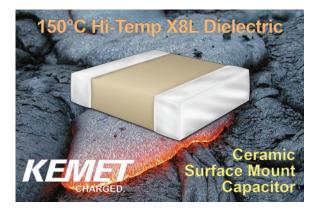


Surface Mount Ceramic Chip Capacitors – X8L Dielectric

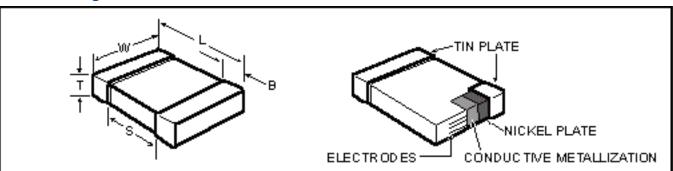


KEMET's X8L Dielectric offers an operating temperature range from -55°C to +150°C with capacitance shift limited to ±15% from -55°C to +125°C and +15, -40% from 125°C to 150°C. Product applications include harsh environments such as Down Hole (Oil Exploration), Automotive (Under Hood), Military and Aerospace.

Five standard package options are available which include EIA 0402, 0603, 0805, 1206, and 1210 case sizes. Devices are available in dc voltage ratings of 10V, 25V and 50V, with capacitance offerings ranging from 10pF to 0.22μ F. Capacitance tolerances offerings include ±5%, ±10% and ±20.

All parts are environmentally friendly, in compliance with RoHS legislation (RoHS 6/6) and are being offered in both commercial and automotive grades with 100% pure matte tin-plated terminations that allow for excellent solderability. A Sn/Pb termination option is also available upon request.

Outline Drawing



Dimensions - Millimeters (Inches)

EIA SIZE CODE	METRIC SIZE CODE	L - LENGTH	W - WIDTH	B - BANDWIDTH	S SEPARATION minimum	MOUNTING TECHNIQUE
0402	1005	1.0 (.04) ± .05 (.002)	0.5 (.02) ± .05 (.002)	0.30 (.012) ±.10 (.004)	0.3 (.012)	Solder Reflow
0603	1608	1.6 (.063) ± .15 (.006)	0.8 (.032) ± .15 (.006)	0.35 (.014) ± .15 (.006)	0.7 (.028)	Solder Wave +
0805	2012	2.0 (.079) ± .20 (.008)	1.25 (.049) ± .20 (.008)	0.50 (.02) ± .25 (.010)	0.75 (.030)	or
1206	3216	3.2 (.126) ± .20 (.008)	1.6 (.063) ± .20 (.008)	0.50 (.02) ± .25 (.010)	N/A	Solder Reflow
1210	3225	3.2 (.126) ± .20 (.008)	2.5 (.098) ± .20 (.008)	0.50 (.02) ± .25 (.010)	N/A	Solder Reflow

© KEMET Electronics Corporation • P.O. Box 5928 • Greenville, SC 29606 (864) 963-6300 • www.kemet.com



Product Bulletin

Qualification Certification:

Automotive Grade Available: AEC-Q200 Rev. C RoHS-PRC (6/6) - 100% matte Sn termination

Electrical Parameters:

As detailed in the KEMET Surface Mount Catalog F3102 for X8L, with following specific requirements based on room temperature (25°C) parameters:

- Operating Temperature Range: -55°C to +150°C
- Temperature Coefficient of Capacitance : ±15% (-55 to 125°C)
- +15, -40% (125 to 150°C)
 Insulation Resistance (IR) measured after 2 minutes at rated voltage @ 25°C: Limit is 1000 megohm microfarads or 100GΩ, whichever of the two is smaller.
- Capacitance and Dissipation Factor (DF) measured under the following conditions: 1kHz and 1 Vrms

DF Limits are:

10 Volts: 3.5% 25 and 50 volts: 2.5%

Ordering Information

С	1206	С	106	K	8	Ν	Α	С
Ceramic	Case Size (L"x W")	Specification/ Series	Capacitance Code (pF)	Capacitance Tolerance	Voltage	Dielectric	Failure Rate/ Design	End Metallization (Plated)
	0402 0603 0805 1206 1210	C = Standard X = Flexible Termination (Not avail- able w/SnPd)	2 Sig. Digits + Number of Zeros	J = ±5% K = ±10% M = ±20%	8 = 10V 3 = 25V 5 = 50V	N = X8L	A = N/A	C = 100% Matte Sn L = SnPb (5% min)

Soldering Process

All parts incorporate the standard KEMET barrier layer of pure nickel, with an overplate of pure tin to provide excellent solderability as well as resistance to leaching. The recommended techniques are as follows:

- 0402 and ≥1210 Case Sizes Solder Reflow Only
- 0603/0805/1206 Case Sizes Solder Wave/Solder Reflow

Marking

These chips will be supplied unmarked. If required, they can be laser-marked as an extra option. Details on the marking format are included in KEMET Surface Mount catalog F3102.

In general, the information in the KEMET Surface Mount catalog F3102 applies to these capacitors. The information in this bulletin supplements that in the catalog.



X8L DIELECTRIC (0402 - 1210 Case Sizes)

		Series		02C		0603			0805			1206	<i>'</i>	0	1210	0	ſ
		Series	C04	020	L L	0603		C C	0805		U U	1206		C C	1210		Ł
		Voltage	10V	25V	10V	25V	50V	10V	25V	50V	10V	25V	50V	10V	25V	50V	
Сар	Cap	Voltage	Ň	Š	×	Š	×	×	Š	×	<	š	ž	×	š	ž	
pF	Code	Voltage Code	8	3	8	3	5	8	3	5	8	3	5	8	3	5	t
			-	Ű			-			l Chip	-				Ŭ	Ű	Ł
		Cap Tolerance							-	Thickr							
12,000	123	JKM	BB	BB													Ł
15,000	153	JKM	BB	BB													
18,000	183	JKM	BB	BB													
22,000	223	JKM	BB	BB													
27,000	273	JKM	BB														
33,000	333	JKM	BB														
39,000	393	JKM	BB				~-										1
47,000	473	JKM	BB		СВ	CB	СВ										1
56,000	563	JKM															1
68,000 82,000	683 823	J K M J K M															
100,000	104	JKM															
120,000	124	JKM			СВ	CB											교
150,000	154	JKM			СВ	CB		DG	DG	DG							N N
180,000	184	JKM			CB			DG	DG	DG							Revision 1
220,000	224	JKM			CB			DD	DD	DG							1
270,000	274	JKM						DD	DD								-
330,000	334	JKM						DD	DD						1.00		2009
390,000	394	JKM						DE	DE					FD	FD	FD	.99
470,000	474	JKM						DE	DE		EG	EG	EG	FD FF	FD FF	FD FF	11/09
560,000 680,000	564 684	J K M J K M						DG	DH					FG	FG	FG	99
820,000	824	JKM						DG	Un					FL	FL	FL	
1,000,000	105	JKM						DG			ED	ED		FM	FM	FM	
1,200,000	125	JKM									EH	EH		FG	FG		
1,500,000	155	JKM									EH	EH		FG	FG		
1,800,000	185	JKM								1	EF	EH		FG	FG		
2,200,000	225	JKM									EF	EH		FG	FG		
2,700,000	275	JKM									EH			FG	FH		
3,300,000	335	JKM									EH			FM	FM		
3,900,000	395	JKM									EH			FG	FK		
4,700,000	475	JKM					-				EH		-	FG	FS		
5,600,000	565	JKM												FH			
6,800,000 8,200,000	685 825	J K M J K M												FM FK			
10,000,000	106	JKM												FS			
10,000,000	100	Voltage Code	8	3	8	3	5	8	3	5	8	3	5	8	3	5	t
Con	Can	i onago codo															ł
Cap pF	Cap Code	Voltage	10V	25V	10V	25V	50V	10V	25V	50V	10V	25V	50V	10V	25V	50V	
		Series	C04	02C	С	0603	C	С	0805	iC	С	1206	C	С	1210	C	ľ
																	L



