

Varistors — continued

MiniReel™  
SIOV Series – Surface Mount



Tape width = 8mm



- 100mm reel size
- 250 pieces on each reel
- Ideal for pre-production, prototyping and production shortfalls
- Complete with leader tape
- Surface mount metal oxide varistors
- Operating temperature -55°C to +155°C

Max. ac op. Volt. (V)	Max. dc op. Volt. (V)	Varistor Volt. @ 1mA (V)	MiniReel List No.	Order Code
<b>Case Size 0805, ±20% Tolerance</b>				
4	5.5	8	MR-Q69510-V40-M62	345-3431
6	8	11	MR-Q69510-V60-M62	345-3443
<b>Case Size 0805, ±10% Tolerance</b>				
14	18	22	MR-Q69510-V140-K62	345-3455
25	31	39	MR-Q69510-V250-K62	345-3467
<b>Case Size 1206, ±20% Tolerance</b>				
4	5.5	8	MR-Q69520-V40-M62	345-3479
6	8	11	MR-Q69520-V60-M62	345-3480
<b>Case Size 1206, ±10% Tolerance</b>				
14	18	22	MR-Q69520-V140-K62	345-3492
20	26	33	MR-Q69520-V200-K62	345-3509
25	31	39	MR-Q69520-V250-K62	345-3510
30	38	47	MR-Q69520-V300-K62	345-3522
<b>Case Size 1210, ±10% Tolerance</b>				
20	26	33	MR-Q69530-G200-K62	345-3534
30	38	47	MR-Q69530-G300-K62	345-3546

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250 Pieces Per Reel

MiniReel List No.	Order Code	1+	3+	5+
<b>Case Size 0805, ±20% Tolerance</b>				
MR-Q69510-V40-M62	345-3431			
MR-Q69510-V60-M62	345-3443			
<b>Case Size 0805, ±10% Tolerance</b>				
MR-Q69510-V140-K62	345-3455			
MR-Q69510-V250-K62	345-3467			
<b>Case Size 1206, ±20% Tolerance</b>				
MR-Q69520-V40-M62	345-3479			
MR-Q69520-V60-M62	345-3480			
<b>Case Size 1206, ±10% Tolerance</b>				
MR-Q69520-V140-K62	345-3492			
MR-Q69520-V200-K62	345-3509			
MR-Q69520-V250-K62	345-3510			
MR-Q69520-V300-K62	345-3522			
<b>Case Size 1210, ±10% Tolerance</b>				
MR-Q69530-G200-K62	345-3534			
MR-Q69530-G300-K62	345-3546			

'Transguard' – Surface Mount



0603 case size L = 1.6 ± 0.15, W = 0.8 ± 0.15, H = 0.9 max.  
 0805 case size L = 2.0 ± 0.2, W = 1.25 ± 0.2, H = 1.02 max.  
 1206 case size L = 3.2 ± 0.2, W = 1.6 ± 0.2, H = 1.02 max.  
 1210 case size L = 3.2 ± 0.2, W = 2.49 ± 0.2, H = 1.7 max.  
 Supplied on 8mm embossed tape

- Ultra compact high energy multilayer transient suppressors in four popular SMD case sizes
- Provides an ultra fast clamping time of less than 1ns for all low voltage DC applications.



Working Voltage, V <sub>WM</sub> (V)	Break-down Voltage, V <sub>B</sub> (V)	Clamping Voltage Max. 8/20µs, V <sub>C</sub> (V)	Peak Current 8/20µs I <sub>p</sub> (A)	Transient Energy Max. 10/1000µs E <sub>TRAN</sub> (J)	Capacitance nF	Inductance nH	Mftrs. List No.	Order Code
<b>0603 Case Size</b>								
3.6	4.0-5.5	10	30	0.1	1.5	1.0	VC060303A100	528-900
5.6	7.6-9.3	15.5	30	0.1	1.0	1.0	VC060305A150	528-912
14	16.5-20.3	30	30	0.1	0.5	1.0	VC060314A300	528-924
18	22.9-28.0	40	30	0.1	0.275	1.0	VC060318A400	528-936
<b>0805 Case Size</b>								
3.6	4.0-5.5	10	40	0.1	1.775	1.5	VC080503A100	528-948
5.6	7.6-9.3	15.5	40	0.1	1.1	1.5	VC080505A150	528-950
5.6	7.1-8.7	15.5	120	0.3	2.75	1.5	VC080505C150	528-961
14	16.5-20.3	30	40	0.1	0.43	1.5	VC080514A300	528-973
<b>1206 Case Size</b>								
5.6	7.1-8.7	15.5	150	0.4	3.0	1.7	VC120605D150	528-985
14	16.5-20.3	30	40	0.1	0.6	1.7	VC120614A300	528-997
14	15.9-19.4	30	150	0.4	1.4	1.7	VC120614D300	529-000
18*	22.5-27.5	40	150	0.4	1.0	1.7	VC120618D400	529-011
26	30.5-37.3	58	120	0.4	0.55	1.7	VC120626D580	529-023
30	36.0-45.0	65	120	0.4	0.5	1.7	VC120630D650	529-035
<b>1210 Case Size</b>								
18*	21.5-26.5	39	500	1.5	3.1	2.0	VC121018J390	529-047

