.960 M	41.0	0.022	3.1
- 6R8M	6.8 ± 20%	30	1 k	7.960 M	33.0	0.028	2.5
- 100K	10.0 ± 10%	60	1 k	2.520 M	27.0	0.043	2.1
- 150K	15.0 ± 10%	50	1 k	2.520 M	21.0	0.056	1.7
- 220K	22.0 ± 10%	50	1 k	2.520 M	17.0	0.086	1.4
- 330K	33.0 ± 10%	45	1 k	2.520 M	13.0	0.140	1.1
- 470K	47.0 ± 10%	40	1 k	2.520 M	11.0	0.170	0.96
- 680K	68.0 ± 10%	35	1 k	2.520 M	9.0	0.280	0.79
- 101K	100.0 ± 10%	55	1 k	0.796 M	7.2	0.330	0.66
- 151K	150.0 ± 10%	40	1 k	0.796 M	5.7	0.560	0.53
- 221K	220.0 ± 10%	30	1 k	0.796 M	4.5	0.720	0.44
- 331K	330.0 ± 10%	25	1 k	0.796 M	3.6	1.100	0.36
- 471K	470.0 ± 10%	25	1 k	0.796 M	2.9	1.700	0.30
- 681K	680.0 ± 10%	25	1 k	0.796 M	2.3	2.300	0.25
- 102K	1000.0 ± 10%	55	1 k	0.252 M	1.9	4.300	0.20

\*RLH 0912-(LC)TR: Housing PBT-4130 (UL94V-O)

Packaging: 500 pieces per bag; available on tape and reel - 500 pieces per reel

**Materials**

Core: .....Ferrite DR core  
 Wire: .....Enameled copper wire  
 Lead: .....Tinned copper wire for bulk  
 Lead: .....Tinned CP wire for tape  
 Tube: .....Shrinkable tube 125°C, 600V  
**Temperature**  
 Rise: .....20°C max. at rated current  
**Operating**  
**Temperature:** .....-20 to +80°C

**Materials For Items On Following Page**

Core: .....Ferrite DR core  
 Wire: .....Enameled copper wire  
 Lead: .....0.6 dia. - 0.8 dia. mm soldered copper wire (3.3µH - 47 µH)  
 Lead: .....0.8 dia. mm tinned copper wire (68 µH - 15 µH) } RLB1314 only  
 Tube: .....Shrinkable tube 125°C, 600V  
**Temperature**  
 Rise: .....40°C max. at rated current for 0914 / 20°C max. for 1314

RLB Series Electrical Characteristics

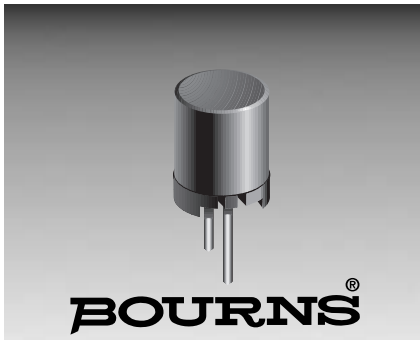
BOURNS Part No.	Inductance (µH)	Q min.	Test freq. (MHz) L Q	SRF (MHz) min.	RDC (Ω) max.	IDC (A) max.
RLB 0914 - 3R3M	3.3 ± 20%	20	7.960	70.0	0.027	3.60
- 4R7M	4.7 ± 20%	20	7.960	50.0	0.033	3.20
- 6R8M	6.8 ± 20%	20	7.960	30.0	0.039	3.00
- 100K	10.0 ± 10%	50	2.520	20.0	0.048	2.70
- 120K	12.0 ± 10%	50	2.520	15.0	0.055	2.50
- 150K	15.0 ± 10%	50	2.520	10.0	0.060	2.40
- 180K	18.0 ± 10%	40	2.520	9.5	0.065	2.30
- 220K	22.0 ± 10%	40	2.520	9.0	0.090	1.90
- 270K	27.0 ± 10%	40	2.520	8.5	0.110	1.80
- 330K	33.0 ± 10%	40	2.520	8.0	0.120	1.70
- 390K	39.0 ± 10%	30	2.520	7.0	0.130	1.60
- 470K	47.0 ± 10%	30	2.520	6.0	0.140	1.50
- 560K	56.0 ± 10%	30	2.520	5.0	0.200	1.30
- 680K	68.0 ± 10%	30	2.520	4.5	0.210	1.20
- 820K	82.0 ± 10%	30	2.520	4.0	0.230	1.10
- 101K	100.0 ± 10%	30	0.796	3.5	0.280	1.00
- 121K	120.0 ± 10%	30	0.796	3.0	0.320	0.90
- 151K	150.0 ± 10%	30	0.796	2.8	0.370	0.80
- 181K	180.0 ± 10%	30	0.796	2.6	0.540	0.75
- 221K	220.0 ± 10%	20	0.796	2.4	0.600	0.70
- 271K	270.0 ± 10%	20	0.796	2.2	0.680	0.65
- 331K	330.0 ± 10%	20	0.796	2.0	0.760	0.60
- 391K	390.0 ± 10%	20	0.796	1.9	0.850	0.55
- 471K	470.0 ± 10%	20	0.796	1.8	1.300	0.50
- 561K	560.0 ± 10%	20	0.796	1.7	1.400	0.45
- 681K	680.0 ± 10%	20	0.796	1.6	1.600	0.40
- 821K	820.0 ± 10%	20	0.796	1.5	1.800	0.35
- 102K	1000.0 ± 10%	40	0.252	1.3	2.100	0.30

