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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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POWER DISCRETES**Description****Semtech Premium Dielectric
High Voltage Capacitors
Monolithic Ceramic type**

Semtech's premium dielectric capacitors demonstrate minimum capacitance change over the operation voltage and temperature range, high current carrying capability and high volumetric efficiency. This X7R body has been designed into the most demanding applications: from the one extreme of satellite, missile, space shuttle, and avionics programs to the other extreme of "down hole" oil exploration equipment.

Features

- ◆ X7R dielectric
- ◆ 1kV to 5kV voltage range


General Specifications


- ◆ Operating temperature range -55°C to 125°C
- ◆ Aging rate <1.0% per decade hour
- ◆ Insulation resistance: 100k meg Ω or 1000meg Ω microfarads, whichever is less, at 500VDC, 25°C
- ◆ Dissipation factor: 2.5% max at 1kHz 1 VAC, 25°C
- ◆ Dielectric withstanding voltage: 1.2 x rated voltage at 25°C (Test conducted with charging current limited to 10mA and discharge current limited to 10A)
- ◆ Temperature coefficient: \pm 15% over -55°C to 125°C range
- ◆ "S" size package type available

POWER DISCRETES

Capability Matrix

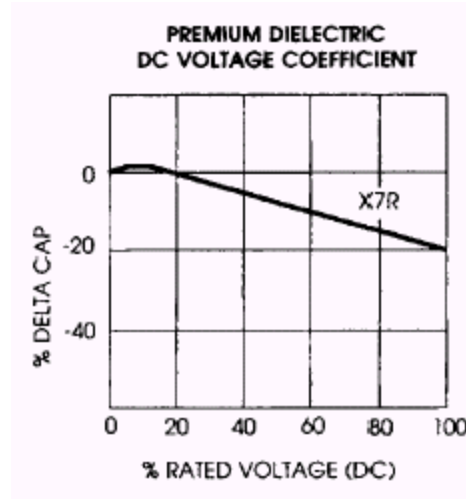
SIZE	1kV					2kV					3kV					4kV					5kV					EIA CODE					
	2	3	4	5	6	2	3	4	5	6	2	3	4	5	6	2	3	4	5	6	2	3	4	5	6						
VALUE																															
180pF																															181
220pF																															221
270pF																															271
330pF																															331
390pF																															391
470pF																															471
560pF																															561
680pF																															681
820pF																															821
1000pF																															102
1200pF																															122
1500pF																															152
1800pF																															182
2200pF																															222
2700pF																															272
3300pF																															332
3900pF																															392
4700pF																															472
5600pF																															562
6800pF																															682
8200pF																															822
.010uF																															103
.012uF																															123
.015uF																															153
.018uF																															183
.022uF																															223
.027uF																															273
.033uF																															333
.039uF																															393
.047uF																															473
.056uF																															563
.068uF																															683
.082uF																															823
.10uF																															104
.12uF																															124
.15uF																															154
.18uF																															184
.22uF																															224
.27uF																															274
.33uF																															334
.39uF																															394

 = Standard range K tolerance available from stock.

 = Non standard capabilities

POWER DISCRETES

Typical Characteristic



Ordering Information

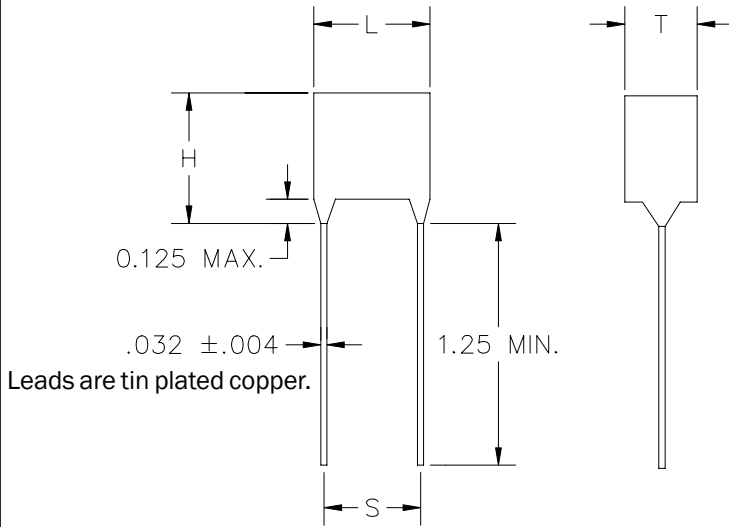
3	A		X	103	K	2
PART SIZE CODE	FORM		DIELECTRIC MATERIAL	CAPACITANCE (EIA CODE)	CAPACITANCE TOLERANCE	VOLTAGE RATING
2	CHIP	LEADED	X = X7R	Last digit indicates number of zeroes following the first two digits Example: 103=10000pF	K = 10% M = 20% V = +100% - 0% Z = +80% - 20%	1 = 1kV 2 = 2kV 3 = 3kV 4 = 4kV 5 = 5kV
3	A = Silver Termination	E = Epoxy Encapsulated L = Leaded only				
4	D = Palladium Silver Termination					
5	H = Capable of handling temperature excursions of up to 200°C					
6						

