

High temperature ceramic cased capacitors, with a new, unique design concept, are ideally suited for continuous operation up to +260°C. Problems associated with epoxy cased/epoxy potted capacitors, such as material deterioration, cracks in cases and potted areas, are nonexistent, even at +260°C.

### COG

COG (NP0) capacitors, which exhibit little change in capacitance with variations in temperature, are used in RF oscillators, precision timing circuits, wave filters, and other circuits requiring a predictable linear temperature coefficient.

### X7R

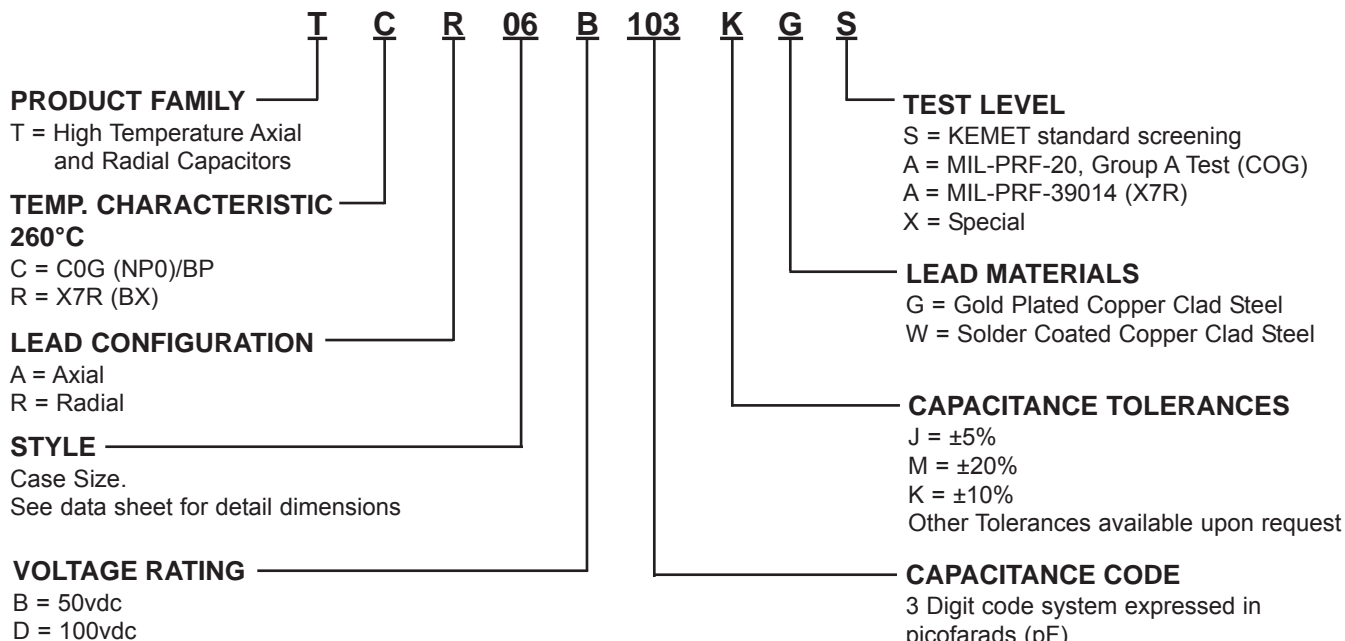
Conventional X7R materials lose up to 75% of the +25°C capacitance. Dissipation factor drops from 1.25% at +25°C to 0.2% at +260°C. At +120°C the ceramic undergoes a transformation (crystalline inversion) resulting in the material changing from ferroelectric to paraelectric - no piezoelectric behavior.

Typical applications include oil well logging (down hole), jet engine controls and geophysical pressure probes.

### INSTALLATION:

Parts should be soldered using a heat sink between the soldering point and the part using a soldering iron rated 18-30 watts. Remove all traces of flux or other contamination resulting from the soldering operation. An intermittent conducting path between the leads, at high voltage, could cause breakdown. Soldering temperature should not exceed +300°C.

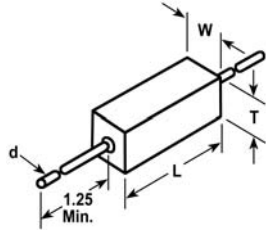
### PART NUMBER AND ORDERING INFORMATION



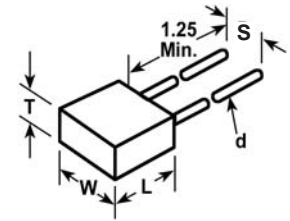
MARKING	EXAMPLE
Manufacturer's ID	KEC
Capacitance	106J
Voltage	50V
Date Code	123
Red dot = +260°C	•

# High Temperature (+260°C) Axial and Radial Ceramic Cased Capacitors (C<sup>3</sup>) TCR/TCA Series

**AXIAL**  
All Dimensions  
in Inches (mm)



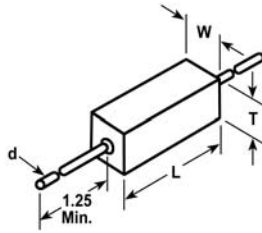
**RADIAL**  
All Dimensions  
in Inches (mm)



