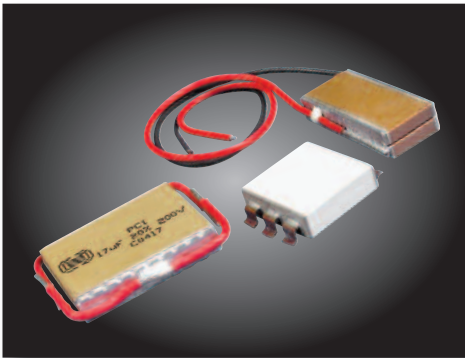


HIGH TEMPERATURE

150°C · 180°C · 200°C · 230°C · 250°C · 350°C



CERAMIC CAPACITORS
Catalog 3500



PRESIDIO COMPONENTS, INC.

The industry leader for high temperature ceramic capacitors. We have an active development program for material, packaging and testing from 200°C to above 350°C.

Presidio Components has been an industry leader in the manufacture of ceramic capacitors since 1980. We are dedicated to excellence in manufacturing, process control and customer service. All products are manufactured and tested in our state-of-the-art, 40,000 square foot facility in San Diego, California, allowing for immediate response to your business needs. We have numerous patents, and hundreds of years of combined engineering experience, and we can formulate the right product for your application. At Presidio Components we work hard to build positive, long term relationships with our customers and we will go the extra distance to ensure customer satisfaction.

Standard & Custom Products

If you cannot find a part anywhere else, call Presidio Components. With more than 70 million parts in inventory, we have many commercial and military parts in stock. If you have a custom application, call the factory. Our custom products include nonstandard part sizes and voltages, including high voltage, high temperature, high "Q", custom leads, cryogenic ceramics, negative and positive temperature characteristic ceramics and piezoelectric formulations. We have a series of patented microwave and radio frequency products including patented single layer and broadband DC blocking caps.

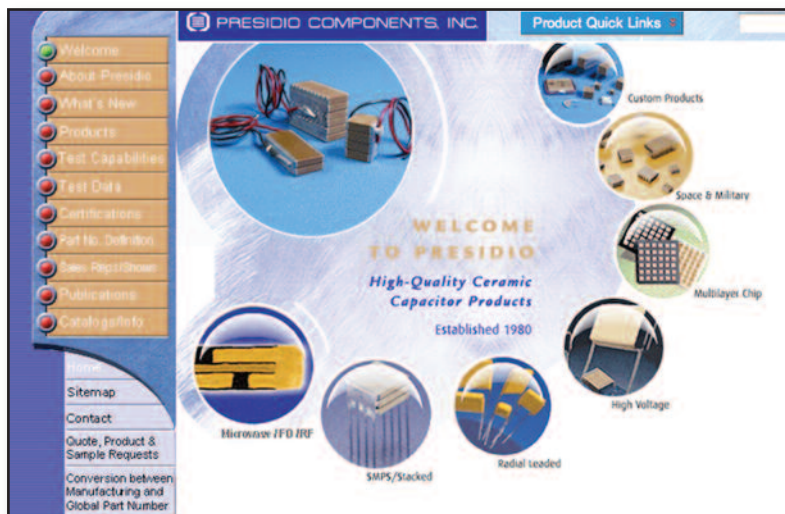
Diverse Markets

Presidio Components provides ceramic capacitors for high quality commercial, downhole oil, military, space and implant medical applications. Our customers manufacture products such as oil exploration drillbits, aircraft, missile guidance systems, switch mode power supplies, phased array radar, high frequency transponders and receivers, ring laser gyros, and cochlear implants.

QPL Products & DSCC Approved Test Lab

Presidio Components was initially qualified to MIL-PRF-55681 in 1984. Since then we have upgraded our processing line to obtain the highest established reliability rating of "S" level. We are also qualified on two additional space level specifications, MIL-PRF-123 and MIL-PRF-49470 "T" level. And, Presidio Components is proud to be the first QPL supplier to MIL-PRF-49467, the high voltage ceramic capacitor specification. All QPL testing per MIL-STD-202 is done on site at our DSCC approved test lab. For a list of environmental test capability, consult the factory.

For more information about Presidio's products or the name of your local sales representative visit our website at:
www.presidiocomponents.com



HIGH TEMPERATURE CERAMIC CHIP CAPACITORS (HT)

HIGH TEMPERATURE DESIGNATION

Code “HT”: This code signifies that the parts are designed for high temperature use, and have followed the Group A testing program of the “HR” type listed in our catalog. Temperatures of 250°C are acceptable for these capacitors, in terms of the inherent capability of the ceramic and depending on the voltage applied. Presidio’s HT product line features many proprietary design elements, in both materials and construction, that have been shown to work well in the downhole environments. Consult factory for higher temperature requirements.

ROHS COMPLIANCE

Code “R” This code signifies that the parts are made in compliance with the RoHS Directive.