Product Bulletin

Packaging Specifications

TachanesChyseChyseChyseChyseChyseChyseChyseChyseChyseChyseCharacter		· · · · ·						
AB 0401 0201 020 0300 10000 90000 90000 C0 0603 0.06.0.010 4400 10000 C0 0603 0.66.0.10 4400 10000 C0 0605 0.76.0.10 4400 10000 C0 0605 0.50.0.10 2500 15000 C0 0605 1.50.0.10 2500 15000 C0 0805 1.52.0.2.0 2500 15000 C1 1.52.0.2.0.1 4000 15000 C1 1.52.0.2.0.2 2500 15000 C1 1.56.1.0.4.0.10 2500 15000 C1							Qty per Reel 13" Paper	
BB 0462 0.6 0.0 0.0 50001 50001 50001 50001 CD 9663 0.0 0.0 0.0 4000 10000 CD 9663 0.0 0.0 0.0 4000 10000 CD 9665 0.0 0.0 0.0 4000 10000 DD 9665 0.7 0.0 1.0 4000 10000 DD 9665 1.7 0.0 1.0 2200 10000 DF 9665 1.3 5.0 1.0 2200 10000 DL 0665 0.5 5.0 1.0 4000 10000 DD 0500 1.0 0.1 0 2200 10000 DE 1000 1.0 0.1 0 2200 10000 DD 1000 1.0 0.10					-		-	
CD 9603 0.9.0.9.07 4.000 19000 CD 9603 0.9.0.9.01 4.000 19000 CD 9605 0.9.0.9.01 4.000 19000 CD 9605 0.7.0.9.010 4.000 19000 CD 9605 1.7.0.6.101 2.200 19000 CD 9605 1.7.0.6.101 2.200 19000 CD 9605 1.7.0.6.10 4.000 19000 CD 9605 1.7.0.6.10 4.000 19000 CD 1.0.6.10 4.000 10000 CD 1.0.6.10 4.000 10000					-			
CC 960 0.9.0.10 4.000 10000 CD 960 0.9.0.10 4.000 10000 CD 960 0.9.0.10 4.000 10000 CD 960 1.9.0.10 2200 10000 CD 960 1.9.0.10 2200 10000 CD 960 1.9.0.10 4000 10000 CD 960 1.9.0.10 4000 10000 CD 960 1.9.0.10 4000 10000 CD 1.9.0.10 4000 10000 CD 1.9.0.10 2200 8000 CD 1.9.0.10 2000 8000 CD 1.9.0.10 4000	88	0402	0.50 ± 0.05		-	10000	50000	50000
CD 963 5.6.9 1.0.9 4.000 10000 D0 965 5.9.9 1.0 4.000 10000 D0 965 1.9.9 1.0 2.000 10000 D1 965 1.9.9 1.0.9 2.000 10000 D1 965 1.3.9 1.0 2.000 10000 D1 965 1.3.9 1.0 4.000 10000 D1 965 1.3.9 0.000 4.000 10000 D1 1.0.9 0.00 2.500 10000 D2 1.0.9 1.0.9 2.500 10000 D2 1.0.9 1.0.9 2.500 10000 D1 1.0.9 0.0.9 1.0<	CB	0603	0.80 ± 0.07		-	4000	10000	15000
DB 0965 0.50 0.010 -4000 10000 DD 0965 0.70 0.010 4000 10000 DD 9965 1.00 0.010 2500 10000 DF 9965 1.35 0.10 2500 10000 DH 9965 1.35 0.10 4260 10000 DL 9965 1.56 0.10 4260 10000 DL 9965 1.66 0.10 4260 10000 DL 9965 1.66 0.10 2260 10000 ES 1.66 0.10 2260 16000 ES 1.66 0.40 2000 6000 ES 1.66 0.40.01 2000 6000	CC	0603	0.80 ± 0.10			4000	10000	
DC 9665 0.7.8.0.10 4.000 10000 DF 9665 1.1.9.0.10 2500 10000 DF 9665 1.1.9.0.10 2500 10000 DH 9665 1.1.9.0.10 2500 10000 DH 9665 0.5.9.0.10 4000 10000 DL 9655 0.5.9.0.10 4000 10000 DL 10.0.0.10 2500 10000 DL 10.0.0.10 2500 10000 DL 10.0.0.10 2500 10000 DL 10.0.0.10 2500 10000 DL 10.0.0.10	8	0603	0.80 ± 0.15		-	4000	10000	
DD 0865 0.0 0, 0.10 4000 DF 0865 1.10, 0, 10 2800 10000 DF 0865 1.15, 8, 1.0 2800 10000 DH 0865 1.5, 8, 0.10 4200 10000 DH 0865 0.8, 0.10 4200 10000 ES 1205 0.8, 0.10 4200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2000 10000 EM 1206 0.6, 0.10 4000	DB	0805	0.60 ± 0.10		-	4000	10000	10000
DD 0865 0.0 0, 0.10 4000 DF 0865 1.10, 0, 10 2800 10000 DF 0865 1.15, 8, 1.0 2800 10000 DH 0865 1.5, 8, 0.10 4200 10000 DH 0865 0.8, 0.10 4200 10000 ES 1205 0.8, 0.10 4200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2200 10000 ES 1205 1.0, 0.10 2000 10000 EM 1206 0.6, 0.10 4000	DC	0805	0.78 ± 0.10			4000	10000	
DE 0605 1.10.0.10 2500 10000 D0 9605 1.13.0.10 2500 10000 D4 9605 1.35.0.10 4500 10000 D4 9605 0.59.0.10 4500 10000 D5 1.05.0.10 4500 10000 E5 1.05.0.10 2500 10000 E5 1.05.0.10 2500 10000 E5 1.05.0.10 2500 10000 E5 1.05.0.10 2.000 8000 E4 1.05.0.10 2.000 8000 E5 1.25.0.15 2.000 8000 E4 1.05.0.10 2.000 8000 -								
DF D956 D156 D156 D158 D150 D					10000		10000	
DFI 0.965 1.9.2 ± 0.15 2.900 1.000 - - - DL 0.065 1.9.5 ± 0.10 4000 10000 - - - DL 0.065 0.5.8 ± 0.10 4000 10000 - - - ES 1026 1.0.8 ± 0.10 2200 10000 - - - ES 1026 1.0.8 ± 0.10 2200 10000 - - - ES 1026 1.0.8 ± 0.10 2200 8000 - - - ES 1026 1.0.8 ± 0.10 2000 8000 - - - EM 1026 0.5.8 ± 0.10 4000 10000 - - - FN 1200 0.7.8 ± 0.10 2500 10000 - - - FN 1210 0.8.8 ± 0.10 2500 10000 - - - FN 1210 1.8.8 ± 0.10 2500							-	
DH 0005 1.5 ± 0.20 12000 EB 1206 0.5 ± 0.10 4000 10000 EB 1206 1.5 ± 0.10 4000 10000 EC 1206 1.5 ± 0.10 2500 10000 ES 1206 1.5 ± 0.13 2500 10000 ES 1206 1.6 ± 0.13 2500 10000 EV 1206 1.6 ± 0.13 2500 10000 EV 1206 1.7 ± 0.10 2500 10000 EV 1206 0.5 ± 0.10 4000 10000 FE 1210 0.5 ± 0.10 4000 10000 FE 1210 1.5 ± 0.15 2500 10000 FF 1210							-	-