Note:

1. For "S" size package type, please order part as "SXXXXXXXX" e.g. S3AX103K2.

POWER DISCRETES

Outline Drawing - Encapsulated



Dimensions				
Size Code	L(Max) In. (mm)	S In.(mm)	T(Max) In.(mm)	H(Ref) ⁽¹⁾ In.(mm)
2	.400 (10.2)	.300 ± .032 (7.62 ± .82)	.275 (7.00)	.475 (12.1)
3	.500 (12.7)	.400 ± .032 (10.2 ± .82)	.300 (7.62)	.575 (14.6)
4	.600 (15.3)	.500 ± .032 (12.7 ± .82)	.375 (9.53)	.675 (17.1)
5	.700 (17.8)	.600 ± .032 (15.3 ± .82)	.375 (9.53)	.775 (19.7)
6	.800 (20.4)	.700 ± .032 (17.8 ± .82)	.375 (9.53)	.875 (22.2)

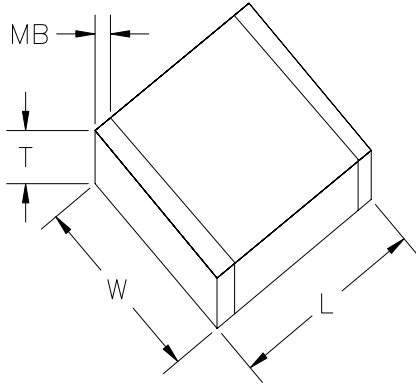
Notes:

1. Maximum mounting height. Leads shall be solderable beyond this point.
2. When ordering "S" size package type please see Dimension Table "S".

Dimensions for "S" Size ⁽²⁾				
Size Code	L(Max) In. (mm)	S In.(mm)	T(Max) In.(mm)	H(Ref) ⁽¹⁾ In.(mm)
S2	0.42 (10.7)	.275 ± .03 (6.96 ± .76)	0.35 (8.89)	0.3 (8.89)
S3	0.49 (12.4)	.375 ± .03 (9.52 ± .76)	0.35 (8.89)	0.4 (10.16)
S4	0.59 (14.9)	.475 ± .03 (12.06 ± .76)	0.35 (8.89)	0.5 (12.7)
S5	0.69 (17.5)	.575 ± .03 (14.6 ± .76)	0.35 (8.89)	0.6 (15.24)
S6	0.79 (20.0)	.675 ± .03 (17.14 ± .76)	0.35 (8.89)	0.72 (18.28)

POWER DISCRETES

Outline Drawing - Chip



Dimensions				
Size Code	L(Nom) In. (mm)	W(Nom) In.(mm)	T(Max) In.(mm)	MB(Max) In.(mm)
2	.270 (6.90)	.250 (6.40)	.250 (6.40)	.040 (1.10)
3	.370 (9.40)	.350 (8.90)	.250 (6.40)	.040 (1.10)
4	.470 (12.0)	.450 (11.5)	.300 (7.60)	.040 (1.10)
5	.570 (14.5)	.550 (14.0)	.300 (7.60)	.040 (1.10)
6	.670 (17.0)	.650 (16.6)	.300 (7.60)	.040 (1.10)

Note:

1. When ordering "S" size package type please see Dimension Table "S".

Dimensions for "S" Size ⁽¹⁾				
Size Code	L(Nom) In. (mm)	W(Nom) In.(mm)	T(Max) In.(mm)	MB(Max) In.(mm)
S2	.25 (6.35)	.2 (5.08)	.25 (6.35)	.03 (0.76)
S3	.36 (9.14)	.31 (7.87)	.25 (6.35)	.03 (0.76)
S4	.45 (11.43)	.4 (10.16)	.25 (6.35)	.03 (0.76)
S5	.56 (14.22)	.52 (13.2)	.25 (6.35)	.03 (0.76)
S6	.66 (16.76)	.62 (15.74)	.25 (6.35)	.03 (0.76)

Contact Information

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