SOLDERING/TERMINATION OPTIONS

Code	Description	Application Solder	Summary
NT9	Standard Ni + 90%Sn 10%Pb	HMP or Sn63 (for use up to 150°C)	This is our traditional 90/10 SnPb termination.
Q	Ni + 100% Sn	Sn96 (for use up to 180°C)	Ni barrier with 100% matte Sn
T	Standard Ni + 100%Sn	Sn96 (for use up to 150°C)	Our standard Ni barrier with 100% matte Sn
NP8	Standard Ni + 15%Sn 85%Pb	HMP Solder (for use up to 200°C)	This is our high temperature termination for HMP soldering.
NG	Standard Ni + Gold	Wirebond (for use up to 200°C)	This is our Ni/Au termination for wirebond applications
P	Pd/Ag Termination	HMP (for use up to 250°C)	This is our standard Pd/Ag termination
F	Polished Pd/Ag Termination	HMP (for use up to 250°C)	This is our standard Pd/Ag termination that has been polished for easier soldering

HOW TO ORDER HT CHIPS

HT	0805	XHT	473	K	1	Q	5	R
PREFIX	SIZE	DIELECTRIC*	CAPACITANCE CODE	TOLERANCE CODE**	VOLTAGE CODE	TERMINATION CODE	MARKING & PACKAGING	RoHS
HT	0402 0403 0504 0603 0805 1206 1209 1712	NPQ NPO XHT X7R	Two significant figures followed by the number of zeros. Example: 100 = 10 pF 101 = 100 pF 102 = 1000 pF 103 = .01 μF 104 = .10 μF 105 = 1.0 μF	B = ± .10pF <10pF C = ± .25pF <10pF D = ± .50pF <10pF F = ± 1% G = ± 2% J = ± 5% K = ± 10% M = ± 20%	10V = 10 VDC 12V = 12 VDC 16V = 16 VDC 1 = 25 VDC 2 = 50 VDC 3 = 100 VDC 4 = 200 VDC 5 = 300 VDC 6 = 500 VDC 7 = 600 VDC 8 = 750 VDC 9 = 1000 VDC	NG = Au over Ni NP8 = 15/85 Sn/Pb over Ni NT9 = 90/10 Sn/Pb over Ni Q = 100% Sn over Ni P = Pd/Ag F = Polished Pd/Ag T = 100% Sn over Std. Ni.	1. Reel, 7", plastic tape, unmarked 2. Reel, 7", plastic tape, marked 3. Bulk, unmarked 4. Bulk, marked 5. Waffle, unmarked 6. Waffle, marked A. Reel, 13", plastic tape, unmarked (0402 & 0603 only) B. Reel, 13", plastic tape, marked C. Reel, 7", paper, unmarked (0402 & 0603 only) D. Reel, 13", paper, marked (0402 & 0603 only)	R = RoHS Compliant Only compatible with Q, P, F, and NG terminations

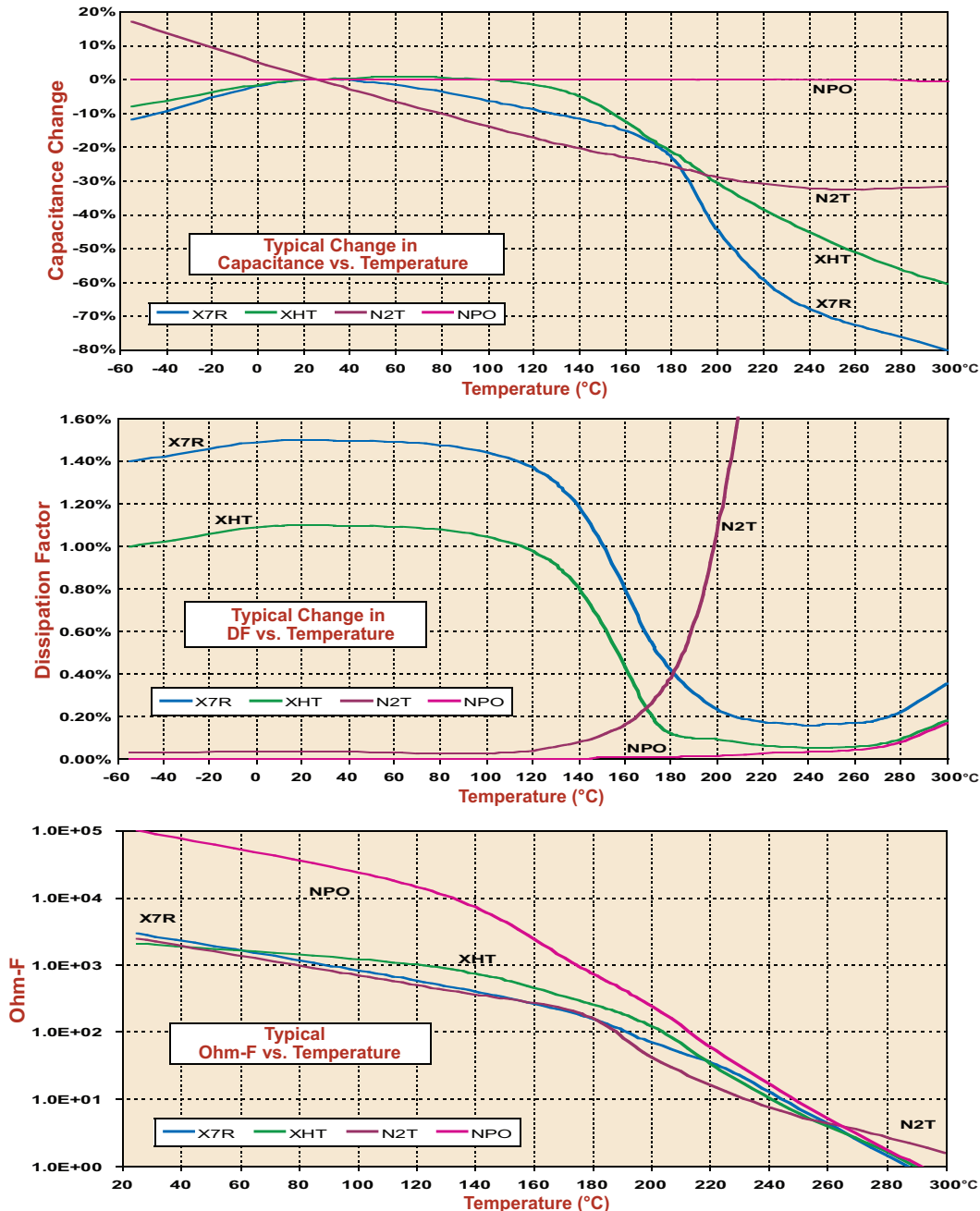
* Consult factory regarding NPQ dielectric
** B, C, D, F and G tolerances are available for NPO parts only