DL 0956 0.9 8 ± 0.10 4000 10000 EC 1266 0.9 8 ± 0.10 4000 10000 ED 1266 1.0 ± 0.10 2260 10000 ES 1206 1.0 ± 0.10 2260 10000 EV 1206 1.6 ± 0.10 2000 8000 EV 1206 1.6 ± 0.20 2000 8000 EV 1206 1.8 ± 0.15 2200 8000 EV 1206 0.8 ± 0.10 4000 10000 FE 1210 0.7 ± ± 0.10 4000 10000 FF 1210 0.5 ± ± 0.15 2200 10000 FF 1210 1.5 ± ± 0.15 2200 8000 FF 1	DG	0805	1.25 ± 0.15	2500	10000	-	-	-
BE 1206 0.7 ± 0.10 4000 10000 EC 1206 1.9 ± 0.10 4200 10000 ED 1206 1.9 ± 0.10 2500 10000 ES 1206 1.8 ± 0.15 2200 5000 ES 1206 1.6 ± 0.20 2000 8000 EN 1206 1.7 ± 2.0 2000 8000 EN 1206 1.2 ± 0.15 2500 10000 EN 1206 1.2 ± 0.15 2500 10000 FE 1210 1.0 ± 0.10 2500 10000 FF 1210 1.5 ± 0.15 2500 10000 FV 1210 1.5 ± 0.10 2000 9000	DH	0805	1.25 ± 0.20	2500	10000	-	-	-
EC 106 100 a 0.10 2000 10000	DL	0805	0.95 ± 0.10	4000	10000	-	-	
BC 1206 19.9 ± 10 2200 19000 EF 1206 1.10 ± 10 2200 19000 EF 1206 1.60 ± 10 2200 19000 EF 1206 1.60 ± 10 2200 8000 EM 1206 1.60 ± 10 2000 8000 EM 1206 0.58 ± 10 2000 8000 EM 1206 0.58 ± 10 4000 10000 FS 1210 0.78 ± 10 4200 10000 FF 1210 1.98 ± 10 2200 10000 FF 1210 1.58 ± 0.20 2000 8000 FF 1210 1.58 ± 0.20 2000 8000	EB	1206	0.78 ± 0.10	4000	10000	4000	10000	
EO 1206 100 ± 010 2500 10000 EF 1206 1.0 ± 0.15 2200 10000 EG 1206 1.6 ± 0.15 2200 8000 EJ 1206 1.7 ± 0.20 2000 8000 EJ 1206 1.7 ± 0.20 2000 8000 EJ 1206 1.7 ± 0.20 2000 8000 EM 1206 1.5 ± 0.15 2500 10000 FC 1210 0.5 ± 0.10 4000 10000 FC 1210 1.0 ± 0.10 2500 10000 FF 1210 1.8 ± 0.10 2500 10000 FV 1210 1.8 ± 0.20 2000 8000 FV 1210 1.8 ± 0.20 2000 8000 -	EC	1206	0.90 + 0.10	4000	10000		-	
EEE 1206 110 p 0 10 2200 10000 EF 1206 1.60 p 0 15 2200 8000 EH 1206 1.60 p 0 10 2000 8000 EM 1206 1.70 p 0 20 2000 8000 EK 1206 0.80 p 0 10 2000 8000 EK 1206 0.80 p 0 10 4000 10000 FB 1210 0.78 p 0 10 4000 10000 FD 1210 0.89 p 10 4000 10000 FD 1210 1.88 p 0.10 2500 10000 FV 1210 1.88 p 0.10 2500 10000 FV 1210 1.88 p 0.20 2000 8000 FV 1210 1.89 p 0.20 2000 8000							-	-
EF 1266 11.0 + 0.15 2500 1600.0 EH 1206 1.6.9 + 0.20 2000 8000 EH 1206 1.6.9 + 0.20 2000 8000 EM 1206 1.6.9 + 0.20 2000 6000 EM 1206 1.5.8 + 0.15 2000 10000 PN 1206 0.5.8 + 0.10 4000 10000 PC 1210 1.0.8 + 0.10 2500 10000 FE 1210 1.0.8 + 0.10 2500 10000 FH 1210 1.6.8 + 0.20 2000 8000 FH 1210 1.6.8 + 0.20 2000 8000 FM 1210 1.6.8 + 0.20								
EG 1206 160 + 0.16 2000 6000 EH 1206 1.0 + 0.20 2000 6000 EK 1206 1.0 + 0.20 2000 6000 EK 1206 1.5 + 0.10 4000 10000 EN 1206 0.5 + 0.10 4000 10000 PS 1210 0.5 + 0.10 4000 10000 PF 1210 1.0 + 0.10 2500 10000 PF 1210 1.10 + 0.10 2500 10000 PF 1210 1.10 + 0.10 2500 10000 PK 1210 1.16 + 0.20 2000 8000 FK 1210 1.40 + 0.20 2000						-	-	
EH 1206 1.00.4.020 2000 8000 EJ 1206 0.10.4.0.20 2000 8000 EM 1206 0.16.4.0.10 2000 6000 EM 1206 0.15.4.0.10 4000 10000 FE 1210 0.54.6.0.10 4000 10000 FC 1210 1.05.4.0.10 2500 10000 FE 1210 1.05.4.0.15 2000 8000 FF 1210 1.55.4.0.15 2000 8000 FV 1210 1.55.2.0.20 2000 8000 FV 1210 1.56.2.0.20 2000 8000 FV 1210 1.56.2.0.20 2000 8000 FV 1210 1.56.2.0.10 2000 8000	-							
EJ 1266 1.70 + 0.20 2000 8000 EK 1266 0.85 + 0.10 2000 10000 EN 1206 0.85 + 0.10 4000 10000 PK 1210 0.78 + 0.10 4000 10000 PC 1210 0.58 + 0.10 4000 10000 PF 1210 1.15 + 0.10 2500 10000 PF 1210 1.15 + 0.10 2500 10000 PF 1210 1.15 + 0.15 2000 8000 PK 1210 1.46 + 0.20 2000 8000 PK 1210 1.46 + 0.20 2000 8000 PK 1210 1.46 + 0.20 2000 80	EG	1206	1.60 ± 0.15	2000	8000	-	-	
EK 1266 0.00.9.0.10 2000 0000 EM 1266 0.55.4.0.10 4000 10000 PS 1210 0.78.4.0.0 4000 10000 PC 1210 0.58.4.0.10 4000 10000 PC 1210 1.08.4.0.10 2250 10000 PE 1210 1.08.4.0.10 22500 15000 PF 1210 1.68.4.0.20 2000 8000 PK 1210 1.08.4.0.20 2000 8000 PM 1210 1.08.4.0.20 2000 8000 PN 1210 1.08.4.0.20 1000 4000 FN 1210 1.08.4.0.20 1000 <td>EH</td> <td>1206</td> <td>1.60 ± 0.20</td> <td>2000</td> <td>8000</td> <td>-</td> <td>-</td> <td>-</td>	EH	1206	1.60 ± 0.20	2000	8000	-	-	-
EK 1266 0.80 + 0.10 2000 6000 EM 1266 0.95 + 0.10 4000 10000 PS 1210 0.78 + 0.10 4000 10000 PC 1210 0.58 + 0.10 4000 10000 PC 1210 1.05 + 0.10 2500 10000 PF 1210 1.05 + 0.10 2500 10000 PF 1210 1.55 + 0.15 2500 10000 PF 1210 1.45 + 0.20 2000 8000 PK 1210 1.40 + 0.15 2000 8000 PF 1210 1.50 + 0.20 2000 8000 FR 1210 1.50 + 0.20 2000 </td <td>EJ</td> <td>1206</td> <td>1.70 ± 0.20</td> <td>2000</td> <td>8000</td> <td></td> <td>-</td> <td></td>	EJ	1206	1.70 ± 0.20	2000	8000		-	