Packaging: 500 pieces per bag

RLB1314 Series Electrical Characteristics

BOURNS Part No.	Inductance (µH)	Q Ref.	Test freq. (Hz)		SRF (MHz) Typ.	RDC (Ω) max.	IDC (A) max.	W Dia. mm(in) ±0.05 (.002)	F mm(in) ±1.0 (.04)
			L	Q					
RLB 1314 - 3R3M	3.3 ± 20%	90	1 k	7.96 M	59.00	0.008	5.600	0.8 (.032)	10.0 (.394)
- 4R7M	4.7 ± 20%	100	1 k	7.96 M	45.00	0.009	4.700	0.8 (.032)	10.0 (.394)
- 6R8M	6.8 ± 20%	80	1 k	7.96 M	34.00	0.012	3.900	0.7 (.028)	10.0 (.394)
- 100M	10.0 ± 20%	140	1 k	2.52 M	26.00	0.015	3.200	0.7 (.028)	10.0 (.394)
- 150M	15.0 ± 20%	120	1 k	2.52 M	19.00	0.019	2.600	0.7 (.028)	10.0 (.394)
- 220K	22.0 ± 10%	110	1 k	2.52 M	14.00	0.026	2.200	0.7 (.028)	10.0 (.394)
- 330K	33.0 ± 10%	100	1 k	2.52 M	10.00	0.045	1.800	0.6 (.024)	10.0 (.394)
- 470K	47.0 ± 10%	90	1 k	2.52 M	8.30	0.056	1.500	0.6 (.024)	10.0 (.394)
- 680K	68.0 ± 10%	80	1 k	2.52 M	6.70	0.092	1.200	0.8 (.032)	7.0 (.276)
- 101K	100.0 ± 10%	70	1 k	796 K	5.40	0.120	1.000	0.8 (.032)	7.0 (.276)
- 151K	150.0 ± 10%	70	1 k	796 K	4.30	0.200	0.820	0.8 (.032)	7.0 (.276)
- 221K	220.0 ± 10%	40	1 k	796 K	3.40	0.250	0.680	0.8 (.032)	7.0 (.276)
- 331K	330.0 ± 10%	40	1 k	796 K	2.70	0.420	0.550	0.8 (.032)	7.0 (.276)
- 471K	470.0 ± 10%	30	1 k	796 K	2.30	0.510	0.460	0.8 (.032)	7.0 (.276)
- 681K	680.0 ± 10%	30	1 k	796 K	1.90	0.790	0.380	0.8 (.032)	7.0 (.276)
- 102K	1000.0 ± 10%	40	1 k	252 K	1.60	1.300	0.310	0.8 (.032)	7.0 (.276)
- 152K	1500.0 ± 10%	30	1 k	252 K	1.30	1.700	0.250	0.8 (.032)	7.0 (.276)
- 222K	2200.0 ± 10%	60	1 k	252 K	1.10	2.900	0.210	0.8 (.032)	7.0 (.276)
- 332K	3300.0 ± 10%	50	1 k	252 K	0.90	3.700	0.170	0.8 (.032)	7.0 (.276)
- 472K	4700.0 ± 10%	50	1 k	252 K	0.76	5.600	0.140	0.8 (.032)	7.0 (.276)
- 682K	6800.0 ± 10%	60	1 k	252 K	0.65	9.400	0.120	0.8 (.032)	7.0 (.276)
- 103K	10000.0 ± 10%	80	1 k	79.6 K	0.53	12.000	0.100	0.8 (.032)	7.0 (.276)
- 153K	15000.0 ± 10%	70	1 k	79.6 K	0.41	15.000	0.082	0.8 (.032)	7.0 (.276)