HIGH TEMPERATURE CERAMIC CHIP CAPACITORS (HT)

Consult factory for requirements above 250°C

DIELECTRIC CHARACTERISTICS

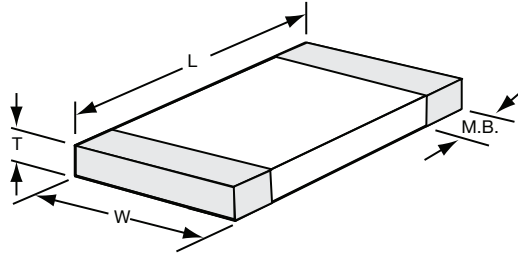
CHARACTERISTICS	NPO DIELECTRIC	XHT DIELECTRIC
Operating Temperature Range	-55°C to 250°C	-55°C to 250°C
Temperature Coefficient up to 200°C	0 ± 30 ppm/°C	+15 - 45% Δ °C Max
Dissipation Factor @ 25°C	.001(0.1%) Max	.025 (2.5%) Max
Insulation Resistance, 25°C 200°C	>100GΩ or >1000ΩF >1GΩ or >10 ΩF	>100 GΩ or >1000 ΩF >1 GΩ or >10 ΩF
Dielectric Withstanding Voltage:	DWV will be tested at 250% of rated voltage except for 500V rated parts which will be tested at 150% of rated voltage.	DWV will be tested at 250% of rated voltage except for 500V rated parts which will be tested at 150% of rated voltage.



HIGH TEMPERATURE CERAMIC CHIP CAPACITORS (HT)

Consult factory for requirements above 250°C

DIMENSIONS



AVAILABLE CAPACITANCE VALUES

The following values are the traditional designs that Presidio has supplied to the downhole industry for over 25 years.

SIZE	L (Inches)	W (Inches)	Thickness Max (T) (Inches)	Metalization Band (M.B.) (Inches)	VVDC	DIELECTRIC (Maximum Capacitance)		
						NPO	XHT	X7R
0402	0.040 ± 0.004	0.020 ± 0.004	0.024	0.004 min. band 0.015 min. space	25V	120 pF	2200 pF	4700 pF
					50V	100 pF	1800 pF	3900 pF
					100V	39 pF	680 pF	1200 pF
0403	0.040 ± 0.010	0.030 ± 0.010	0.030	0.004 min. band 0.015 min. space	25V	390 pF	6800 pF	0.015 µF
					50V	330 pF	5600 pF	0.012 µF
					100V	68 pF	1000 pF	2200 pF
0504	0.050 ± 0.010	0.040 ± 0.010	0.040	0.005 min. band 0.015 min. space	25V	1500 pF	0.027 µF	0.047 µF
					50V	1200 pF	0.020 µF	0.039 µF
					100V	180 pF	2700 pF	6800 pF
0603	0.063 ± 0.006	0.032 ± 0.006	0.035	0.005 min. band 0.025 min. space	25V	680 pF	0.015 µF	0.027 µF
					50V	560 pF	0.010 µF	0.022 µF
					100V	100 pF	1800 pF	3300 pF
0805	0.080 ± 0.010	0.050 ± 0.010	0.050	0.020 ± 0.010	25V	2700 pF	0.047 µF	0.10 µF
					50V	2200 pF	0.039 µF	0.10 µF
					100V	560 pF	8200 pF	0.022 µF
1206	0.126 ± 0.008	0.063 ± 0.008	0.059	0.020 ± 0.010	25V	6800 pF	0.15 µF	0.27 µF
					50V	5600 pF	0.1 µF	0.22 µF
					100V	1500 pF	0.027 µF	0.068 µF
					200V	820 pF	0.012 µF	0.027 µF
1209	0.125 ± 0.010	0.095 ± 0.010	0.065	0.020 ± 0.010	25V	0.010 µF	0.22 µF	0.47 µF
					50V	8200 pF	0.18 µF	0.39 µF
					100V	3900 pF	0.068 µF	0.15 µF
					200V	1800 pF	0.033 µF	0.068 µF
1712	0.175 ± 0.013	0.125 ± 0.010	0.065	0.020 ± 0.010	25V	0.022 µF	0.47 µF	1.0 µF
					50V	0.015 µF	0.27 µF	0.68 µF
					100V	6800 pF	0.12 µF	0.27 µF
					200V	3300 pF	0.056 µF	0.12 µF