EM 1266 1.35 + 0.15 2500 10000 PN 1210 0.78 + 0.10 4000 10000 PC 1210 0.58 + 0.10 4000 10000 PC 1210 0.58 + 0.10 4000 10000 PF 1210 1.04 + 0.10 2500 10000 PF 1210 1.35 + 0.15 2500 10000 PH 1210 1.55 + 0.15 2500 5000 PK 1210 1.65 + 0.15 2000 5000 PK 1210 1.65 + 0.15 2000 5000 PK 1210 1.46 + 0.26 2000 5000 PK 1210 1.56 + 0.10 <td>EK</td> <td>1206</td> <td></td> <td>2000</td> <td>8000</td> <td>-</td> <td>-</td> <td>-</td>	EK	1206		2000	8000	-	-	-
EN 1205 0.98 ± 0.10 4000 10000 PC 1210 0.07 ± 0.10 4000 10000 PC 1210 1.0.8 ± 0.10 4000 10000 PE 1210 1.0.8 ± 0.10 2500 10000 PE 1210 1.1.8 ± 0.15 2500 10000 PH 1210 1.5.8 ± 0.15 2500 8000 FK 1210 1.6.8 ± 0.20 2000 8000 FM 1210 1.6.8 ± 0.20 2000 8000 FP 1210 1.6.8 ± 0.20 2000 8000 FS 1210 1.6.9 ± 0.20 1000 4000 GE 1812 1.0.9 ± 0.01 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></t<>							-	
FB 1210 0.76 ± 0.10 4000 10000 FD 1210 0.56 ± 0.10 4000 10000 FF 1210 1.06 ± 0.10 2500 10000 FF 1210 1.06 ± 0.10 2500 10000 FJ 1210 1.58 ± 0.20 2500 10000 FJ 1210 1.85 ± 0.20 2500 8000 FJ 1210 1.85 ± 0.20 2000 8000 FN 1210 1.50 ± 0.20 2000 8000 FP 1210 1.50 ± 0.20 2000 8000 FT 1210 1.50 ± 0.20 1000 4000 GQ 1912 1.00 ± 0.10 1000 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
PC 1210 0.9.0.4.0.0 4000 10000 FE 1210 1.0.6.0.1.0 2500 10000 FF 1210 1.0.6.0.1.0 2500 10000 FF 1210 1.2.6.0.1.5 2500 10000 FJ 1210 1.5.6.0.1.5 2500 8000 FL 1210 1.6.6.0.2.0 2000 8000 FN 1210 1.7.6.0.2.0 2000 8000 FN 1210 1.5.6.2.0.0 2000 8000 FS 1210 1.6.0.2.0.0 2000 8000 FS 1210 1.6.0.2.0.0 1000 4000 GE 1812 1.0.0.0.10 1000								
FD 1210 0.95 ± 0.10 4000 10000 FF 1210 1.0 ± 0.10 2500 10000 FG 1210 1.1.2 ± 0.15 2500 10000 FJ 1210 1.85 ± 0.20 2000 8000 FJ 1210 1.45 ± 0.20 2000 8000 FK 1210 1.40 ± 0.15 2000 8000 FN 1210 1.50 ± 0.20 2000 8000 FP 1210 1.50 ± 0.20 2000 8000 FS 1210 2.50 ± 0.20 1000 4000 GE 1812 1.00 ± 0.10 1000 4000 GE 1812 1.00 ± 0.15 1000						-	-	-
FE 1210 1.00 ± 0.10 2800 10000 FF 1210 1.26 ± 0.15 2800 10000 FH 1210 1.28 ± 0.15 2800 8000 FJ 1210 1.88 ± 0.20 2800 8000 FK 1210 1.88 ± 0.20 2800 8000 FM 1210 1.78 ± 0.20 2800 8000 FM 1210 1.78 ± 0.20 2800 8000 FP 1210 1.60 ± 0.20 2800 8000 FP 1210 1.60 ± 0.20 2800 8000 FS 1210 1.60 ± 0.20 1800 4000 GC 1812 1.00 ± 0.10 1000 4000 GE 1812 1.00 ± 0.10 1000 4000							-	
FF 1:10 ± 0.10 2500 10000 FG 1:210 1.25 ± 0.15 2500 10000 FJ 1:210 1.58 ± 0.15 2000 8000 FJ 1:210 1.58 ± 0.20 2000 8000 FL 1:210 1.58 ± 0.20 2000 8000 FN 1:210 1.58 ± 0.20 2000 8000 FP 1:210 1.58 ± 0.20 2000 8000 FR 1:210 1.58 ± 0.20 2000 8000 FT 1:210 1.58 ± 0.20 1000 4000 GB 1912 1.0.0 ± 0.10 1000 4000 GG 1912 1.50 ± 0.10 1000 4								
FG 1210 1.35 ± 0.15 2500 10000 FJ 1210 1.85 ± 0.15 2000 8000 FK 1210 1.85 ± 0.20 2000 8000 FK 1210 1.40 ± 0.20 2000 8000 FM 1210 1.75 ± 0.20 2000 8000 FP 1210 1.85 ± 0.20 2000 8000 FP 1210 1.85 ± 0.20 2000 8000 FR 1210 2.85 ± 0.20 1000 4000 GB 1812 1.05 ± 0.20 1050 4000 GE 1812 1.125 ± 0.15 1050 4000 GE 1812 1.55 ± 0.15 1050	FE	1210	1.00 ± 0.10	2500	10000	-	-	-
PH 1210 1.85 ± 0.15 2000 8000 FK 1210 1.85 ± 0.20 2000 8000 FL 1210 1.40 ± 0.15 2000 8000 FM 1210 1.70 ± 0.20 2000 8000 FN 1210 1.85 ± 0.20 2000 8000 FP 1210 1.85 ± 0.20 2000 8000 FR 1210 2.56 ± 0.20 1000 4000 GE 1812 1.00 ± 0.10 1000 4000 GE 1812 1.00 ± 0.10 1000 4000 GE 1812 1.00 ± 0.15 1000 4000 GE 1812 1.50 ± 0.15 1000	FF	1210	1.10 ± 0.10	2500	10000		-	
FJ 1210 1.85 ± 0.20 2000 8000 FK 1210 1.4 ± 0.15 2000 8000 FM 1210 1.70 ± 0.20 2000 8000 FN 1210 1.85 ± 0.20 2000 8000 FO 1210 1.85 ± 0.20 2000 8000 FF 1210 1.85 ± 0.20 2000 8000 FS 1210 2.55 ± 0.20 1000 4000 GE 1812 1.90 ± 0.10 1000 4000 GD 1812 1.30 ± 0.10 1000 4000 GE 1812 1.80 ± 0.10 1000 4000 - GE 1812 1.80 ± 0.10 1000	FG	1210	1.25 ± 0.15	2500	10000	-	-	
FJ 1210 1.85 ± 0.20 2000 8000 FL 1210 1.40 ± 0.20 2000 8000 FM 1210 1.70 ± 0.20 2000 8000 FN 1210 1.85 ± 0.20 2000 8000 FP 1210 1.85 ± 0.20 2000 8000 FR 1210 1.85 ± 0.20 2000 8000 FS 1210 2.85 ± 0.20 1000 4000 - GS 1812 1.10 ± 0.10 1000 4000 - GD 1812 1.85 ± 0.10 1000 4000 - GK 1812 1.80 ± 0.10 1000 4000 - GK 1812 1.80 ± 0.20 1000	FH	1210		2000	8000		-	
PK 1210 2.10 ± 0.20 2000 8000 PL 1210 1.40 ± 0.15 2000 8000 FN 1210 1.85 ± 0.20 2000 8000 FP 1210 1.85 ± 0.20 2000 8000 FP 1210 1.86 ± 0.20 2000 8000 FP 1210 2.85 ± 0.20 1000 4000 GC 1812 1.00 ± 0.10 1000 4000 GC 1812 1.30 ± 0.10 1000 4000 GF 1812 1.30 ± 0.10 1000 4000 GF 1812 1.70 ± 0.15 1000 4000 - GF 1812 1.70 ± 0.15 1000					8000		-	
FL 1210 1.40±0.15 2000 8000 FM 1210 1.75±0.20 2000 8000 FO 1210 1.55±0.20 2000 8000 FP 1210 1.55±0.20 2000 8000 FR 1210 2.25±0.20 2000 8000 FT 1210 1.50±0.20 1500 4000 GB 1812 1.00±0.10 1000 4000 GD 1812 1.50±0.10 1000 4000 GF 1812 1.50±0.15 1000 4000 GJ 1812 1.60±0.20 1000 4000 GL 1812 1.70±0.15								