Packaging: 300 pieces per bag

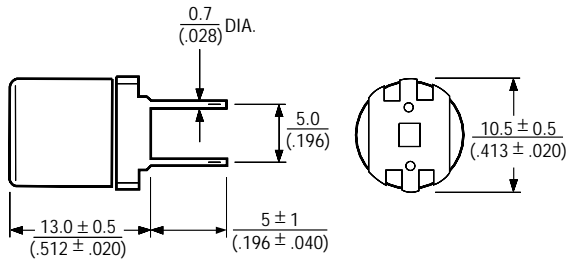


## Features

- High inductance up to 47mH
- High Q level

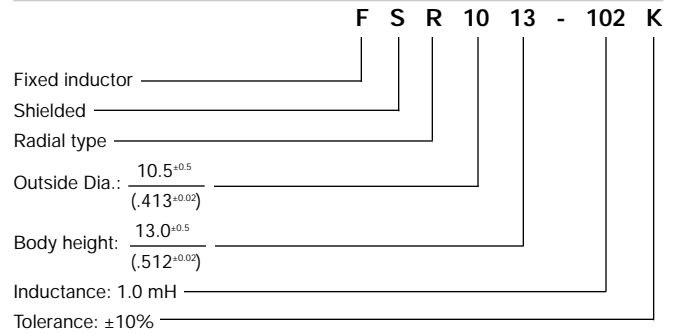
## FSR1013 Series - Shielded Fixed Inductors

### Dimensions



DIMENSIONS ARE:  $\frac{\text{METRIC}}{\text{(INCHES)}}$

### How to Order



### Electrical Characteristics

BOURNS Part No.	Inductance (mH)	Q min.	Test freq. (Hz)		SRF (kHz) min.	RDC ( $\Omega$ ) max.	Rated Curr. IDC (mA)
			L	Q			
FSR 1013 - 102K	1.0 $\pm$ 10%	40	1 k	252.0 k	740	4.0	150
- 122K	1.2 $\pm$ 10%	40	1 k	252.0 k	670	5.0	140
- 152K	1.5 $\pm$ 10%	40	1 k	252.0 k	500	6.0	130
- 182K	1.8 $\pm$ 10%	40	1 k	252.0 k	480	7.0	115
- 222K	2.2 $\pm$ 10%	40	1 k	252.0 k	410	10.0	100
- 272K	2.7 $\pm$ 10%	40	1 k	252.0 k	390	11.0	95
- 332K	3.3 $\pm$ 10%	30	1 k	252.0 k	350	12.0	85
- 392K	3.9 $\pm$ 10%	30	1 k	252.0 k	340	13.0	80
- 472K	4.7 $\pm$ 10%	30	1 k	252.0 k	320	23.0	70
- 562K	5.6 $\pm$ 10%	30	1 k	252.0 k	310	25.0	65
- 682K	6.8 $\pm$ 10%	20	1 k	252.0 k	280	30.0	60
- 822K	8.2 $\pm$ 10%	20	1 k	252.0 k	260	32.0	50
- 103K	10.0 $\pm$ 10%	50	1 k	79.6 k	240	35.0	45
- 123K	12.0 $\pm$ 10%	50	1 k	79.6 k	210	50.0	40
- 153K	15.0 $\pm$ 10%	50	1 k	79.6 k	190	58.0	38
- 183K	18.0 $\pm$ 10%	50	1 k	79.6 k	180	63.0	35
- 223K	22.0 $\pm$ 10%	40	1 k	79.6 k	140	90.0	30
- 273K	27.0 $\pm$ 10%	40	1 k	79.6 k	130	100.0	28
- 333K	33.0 $\pm$ 10%	40	1 k	79.6 k	125	115.0	25
- 393K	39.0 $\pm$ 10%	30	1 k	79.6 k	120	185.0	23
- 473K	47.0 $\pm$ 10%	30	1 k	79.6 k	110	205.0	22

### Materials

Core: .....Ferrite POT core  
 Wire: .....Enamelled copper wire  
 Bobbin: .....Phenolic  
 Adhesive:.....Epoxy resin  
 Temperature Rise:.....40°C max. at rated current