HIGH TEMPERATURE HIGH VOLTAGE CHIP CAPACITORS (HTHV) XHT and NPO DIELECTRIC

Size	L (Inches)	W (Inches)	Thickness Max (T) (Inches)	Metalization Band (M.B.) (Inches)	WVDC	DIELECTRIC (Maximum Capacitance)	
						NPO	XHT
1209	0.125 ± 0.010	0.095 ± 0.010	0.080	0.020 ± 0.010	500V	2700pF	0.022μF
					1000V	390pF	1800pF
1514	0.150 ± 0.010	0.140 ± 0.010	0.140	0.020 ± 0.010	500V	3900pF	0.075μF
					1000V	1800pF	0.018μF
					2000V	390pF	3300pF
					3000V	150pF	1500pF
1812	0.180 ± 0.020	0.160 max	0.120	0.020 ± 0.010	500V	6800pF	0.068μF
					1000V	2200pF	0.015μF
					2000V	270pF	1800pF
					3000V	120pF	390pF
1825	0.180 ± 0.020	0.250 max	0.160	0.020 ± 0.010	500V	0.012μF	0.15μF
					1000V	5600pF	0.027μF
					2000V	1000pF	6800pF
					3000V	470pF	1800pF
1918	0.190 ± 0.013	0.180 ± 0.013	0.150	0.020 ± 0.010	500V	8200pF	0.082μF
					1000V	3900pF	0.022μF
					2000V	820pF	4700pF
					3000V	330pF	1800pF
2225	0.230 ± 0.020	0.250 max	0.200	0.020 ± 0.010	500V	0.015μF	0.39μF
					1000V	6800pF	0.068μF
					2000V	1500pF	0.012μF
					3000V	560pF	3900pF
2720	0.270 ± 0.020	0.230 max	0.200	0.020 ± 0.010	500V	0.012μF	0.1μF
					1000V	5600pF	0.027μF
					2000V	1500pF	6800pF
					3000V	560pF	3300pF
3728	0.370 ± 0.020	0.330 max	0.220	0.020 ± 0.010	500V	0.033μF	0.27μF
					1000V	0.018μF	0.082μF
					2000V	2700pF	0.015μF
					3000V	1800pF	5600pF
3933	0.380 ± 0.020	0.350 max	0.150	0.020 ± 0.010	4000V	680pF	3300pF
					500V	0.047μF	0.47μF
					1000V	0.018μF	0.1μF
					2000V	3900pF	0.022μF
					3000V	1800pF	8200pF
					4000V	1000pF	3900pF

HOW TO ORDER HTHV CHIPS

HTHV	1825	XHT	102	K	11	P	3	A
PREFIX HTHV	SIZE See Table	DIELECTRIC NPO XHT	CAPACITANCE CODE Two significant figures followed by the number of zeros. Example: 100 = 10 pF 101 = 100 pF 102 = 1000 pF 103 = .01 μF	TOLERANCE CODE B = ± .10pF < 10pF (NPO only) C = ± .25pF < 10pF (NPO only) D = ± .50pF < 10pF (NPO only) F = ± 1% (NPO only) G = ± 2% (NPO only) J = ± 5% K = ± 20% Z = +80% / -20% P = +100% / -0%	VOLTAGE CODE 6 = 500 VDC 9 = 1000 VDC 11 = 2000 VDC 13 = 3000 VDC 14 = 4000 VDC 15 = 5000 VDC	TERMINATION CODE NG = Au over Ni NP8 = 15/85 Sn/Pb over Ni NT9 = 90/10 Sn/Pb over Ni Q = 100% Sn over Ni P = Pd/Ag F = Polished Pd/Ag T = 100% Sn over Std. Ni.	MARKING AND PACKAGING 1 = Reel, 7", plastic tape, unmarked 2 = Reel, 7", plastic tape, marked 3 = Bulk, unmarked 4 = Bulk, marked 5 = Waffle, unmarked 6 = Waffle, marked A = Reel, 13", plastic tape, unmarked B = Reel, 13", plastic tape, marked C = Reel, 7", paper, unmarked (0402 and 0603 only) D = Reel, 13", paper, marked (0402 and 0603 only)	SPECIAL CODE Add "A" for non-standard dimension