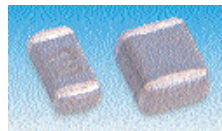
\* Withstands 24.5V dc for 5 minutes (automotive applications)

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Order Multiple=5

Working Voltage (V)	Order Code	5+	50+	100+	500+	1000+
<b>0603 Case Size</b>						
3.6	528-900					
5.6	528-912					
14	528-924					
18	528-936					
<b>0805 Case Size</b>						
3.6	528-948					
5.6	528-950					
5.6	528-961					
14	528-973					
<b>1206 Case Size</b>						
5.6	528-985					
14	528-997					
14	529-000					
18	529-011					
26	529-023					
30	529-035					
18	529-047					

ML Series – Surface Mount



- Transient surge suppressors to protect electronic devices from high voltage transients
- Manufactured from ceramic which offers rugged protection, excellent energy absorption and high internal heat dissipation
- Chip form eliminates lead conductance which ensures a fast response

- Low capacitance types do not reduce bandwidth of high speed signal lines
- Designed to fail short circuit when over stressed to protect associated equipment

Operating temperature -55°C to +125°C

Maximum Continuous Working Voltage V <sub>dc</sub> Vac	Maximum Non-repet. Surge Current (A) (8/20µs)	Non-repetitive Surge Energy (10/1000µs)	Nominal Voltage at 1mA DC Test Curr. Min (V)	Maximum Clamping Voltage at 10A (or as noted) (8/20µs) (V)	Typical Cap @1MHz nF	Mftrs. List No.	Order Code
<b>0805 Case Size</b>							
3.5	2.5	120	0.3	3.7	5.5	10 at 5A	2.75 V3.5MLA0805 597-508
3.5	2.5	40	0.1	3.7	5.5	10 at 2A	1.2 V3.5MLA0805L 597-510
5.5	4	120	0.3	7.1	9.3	15.5 at 5A	2.5 V5.5MLA0805 597-521
5.5	4	40	0.1	7.1	9.3	15.5 at 2A	1.1 V5.5MLA0805L 597-533
14	10	120	0.3	15.9	20.3	30 at 5A	1.2 V14MLA0805 597-545
14	10	40	0.1	15.9	20.3	30 at 2A	0.45 V14MLA0805L 597-557
18	14	120	0.3	22.5	28	40 at 5A	0.65 V18MLA0805 597-569
18	14	40	0.1	22.5	28	40 at 2A	0.35 V18MLA0805L 597-570
<b>1206 Case Size</b>							
5.5	4	150	0.4	7.1	8.7	15.5	4.5 V5.5MLA1206 597-594
14	10	150	0.4	16.4	20	30	2.1 V14MLA1206 597-600
18	14	150	0.4	22	27	40	1.7 V18MLA1206 597-612
26	20	150	0.6	29.5	38.5	56	0.8 V26MLA1206 597-624
33	26	180	0.8	38	45	72	0.5 V33MLA1206 597-636
42	30	180	0.8	46	56	86	0.45 V42MLA1206 597-648
56	40	180	1.0	61	76	110	0.35 V56MLA1206 597-650
68	50	180	1.0	76	90	130	0.15 V68MLA1206 597-661
<b>1210 Case Size</b>							
18	14	250	0.8	22	27	40	1.9 V18MLA1210 597-673
26	20	250	1.2	29.5	38.5	54	1.0 V26MLA1210 597-685

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