FM 1210 1.70 ± 0.20 2000 8000 FN 1210 1.85 ± 0.20 2000 8000 FP 1210 1.65 ± 0.20 2000 8000 FP 1210 2.25 ± 0.20 2000 8000 FR 1210 2.25 ± 0.20 2000 8000 FT 1210 1.90 ± 0.20 1500 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.50 ± 0.10 1000 4000 GE 1812 1.50 ± 0.10 1000 4000 GH 1812 1.60 ± 0.20 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 - GK 1812 1.60 ± 0.20 1000 4000							-	
PN 1210 1.85 ± 0.20 2000 8000 FP 1210 1.60 ± 0.20 2000 8000 FR 1210 2.50 ± 0.20 2000 8000 FR 1210 2.50 ± 0.20 2000 8000 FT 1210 1.50 ± 0.20 1500 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.50 ± 0.10 1000 4000 GE 1812 1.50 ± 0.10 1000 4000 GE 1812 1.50 ± 0.10 1000 4000 GK 1812 1.70 ± 0.15 1000 4000 GK 1812 1.70 ± 0.20 1000 4000 - GM 1812 1.70 ± 0.20 1000 <							-	
FO 1210 1.50 ± 0.20 2000 6000 FR 1210 2.50 ± 0.20 2000 6000 FS 1210 2.50 ± 0.20 1000 4000 FT 1210 2.50 ± 0.20 1000 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.10 ± 0.10 1000 4000 GE 1812 1.50 ± 0.10 1000 4000 GF 1812 1.50 ± 0.10 1000 4000 GH 1812 1.70 ± 0.15 1000 4000 GL 1812 1.70 ± 0.15 1000 4000 GL 1812 1.70 ± 0.20 1000 4000 - GL 1812 1.70 ± 0.20 1000 <						-	-	
FP 1210 1.60 ± 0.20 2000 8000 FR 1210 2.25 ± 0.20 2000 8000 FT 1210 2.50 ± 0.20 1500 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.30 ± 0.10 1000 4000 GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.40 ± 0.15 1000 4000 GJ 1812 1.40 ± 0.15 1000 4000 GJ 1812 1.70 ± 0.15 1000 4000 GL 1812 1.70 ± 0.20 1000 4000 GL 1812 2.50 ± 0.20 1000	FN	1210	1.85 ± 0.20	2000	8000		-	
PR 1210 2.28 ± 0.20 2000 6000 FT 1210 1.50 ± 0.20 1000 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.00 ± 0.10 1000 4000 GD 1812 1.30 ± 0.10 1000 4000 GF 1812 1.30 ± 0.10 1000 4000 GG 1812 1.40 ± 0.15 1000 4000 GK 1812 1.40 ± 0.15 1000 4000 GK 1812 1.50 ± 0.20 1000 4000 GM 1812 2.00 ± 0.20 1000 4000 GM 1812 1.10 ± 0.15 1000 4000 <td>FO</td> <td>1210</td> <td>1.50 ± 0.20</td> <td>2000</td> <td>8000</td> <td>-</td> <td>-</td> <td></td>	FO	1210	1.50 ± 0.20	2000	8000	-	-	
FS 1210 2.50 ± 0.20 1000 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.10 ± 0.10 1000 4000 GD 1812 1.32 ± 0.15 1000 4000 GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.50 ± 0.10 1000 4000 GH 1812 1.50 ± 0.10 1000 4000 GK 1812 1.40 ± 0.15 1000 4000 GK 1812 1.50 ± 0.20 1000 4000 GM 1812 1.50 ± 0.20 1000 4000 GN 1812 1.50 ± 0.20 1000 4000 GN	FP	1210	1.60 ± 0.20	2000	8000	-	-	
FS 1210 2.50 ± 0.20 1000 4000 GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.10 ± 0.10 1000 4000 GD 1812 1.25 ± 0.15 1000 4000 GE 1812 1.50 ± 0.10 1000 4000 GF 1812 1.50 ± 0.10 1000 4000 GJ 1812 1.40 ± 0.15 1000 4000 GJ 1812 1.60 ± 0.20 1000 4000 GM 1812 1.50 ± 0.20 1000 4000 GM 1812 1.50 ± 0.20 500 2000 GM 1812 1.50 ± 0.15 1000	FR	1210	2.25 ± 0.20	2000	8000			
FT 1210 1.50 ± 0.20 1500 4000 GE 1812 1.10 ± 0.10 1000 4000 GE 1812 1.135 ± 0.10 1000 4000 GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.30 ± 0.10 1000 4000 GG 1812 1.40 ± 0.15 1000 4000 GK 1812 1.40 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GM 1812 1.70 ± 0.15 1000 4000 GN 1812 1.70 ± 0.15 1000 4000 HD 1825 1.40 ± 0.15 1000 4000<	FS				4000		-	
GB 1812 1.00 ± 0.10 1000 4000 GC 1812 1.0 ± 0.10 1000 4000 GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.50 ± 0.10 1000 4000 GG 1812 1.55 ± 0.10 1000 4000 GK 1812 1.70 ± 0.15 1000 4000 GL 1812 1.60 ± 0.20 1000 4000 GM 1812 1.70 ± 0.20 1000 4000 GN 1812 1.70 ± 0.20 1000 4000 - GN 1812 1.50 ± 0.15 1000 4000 - GN 1812 1.50 ± 0.15 1000							-	
GC 1812 1.10 ± 0.10 1000 4000 GE 1812 1.28 ± 0.15 1000 4000 GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.55 ± 0.10 1000 4000 GJ 1812 1.40 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 - GK 1812 1.60 ± 0.20 1000 4000 - GM 1812 1.70 ± 0.20 1000 4000 - GN 1812 1.70 ± 0.20 1000 4000 - HC 1825 1.10 ± 0.15 1000 4000 - HD 1825 1.60 ± 0.20 1000 40000								
GD 1812 1.25 ± 0.15 1000 4000 GF 1812 1.30 ± 0.10 1000 4000 GF 1812 1.50 ± 0.10 1000 4000 GH 1812 1.40 ± 0.15 1000 4000 GL 1812 1.70 ± 0.15 1000 4000 - GL 1812 1.60 ± 0.20 1000 4000 - GM 1812 2.00 ± 0.20 1000 4000 - GN 1812 2.50 ± 0.20 500 2000 GO 1812 1.50 ± 0.15 1000 4000 - HB 1825 1.30 ± 0.15 1000 4000 - HC 1825 1.40 ± 0.15 1000								