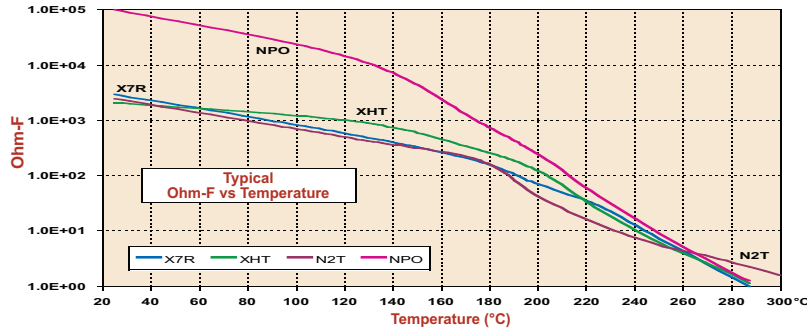
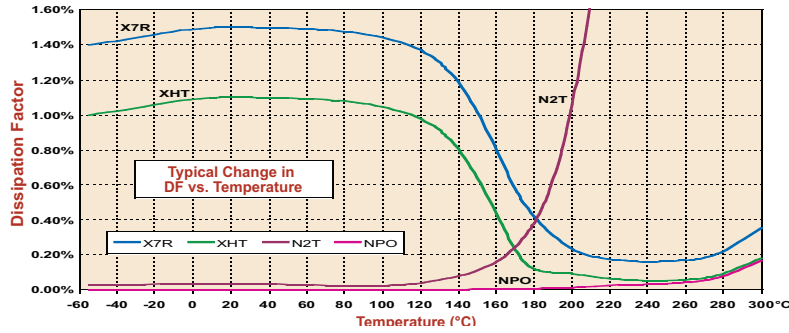
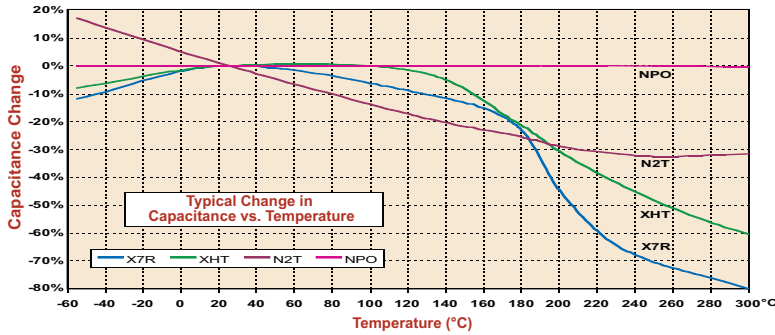
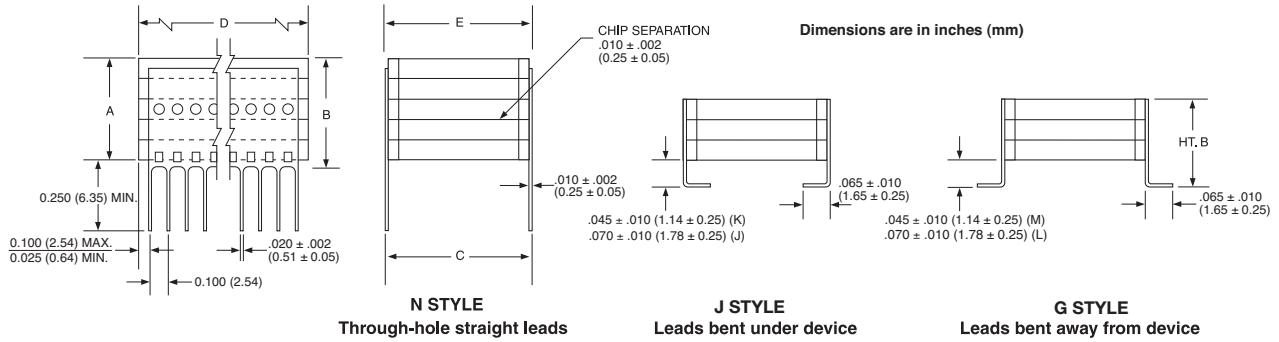
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HIGH TEMPERATURE SMPS STACKED CAPACITORS (HTS)

Consult factory for requirements above 250°C

DIMENSIONS



HOW TO ORDER HTS STACKS

HT	S	4	05	X7R	804	K	2	J	4	Y
TESTING	CONFIGURATION STACKED	NO. OF CAPS	CASE CODE*	DIELECTRIC	CAPACITANCE CODE	TOLERANCE CODE**	VOLTAGE CODE	LEAD STYLE	NO. OF LEADS PER SIDE	SPECIAL CODE
HT	Capacitor Assembly	No. of chips per stack	See Table	NPO X7R XHT	Two significant figures followed by the number of zeros. Example: 100 = 10 pF 101 = 100 pF 102 = 1000 pF 103 = .01 μF	F = ± 1% G = ± 2% J = ± 5% K = ± 10% M = ± 20%	1 = 25 VDC 2 = 50 VDC 3 = 100 VDC 4 = 200 VDC 5 = 300 VDC 6 = 500 VDC	J = Leads formed under G = Leads formed out N = Through-hole * = Soft-leaded (Consult Factory for more information)	See Above	Y = Sn96 compatible leads (Does not contain lead)

* Consult factory for other case sizes

** F, G, and J tolerances are available for NPO parts only



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HIGH TEMPERATURE SMPS STACKED CAPACITORS (HTS)