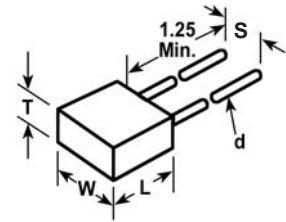
## COG DIELECTRIC

		AXIAL										RADIAL									
STYLE		16		25		39		50		69		05		06		07		08		09	
Cap	L <sub>MAX</sub>	.170 (4.32)		.270 (6.86)		.400 (10.16)		.520 (13.21)		.720 (18.29)		.200 (5.08)		.300 (7.62)		.300 (7.62)		.500 (12.70)		.500 (12.70)	
	W <sub>MAX</sub>	.080 (2.03)		.100 (2.54)		.150 (3.81)		.265 (6.73)		.370 (9.40)		.200 (5.08)		.300 (7.62)		.300 (7.62)		.500 (12.70)		.500 (12.70)	
	T <sub>MAX</sub>	.080 (2.03)		.100 (2.54)		.150 (3.81)		.160 (4.06)		.160 (4.06)		.100 (2.54)		.100 (2.54)		.150 (3.81)		.100 (2.54)		.150 (3.81)	
	s	---		---		---		---		---		.200 ± .015 (5.08 ± .38)		.200 ± .015 (5.08 ± .38)		.200 ± .015 (5.08 ± .38)		.400 ± .015 (10.16 ± .38)		.400 ± .015 (10.16 ± .38)	
	d	.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)		.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)	
	Cap Code		WVDC		WVDC		WVDC		WVDC		WVDC		WVDC		WVDC		WVDC		WVDC		WVDC
		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
5.6pF	569																				
6.8	689																				
8.2	829																				
10	100																				
12	120																				
15	150																				
18	180																				
22	220																				
27	270																				
33	330																				
39	390																				
47	470																				
56	560																				
68	680																				
82	820																				
100	101																				
120	121																				
150	151																				
180	181																				
220	221																				
270	271																				
330	331																				
390	391																				
470	471																				
560	561																				
680	681																				
820	821																				
1000	102																				
1200	122																				
1500	152																				
1800	182																				
2200	222																				
2700	272																				
3300	332																				
3900	392																				
4700	472																				
5600	562																				
6800	682																				
8200	822																				
0.01 μF	103																				
0.012	123																				
0.015	153																				
0.018	183																				
0.022	223																				
0.027	273																				
0.033	333																				
0.039	393																				
0.047	473																				
0.056	563																				
0.068	683																				
0.082	823																				
0.10	104																				
0.12	124																				
0.15	154																				

AXIAL  
All Dimensions  
in Inches (mm)



RADIAL  
All Dimensions  
in Inches (mm)



**X7R DIELECTRIC**

		AXIAL										RADIAL										
STYLE		16		25		39		50		69		05		06		07		08		09		
Cap	L <sub>MAX</sub>	.170 (4.32)		.270 (6.86)		.400 (10.16)		.520 (13.21)		.720 (18.29)		.200 (5.08)		.300 (7.62)		.300 (7.62)		.500 (12.70)		.500 (12.70)		
	W <sub>MAX</sub>	.080 (2.03)		.100 (2.54)		.150 (3.81)		.265 (6.73)		.370 (9.40)		.200 (5.08)		.300 (7.62)		.300 (7.62)		.500 (12.70)		.500 (12.70)		
	T <sub>MAX</sub>	.080 (2.03)		.100 (2.54)		.150 (3.81)		.160 (4.06)		.160 (4.06)		.100 (2.54)		.100 (2.54)		.150 (3.81)		.100 (2.54)		.150 (3.81)		
	S	---		---		---		---		---		.200 ± .015 (5.08 ± .38)		.200 ± .015 (5.08 ± .38)		.200 ± .015 (5.08 ± .38)		.400 ± .015 (10.16 ± .38)		.400 ± .015 (10.16 ± .38)		
	d	.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)		.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.020 ± .002 (.508 ± .051)		.025 ± .002 (.635 ± .051)		.025 ± .002 (.635 ± .051)		
	Cap Code	WVDC	50		100		50		100		50		100		50		100		50		100	
			50		100		50		100		50		100		50		100		50		100	
	100pF	101																				
	120	121																				
	150	151																				
180	181																					
220	221																					
270	271																					
330	331																					
390	391																					
470	471																					
560	561																					
680	681																					
820	821																					
1000	102																					
1200	122																					
1500	152																					
1800	182																					
2200	222																					
2700	272																					
3300	332																					
3900	392																					
4700	472																					
5600	562																					
6800	682																					
8200	822																					
0.01 μF	103																					
0.012	123																					
0.015	153																					
0.018	183																					
0.022	223																					
0.027	273																					
0.033	333																					
0.039	393																					
0.047	473																					
0.056	563																					
0.068	683																					
0.082	823																					
0.10	104																					
0.12	124																					
0.15	154																					
0.18	184																					
0.22	224																					
0.27	274																					
0.33	334																					
0.39	394																					
0.47	474																					
0.56	564																					
0.68	684																					
0.82	824																					
1.0	105																					
1.2	125																					
1.5	155																					
1.8	185																					
2.0	205																					
2.2	225																					
2.7	275																					
3.3	335																					
3.9	395																					