GE 1812 1.30 ± 0.10 1000 4000 GF 1812 1.55 ± 0.10 1000 4000 GJ 1812 1.46 ± 0.15 1000 4000 GJ 1812 1.70 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GM 1812 1.70 ± 0.20 1000 4000 GM 1812 2.70 ± 0.20 1000 4000 GN 1812 1.70 ± 0.20 500 2000 HB 1825 1.15 ± 0.15 1000 4000 - HC 1825 1.40 ± 0.15 1000 4000 - HZ 1825 1.60 ± 0.20 1000								
GF 1812 1.50 ± 0.10 1000 4000 GH 1812 1.55 ± 0.10 1000 4000 GH 1812 1.40 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GM 1812 1.70 ± 0.20 1000 4000 - GN 1812 1.70 ± 0.20 1000 4000 - GO 1812 1.70 ± 0.15 1000 4000 - HC 1825 1.10 ± 0.15 1000 4000 - HD 1825 1.60 ± 0.20 1000 4000 - JB 2220 1.61 ± 0.15 1000 4000								
GG 1812 1.55 ± 0.10 1000 4000 GH 1812 1.40 ± 0.15 1000 4000 GJ 1812 1.60 ± 0.20 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GM 1812 1.90 ± 0.20 1000 4000 GN 1812 2.00 ± 0.20 1000 4000 - GO 1812 2.50 ± 0.20 500 2000 - HC 1825 1.10 ± 0.15 1000 4000 - HD 1825 1.40 ± 0.15 1000 4000 - JB 2220 1.60 ± 0.15 1000 4000 - JD 2220 1.40 ± 0.15 1000	GE	1812	1.30 ± 0.10	1000	4000	-	-	
GH 1812 1.40 ± 0.15 1000 4000 GJ 1812 1.70 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GM 1812 1.90 ± 0.20 1000 4000 GN 1812 2.00 ± 0.20 1000 4000 GN 1812 2.50 ± 0.20 500 2000 HS 1825 1.10 ± 0.15 1000 4000 HD 1825 1.40 ± 0.15 1000 4000 - HE 1825 1.60 ± 0.15 1000 4000 - JD 2220 1.00 ± 0.15 1000 4000 - JF 2220 1.30 ± 0.15 1000	GF	1812	1.50 ± 0.10	1000	4000	-	-	
GJ 1812 1.70 ± 0.15 1000 4000 GK 1812 1.60 ± 0.20 1000 4000 GL 1812 1.90 ± 0.20 1000 4000 GM 1812 2.00 ± 0.20 1000 4000 GO 1812 2.50 ± 0.20 500 2000 HS 1825 1.10 ± 0.15 1000 4000 HC 1825 1.30 ± 0.15 1000 4000 HC 1825 1.40 ± 0.15 1000 4000 HF 1825 1.60 ± 0.20 1000 4000 - JD 2220 1.00 ± 0.15 1000 4000 - JF 2220 1.00 ± 0.15 1000	GG	1812	1.55 ± 0.10	1000	4000	-		
GK 1812 1.60 ± 0.20 1000 4000 GL 1812 1.90 ± 0.20 1000 4000 GM 1812 2.00 ± 0.20 1000 4000 GN 1812 1.70 ± 0.20 1000 4000 GO 1812 1.70 ± 0.20 1000 4000 HD 1825 1.10 ± 0.15 1000 4000 - HD 1825 1.40 ± 0.15 1000 4000 - HB 1825 1.60 ± 0.15 1000 4000 - HG 1825 1.60 ± 0.15 1000 4000 - JD 2220 1.10 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000	GH	1812	1.40 ± 0.15	1000	4000		-	
GK 1812 1.60 ± 0.20 1000 4000 GL 1812 1.90 ± 0.20 1000 4000 GM 1812 2.00 ± 0.20 1000 4000 GN 1812 1.70 ± 0.20 1000 4000 GO 1812 1.70 ± 0.20 1000 4000 HD 1825 1.10 ± 0.15 1000 4000 - HD 1825 1.40 ± 0.15 1000 4000 - HB 1825 1.60 ± 0.15 1000 4000 - HG 1825 1.60 ± 0.15 1000 4000 - JD 2220 1.10 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000	GJ	1812	1.70 ± 0.15	1000	4000		-	
GL 1812 1.90 ± 0.20 1000 4000 GM 1812 2.00 ± 0.20 1000 4000 GN 1812 2.00 ± 0.20 1000 4000 GN 1812 2.50 ± 0.20 500 2000 HS 1825 1.10 ± 0.15 1000 4000 HD 1825 1.40 ± 0.15 1000 4000 HE 1825 1.60 ± 0.15 1000 4000 HZ 1825 1.60 ± 0.15 1000 4000 HS 12220 1.60 ± 0.15 1000 4000 - JZ 2220 1.30 ± 0.15 1000 4000 - JE 2220 1.30 ± 0.15 1000	GK						-	
GM 1812 2.00 ± 0.20 1000 4000 GN 1812 1.70 ± 0.20 1000 4000 GO 1812 2.50 ± 0.20 500 2000 - HS 1825 1.10 ± 0.15 1000 4000 - HC 1825 1.30 ± 0.15 1000 4000 - HE 1825 1.30 ± 0.15 1000 4000 - HE 1825 1.60 ± 0.15 1000 4000 - HF 1825 1.60 ± 0.20 1000 4000 - JC 2220 1.00 ± 0.15 1000 4000 - JD 2220 1.50 ± 0.15 1000 4000 - JF 2220 1.50 ± 0.15 1000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
GN 1812 1.70 ± 0.20 1000 4000 GO 1812 2.50 ± 0.20 500 2000 HB 1825 1.10 ± 0.15 1000 4000 - HC 1825 1.30 ± 0.15 1000 4000 - HD 1825 1.40 ± 0.15 1000 4000 - HE 1825 1.60 ± 0.15 1000 4000 - HF 1825 1.60 ± 0.20 1000 4000 - JB 2220 1.00 ± 0.15 1000 4000 - JD 2220 1.40 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JG 2220 1.60 ± 0.15 1000 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>-</td><td></td></td<>							-	
GO 1812 2.50 ± 0.20 500 2000 HS 1825 1.10 ± 0.15 1000 4000 HC 1825 1.15 ± 0.15 1000 4000 HD 1825 1.40 ± 0.15 1000 4000 HE 1825 1.40 ± 0.15 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 - JD 2220 1.00 ± 0.15 1000 4000 - JD 2220 1.40 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JJF 2220 1.60 ± 0.15 1000 4000 - JH 22201 1.60 ± 0.15 1000							-	
HB 1825 1.10 ± 0.15 1000 4000 HC 1825 1.15 ± 0.15 1000 4000 HD 1825 1.30 ± 0.15 1000 4000 HE 1825 1.40 ± 0.15 1000 4000 HF 1825 1.60 ± 0.15 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.00 ± 0.15 1000 4000 JD 2220 1.00 ± 0.15 1000 4000 JF 2220 1.60 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 - JP 2220 1.60 ± 0.20 1000	GN	1812	1.70 ± 0.20	1000	4000	-	-	