X7R, XHT, and NPO DIELECTRIC

Consult factory for requirements above 250°C

PRESIDIO CASE SIZE														
Case Code*	08			01			05			13			"B" Ht.	No. Caps
Dielectric	X7R	XHT	NPO	X7R	XHT	NPO	X7R	XHT	NPO	X7R	XHT	NPO	Max. (inches)	per Stack
25V (Voltage Code = 1)	1.4	.82	.036	2.5	1.5	.065	7.0	4.0	.16	20	14	.50	.150	1
	2.8	1.6	.072	5.0	3.0	.13	14	8.0	.32	40	28	1.0	.200	2
	4.2	2.4	.11	7.5	4.5	.19	21	12	.48	60	42	1.5	.275	3
	-	-	-	10	6.0	.26	28	16	.64	80	56	2.0	.350	4
	-	-	-	12	7.5	.32	35	20	.80	100	70	2.5	.425	5
	-	-	-	15	9.0	.39	42	24	.96	120	84	3.0	.500	6
50V (Voltage Code = 2)	1.2	.6	.030	2.1	1.0	.055	5.6	3.0	.14	18	10	.40	.150	1
	2.4	1.2	.060	4.2	2.0	.11	11	6.0	.28	36	20	.80	.220	2
	3.6	1.8	.090	6.3	3.0	.16	17	9.0	.42	54	30	1.2	.310	3
	-	-	-	8.4	4.0	.22	22	12	.56	72	40	1.6	.400	4
	-	-	-	10	5.0	.27	28	15	.70	90	50	2.0	.490	5
	-	-	-	12	6.0	.33	33	18	.84	110	60	2.4	.580	6
100V (Voltage Code = 3)	.75	.34	.020	1.4	.70	.040	4.0	1.8	.10	12	6.0	.30	.160	1
	1.5	.68	.040	2.8	1.4	.080	8.0	3.6	.20	24	12	.60	.280	2
	-	-	-	4.2	2.1	.12	12	5.4	.30	36	18	.90	.400	3
	-	-	-	5.6	2.8	.16	16	7.2	.40	48	24	1.2	.520	4
	-	-	-	7.0	3.5	.20	20	9.0	.50	60	30	1.5	.640	5
	-	-	-	-	-	-	-	-	-	72	36	1.8	.760	6
200V (Voltage Code = 4)	.22	.14	.012	.42	.25	.022	1.2	.70	.056	3.5	2.2	.18	.160	1
	.44	.28	.024	.84	.50	.044	2.4	1.4	.11	7.0	4.4	.36	.280	2
	-	-	-	1.2	.75	.066	3.6	2.1	.17	10	6.6	.54	.400	3
	-	-	-	1.7	1.0	.088	4.8	2.8	.22	14	8.8	.72	.520	4
	-	-	-	2.1	1.2	.11	6.0	3.5	.28	17	11	.90	.650	5
	-	-	-	-	-	-	-	-	-	21	13	1.1	.760	6
500V (Voltage Code = 6)	.11	.07	.006	.19	.13	.011	.55	.39	.028	1.6	1.2	.080	.160	1
	.22	.14	.012	.38	.26	.022	1.1	.75	.056	3.2	2.4	.16	.280	2
	-	-	-	.57	.39	.033	1.6	1.1	.084	4.8	3.6	.24	.400	3
	-	-	-	.76	.52	.044	2.2	1.5	.11	6.4	4.8	.32	.520	4
	-	-	-	.95	.65	.055	2.7	1.9	.14	8.0	6.0	.40	.640	5
	-	-	-	-	-	-	-	-	-	9.6	7.2	.48	.760	6
Dimensions	0.215			0.275			0.4			0.45			C ± (.025)	
	0.215			0.275			0.425			1.075			D (Max) Width	
	0.25			0.3			0.44			0.5			E (Max) Length	
Leads Per Side	2			3			4			10				
Chip Size	2018			2627			3941			4399				

* Consult factory for other case sizes



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HIGH TEMPERATURE SMPS STACKED CAPACITORS (HTS)

Consult factory for requirements above 250°C

SOLDERING AND LEAD COATING RECOMMENDATIONS

Special Code	Description	Application Solder	Summary
Blank	Standard 60%Sn 40% Pb coated lead frames	Sn63 or HMP	These stacked capacitors are made with our traditional 60/40 SnPb coated lead frames.
Y	Sn96 Compatible Leads that does not contain lead. (May not be fully RoHS Compliant)	Sn96 or HMP	These stacked capacitors are made with Sn96 compatible lead frames that do not contain lead, but may not be RoHS compliant.
R	Sn96 Compatible Leads that does not contain lead. (RoHS Compliant)	Sn96 (DO NOT USE HMP)	These stacked capacitors are made with Sn96 compatible lead frames that do not contain lead and are fully RoHS compliant.

GENERAL RECOMMENDATIONS FOR SOLDERING CERAMIC STACKED CAPACITORS

In general, Presidio recommends against hand soldering for this type of large ceramic device. However, if the customer cannot avoid hand soldering, it should be done with care to avoid thermally cracking the parts. Soldering of these parts to the circuit board, if done in a careless manner, can be the most likely source of reliability problems.

Preheating and Mounting. For reflow, the parts should be preheated to within 50° C to 60° C to the reflow temperature, or as close as is practical. A convection-style reflow oven with nitrogen is ideal. During reflow, the heat-up and cool-down rates (dT/dt) should be kept well under 4°C/sec, and preferably under 2°C/sec.

Hand Soldering. If hand soldering must be used, preheat the parts as recommended above. A hot-air gun is an ideal tool for this procedure. When hand soldering, avoid excessive heat, and keep the tip of the solder iron as far away from the ceramic as possible. As an example, for through-hole leaded parts, solder from the backside of the board. This will minimize the risk of thermally cracking the ceramic. After soldering, allow the parts to air cool to room temperature before cleaning.

Leads. The leads do not need to be pre-tinned as they have already been tinned with Sn63 as part of our process. For special code 'Y', leads are coated with silver.

In addition to the above, the following rules apply:

1. Never dip the stacked capacitors into a solder pot (for pre-tinning, for example).
2. Never allow an operator to touch-up a solder joint with a soldering iron.

IN ACCORDANCE WITH MIL-PRF-49470 — The following precaution should be followed —

“Precautionary Note: Capacitors covered by this specification sheet are very susceptible to thermal shock damage due their large ceramic mass. Temperature profiles used should provide adequate temperature rise and cool-down time to prevent damage from thermal shock.”



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HIGH TEMPERATURE HIGH VOLTAGE RADIAL LEADED CAPACITORS (RT)

XHT and NPO DIELECTRIC

Consult factory for requirements above 250°C

SPECIFICATIONS

MECHANICAL:

- Case DAP or molded high temperature Vectra
Consult factory for packaging above 200°C
- Leads Solder coated copper clad steel is standard;
other types available

OPERATING TEMPERATURE RANGE:

-55°C to 250°C

TEMPERATURE COEFFICIENT UP TO 225°C:

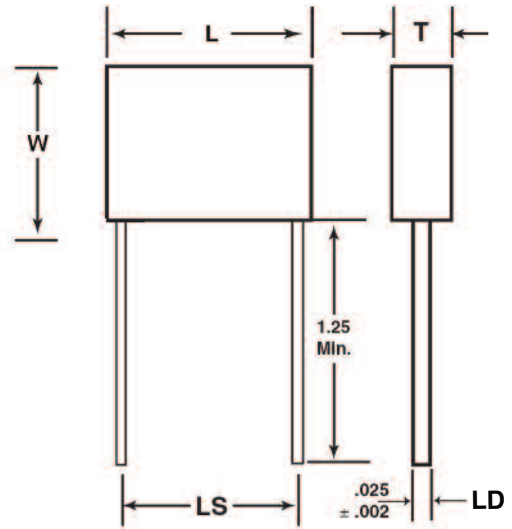
- XHT: +15 -65% °C Max
NPO: 0 ± 30 ppm/°C

DISSIPATION FACTOR:

- XHT: 2.5% max.
NPO: <.0015 (.15%)

INSULATION RESISTANCE:

- NPO/XHT (25°C): 1000ohms x Farad or 100 Gigohms, whichever is less
NPO/XHT (250°C): 10 ohms x Farad or 1 Gigohms, whichever is less



SIZE	L (Max.)	W (Max.)	T (Max.)	LS (±.032)	LD (±.002)
RT1814	0.300	0.200	0.200	0.200	0.025
RT1824	0.300	0.300	0.200	0.200	0.025
RT2225	0.350	0.300	0.200	0.250	0.025
RT2824	0.400	0.300	0.200	0.300	0.025
RT3933	0.500	0.400	0.200	0.400	0.025
RT4844	0.600	0.500	0.200	0.500	0.025
RT5854	0.700	0.600	0.200	0.600	0.025
RT6864	0.800	0.700	0.200	0.700	0.025
RT9650	1.100	0.600	0.200	0.980	0.025
RT13565	1.450	0.720	0.200	1.375	0.025

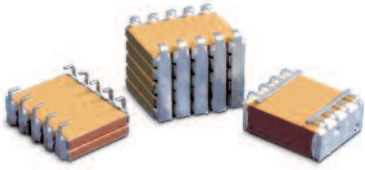
SIZE	25V		50V		100V		200V		500V		1000V	
	XHT	NPO	XHT	NPO	XHT	NPO	XHT	NPO	XHT	NPO	XHT	NPO
RT1814	.47	.022	.33	.018	.22	.012	.10	.0075	.075	.0035	.012	.0010
RT1824	.82	.045	.25	.033	.50	.024	.20	.014	.15	.0068	.024	.0020
RT2225	1.2	.056	1.0	.047	.60	.033	.25	.020	.20	.0090	.032	.0027
RT2824	1.5	.070	1.2	.056	.85	.040	.33	.022	.25	.011	.040	.0036
RT3933	2.7	.16	2.5	.12	1.5	.085	.60	.050	.50	.024	.080	.0075
RT4844	5.0	.18	4.0	.20	2.0	.14	1.2	.082	.82	.039	.16	.014
RT5854	7.8	.27	6.8	.30	4.5	.21	1.8	.12	1.2	.060	.25	.022
RT6864	12	.60	9.5	.44	6.0	.31	2.5	.18	1.8	.085	.35	.030
RT9650	15	.68	10	.47	6.8	.34	2.7	.20	2.0	.095	.39	.033
RT13565	-	-	-	-	-	-	4.7	.36	3.9	.17	.70	.060

HOW TO ORDER RT RADIAL LEADS

RT PREFIX	1814 SIZE See Above	XHT DIELECTRIC NPO XHT	804 CAPACITANCE CODE Two significant figures followed by the number of zeros. Example: 100 = 10 pF 101 = 100 pF 102 = 1000 pF 103 = .01 μF	K TOLERANCE CODE* F = ± 1% G = ± 2% J = ± 5% K = ± 10% M = ± 20%	2 VOLTAGE CODE 1 = 25 VDC 2 = 50 VDC 3 = 100 VDC 4 = 200 VDC 5 = 300 VDC 6 = 500 VDC 9 = 1000 VDC	B CASE Molded Box (Encapsulated)	200 LEAD SPACING (LS) See Above
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* F and G tolerances are available for NPO parts only

PRESIDIO CUSTOM PRODUCTS



CUSTOM LEADS

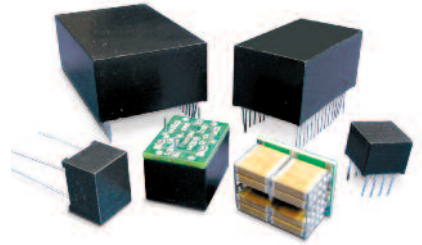
PRESIDIO COMPONENTS, INC. maintains more than 70 million standard commercial and military parts in inventory. If you need a custom product, call our engineering team.