HC 1825 1.15 ± 0.15 1000 4000 HD 1825 1.30 ± 0.15 1000 4000 HE 1825 1.40 ± 0.15 1000 4000 HF 1825 1.60 ± 0.15 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.00 ± 0.15 1000 4000 JE 2220 1.30 ± 0.15 1000 4000 - JF 2220 1.40 ± 0.15 1000 4000 - JF 2220 1.50 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JD 2220 1.60 ± 0.15 1000	8	1812	2.50 ± 0.20	500	2000	-	-	
HC 1825 1.15 ± 0.15 1000 4000 HD 1825 1.30 ± 0.15 1000 4000 HE 1825 1.40 ± 0.15 1000 4000 HF 1825 1.60 ± 0.15 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.30 ± 0.15 1000 4000 JD 2220 1.30 ± 0.15 1000 4000 - JF 2220 1.50 ± 0.15 1000 4000 - JF 2220 1.50 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000	HB	1825	1.10 ± 0.15	1000	4000	-	-	
HD 1825 1.30 ± 0.15 1000 4000 HE 1825 1.40 ± 0.15 1000 4000 HF 1825 1.50 ± 0.15 1000 4000 JB 1825 1.60 ± 0.20 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JD 2220 1.40 ± 0.15 1000 4000 JE 2220 1.40 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JG 2220 1.80 ± 0.15 1000 4000 - JD 2220 1.80 ± 0.15 1000 4000 - JF 2220 1.80 ± 0.15 1000	HC	1825		1000	4000	-	-	
HE 1825 1.40 ± 0.15 1000 4000 HF 1825 1.50 ± 0.15 1000 4000 HG 1825 1.60 ± 0.20 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.10 ± 0.15 1000 4000 JE 2220 1.30 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 - JF 2220 1.60 ± 0.15 1000 4000 - JH 2220 1.60 ± 0.15 1000 4000 - JD 2220 1.60 ± 0.20 1000 4000 - JD 22205 1.00 ± 0.15 1000							-	
HF 1825 1.50 ± 0.15 1000 4000 HG 1825 1.60 ± 0.20 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.00 ± 0.15 1000 4000 JD 2220 1.30 ± 0.15 1000 4000 JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.70 ± 0.15 1000 4000 JG 2220 1.80 ± 0.15 1000 4000 JH 2220 1.60 ± 0.20 1000 4000 JP 2220 1.60 ± 0.20 1000 4000 - KZ 2225 1.00 ± 0.15 1000						-	-	
HG 1825 1.60 ± 0.20 1000 4000 JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.00 ± 0.15 1000 4000 JD 2220 1.30 ± 0.15 1000 4000 JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.50 ± 0.15 1000 4000 - JJG 2220 1.60 ± 0.15 1000 4000 - JJP 2220 1.60 ± 0.20 1000 4000 - JD 2225 1.00 ± 0.15 1000 4000 - KZ 2225 1.40 ± 0.15 1000							-	
JB 2220 1.00 ± 0.15 1000 4000 JC 2220 1.10 ± 0.15 1000 4000 JD 2220 1.30 ± 0.15 1000 4000 JE 2220 1.30 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.70 ± 0.15 1000 4000 JH 2220 1.60 ± 0.15 1000 4000 - JD 2220 2.40 ± 0.15 1000 4000 - JD 2220 1.60 ± 0.20 1000 4000 - KB 2225 1.30 ± 0.15 1000 4000 - KC						-	-	-
JC 2220 1.10 ± 0.15 1000 4000 JD 2220 1.30 ± 0.15 1000 4000 JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.60 ± 0.15 1000 4000 JG 2220 1.70 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 JD 2220 1.60 ± 0.20 1000 4000 - JP 2220 1.60 ± 0.15 1000 4000 - KB 2225 1.00 ± 0.15 1000 4000 - KD 2225 1.30 ± 0.15 1000 4000 - KF 2225 1.60 ± 0.15 1000						-	-	
JD 2220 1.30 ± 0.15 1000 4000 JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.50 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 JP 2220 2.40 ± 0.15 500 2000 JP 2220 1.60 ± 0.20 1000 4000 JP 2225 1.00 ± 0.15 1000 4000 KZ 2225 1.30 ± 0.15 1000 4000 KF 2225 1.60 ± 0.15 1000 4000 - LA 1808 1.60 ± 0.15 1000						-	-	
JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.70 ± 0.15 1000 4000 JG 2220 1.80 ± 0.15 1000 4000 JO 2220 1.80 ± 0.15 1000 4000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 - KC 2225 1.30 ± 0.15 1000 4000 - - - KE 2225 1.40 ± 0.15 1000 4000 - - - - LA 1808 1.60 ± 0.15 1000 4000 - - - - LC 1808 1.60 ± 0.15 </td <td>JC</td> <td>2220</td> <td>1.10 ± 0.15</td> <td>1000</td> <td>4000</td> <td>-</td> <td>-</td> <td></td>	JC	2220	1.10 ± 0.15	1000	4000	-	-	
JE 2220 1.40 ± 0.15 1000 4000 JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.70 ± 0.15 1000 4000 JG 2220 1.80 ± 0.15 1000 4000 JO 2220 1.80 ± 0.15 1000 4000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 - KC 2225 1.30 ± 0.15 1000 4000 - - - KE 2225 1.40 ± 0.15 1000 4000 - - - - LA 1808 1.60 ± 0.15 1000 4000 - - - - LC 1808 1.60 ± 0.15 </td <td>JD</td> <td>2220</td> <td>1.30 ± 0.15</td> <td>1000</td> <td>4000</td> <td>-</td> <td>-</td> <td>-</td>	JD	2220	1.30 ± 0.15	1000	4000	-	-	-