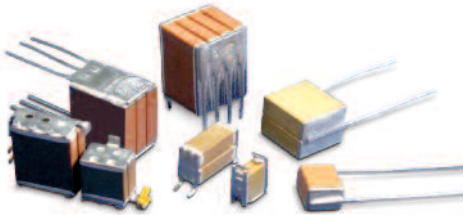
'S' LEADS

Custom products include non-standard part sizes and voltages such as high voltage, high temperature, high "Q", custom leads, cryogenic ceramics, negative and positive temperature characteristic ceramics, and piezoelectric formulations. European sizes are also available.

Backed with numerous patents and hundreds of years of combined experience, Presidio's engineering team is ready and able to create the ideal solution for any application.



ENCAPSULATED



**CUSTOM STACKED
CUSTOM ASSEMBLY**



**HIGH TEMP
DOWNHOLE OIL**



**MULTILAYER CO-FIRED
PIEZO**



**POWER-STACK™
CAPACITORS**



**HIGH FREQUENCY
HIGH POWER**

HIGH TEMPERATURE APPLICATIONS



DOWNHOLE
Oil • Gas • Geothermal

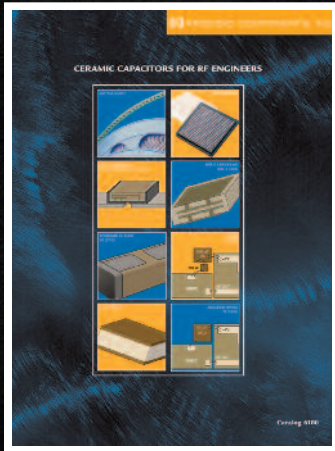


HIGH TEMPERATURE
Avionics

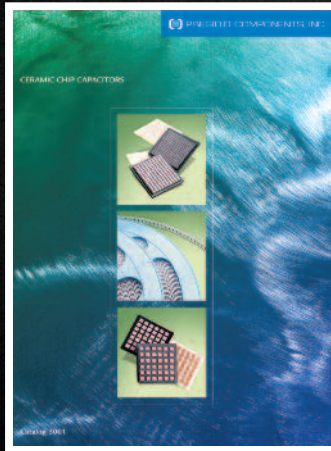
 **PRESIDIO COMPONENTS, INC.**

7169 Construction Court, San Diego, CA 92121 USA • Tel: 858-578-9390 • Fax: 800-538-3880 or 858-578-6225
www.presidiocomponents.com • info@presidiocomponents.com

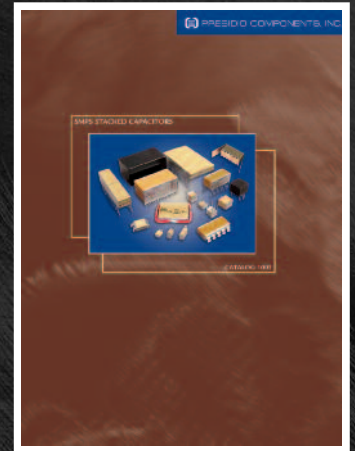
MAIN PRODUCT CATALOGS



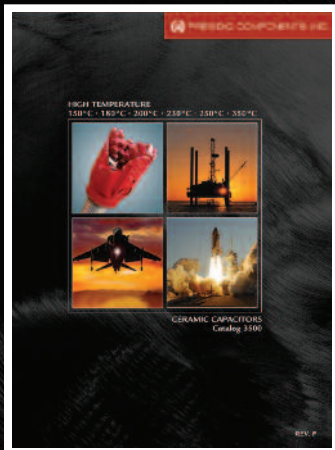
**CERAMIC CAPACITORS
FOR RF, MICROWAVE
& FIBER OPTIC
APPLICATIONS**



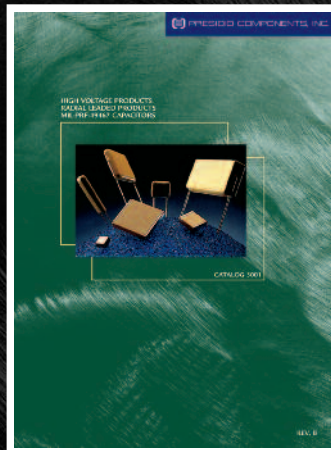
**CERAMIC CHIP
CAPACITORS**



**SMPS STACKED
CAPACITORS**



**HIGH TEMPERATURE
CERAMIC
CAPACITORS**



**HIGH VOLTAGE &
RADIAL LEADED PRODUCTS
MIL-PRF-49467 CAPACITORS**



**HIGH RELIABILITY
EXTENDED RANGE
CHIP CAPS FOR SPACE**