JF 2220 1.50 ± 0.15 1000 4000 JG 2220 1.70 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 JP 2220 1.60 ± 0.20 1000 4000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 - KD 2225 1.40 ± 0.15 1000 4000 - KF 2225 1.60 ± 0.15 1000 4000 - LB 1808 1.40 ± 0.15 1000 4000 - LC 1808 2.00 ± 0.10 2500						-	-	
JG 2220 1.70 ± 0.15 1000 4000 JH 2220 1.80 ± 0.15 1000 4000 JO 2220 2.40 ± 0.15 500 2000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 KC 2225 1.30 ± 0.15 1000 4000 KE 2225 1.30 ± 0.15 1000 4000 - LA 1808 1.60 ± 0.20 1000 4000 - LA 1808 1.60 ± 0.15 1000 4000 - LB 1808 1.60 ± 0.15 1000 4000 - LD 1808 0.90 ± 0.10 2500							-	
JH 2220 1.80 ± 0.15 1000 4000 JO 2220 2.40 ± 0.15 500 2000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 KC 2225 1.00 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 LA 1808 1.60 ± 0.15 1000 4000 LC 1808 1.60 ± 0.15 1000 4000 LD 1808 0.50 ± 0.10 2500 10000 MA 1322 0.80 ± 0.10 4000								-
JO 2220 2.40 ± 0.15 500 2000 JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 KC 2225 1.30 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.40 ± 0.15 1000 4000 LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000								
JP 2220 1.60 ± 0.20 1000 4000 KB 2225 1.00 ± 0.15 1000 4000 KC 2225 1.10 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.60 ± 0.15 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.40 ± 0.15 1000 4000 LC 1808 0.90 ± 0.10 2500 10000 LD 1638 0.90 ± 0.10 4000 10000 MA 1632 0.80 ± 0.10 4000								
KB 2225 1.00 ± 0.15 1000 4000 KC 2225 1.10 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.60 ± 0.20 1000 4000 LA 1808 1.60 ± 0.15 1000 4000 LB 1808 1.60 ± 0.15 1000 4000 LD 1808 1.60 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000				500	2000	-	-	
KC 2225 1.10 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.40 ± 0.15 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LD 1808 1.60 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 LD 1808 0.90 ± 0.10 2500 10000 MA 1832 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000	JP	2220	1.60 ± 0.20	1000	4000	-	-	
KC 2225 1.10 ± 0.15 1000 4000 KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.40 ± 0.15 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LC 1808 1.60 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1832 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000	KB	2225	1.00 ± 0.15	1000	4000		-	
KD 2225 1.30 ± 0.15 1000 4000 KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.60 ± 0.15 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.40 ± 0.15 1000 4000 LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000	KC	2225		1000	4000	-	-	
KE 2225 1.40 ± 0.15 1000 4000 KF 2225 1.60 ± 0.20 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.40 ± 0.15 1000 4000 LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000							-	
KF 2225 1.60 ± 0.20 1000 4000 LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.60 ± 0.15 1000 4000 LC 1808 1.60 ± 0.15 1000 4000 LD 1808 0.50 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000							-	
LA 1808 1.40 ± 0.15 1000 4000 LB 1808 1.60 ± 0.15 1000 4000 LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000							-	
LB 1808 1.60 ± 0.15 1000 4000 LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.50 ± 0.10 2500 10000 MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000								
LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10500 MA 1632 0.80 ± 0.10 4000 10500 NA 1706 0.90 ± 0.10 4000 10500 NA 1706 0.90 ± 0.10 4000 10500	LA	1808	1.40 ± 0.15	1000	4000	-	-	
LC 1808 2.00 ± 0.15 1000 4000 LD 1808 0.90 ± 0.10 2500 10500 MA 1632 0.80 ± 0.10 4000 10500 NA 1706 0.90 ± 0.10 4000 10500 NA 1706 0.90 ± 0.10 4000 10500		1808	1.60 ± 0.15	1000	4000		-	
LD 1808 0.90±0.10 2500 10000 MA 1832 0.80±0.10 4000 10000 NA 1706 0.90±0.10 4000 10000 NA 1706 0.90±0.10 4000 10000						-	-	
MA 1632 0.80 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000	LB	1808						
NA 1706 0.90 ± 0.10 4000 10000 NA 1706 0.90 ± 0.10 4000 10000	LB LC				10000		-	
NA 1706 0.90±0.10 4000 10000	LB LC LD	1808	0.90 ± 0.10	2500				
	LB LC LD MA	1808 1632	0.90 ± 0.10 0.80 ± 0.10	2500 4000	10000	-	-	-
PA 1220 0.80±0.10 4000 10000	LB LC LD MA NA	1808 1632 1706	0.90 ± 0.10 0.80 ± 0.10 0.90 ± 0.10	2500 4000 4000	10000 10000		-	-
	LB LC LD MA NA NA	1808 1632 1706 1706	0.90 ± 0.10 0.80 ± 0.10 0.90 ± 0.10 0.90 ± 0.10	2500 4000 4000 4000	10000 10000 10000	-	-	-

© KEMET Electronics Corporation • P.O. Box 5928 • Greenville, SC 29606 (864) 963-6300 • www.kemet.com