

# Type THF Solid Tantalum Capacitors

## Hermetically Sealed Axial Lead Solid Tantalum Capacitors



The Type THF is ideal for use in switching regulators and high frequency power supplies because of its high ripple current and low ESR capabilities. It is an axial lead solid tantalum capacitor constructed with a rugged hermetically sealed metal case, insulated with an outer polyester wrap. The THF assures a small case size for high capacitance, and is extremely stable over the rated temperature range.

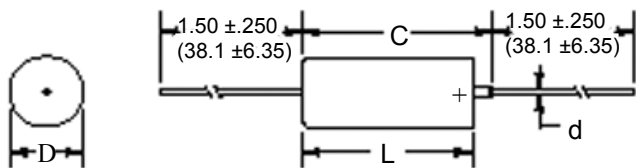
### Highlights

- ◆ High Ripple Current
- ◆ Low ESR
- ◆ Lower Impedance at High Frequency
- ◆ Extremely Stable Capacitance
- ◆ Long Life
- ◆ Moisture & Solvent Resistant
- ◆ Small Size

### Specifications

<b>Capacitance Range:</b>	5.6 $\mu$ F to 330 $\mu$ F
<b>Voltage Range:</b>	6 WVdc to 50 WVdc @ 85 °C
<b>Capacitance Tolerance:</b>	-55 °C to +125 °C ( With proper derating)
<b>Operating Temperature:</b>	$\pm$ 10% (K), $\pm$ 20% (M) At +25 °C - (See Ratings)
<b>DC Leakage:</b>	At +85 °C - 10 x Ratings limit At +125 °C - 12.5 x Ratings limit

### Outline Drawing



	Uninsulated		Insulated		Inches (mm)		
	D	L	D	L	C	d	Quantity
<b>Case</b>	$\pm$ .005	$\pm$ .031	$\pm$ .010	$\pm$ .031	C	$\pm$ .001	Per
<b>Code</b>	( $\pm$ .13)	( $\pm$ .79)	( $\pm$ .25)	( $\pm$ .79)			
F	.279(7.09)	.650(16.51)	.289(7.34)	.686(17.42)	.822(20.88)	.025(.64)	500
G	.341(8.66)	.750(19.05)	.351(8.92)	.786(19.96)	.922(23.42)	.025(.64)	400

### Part Numbering System

<b>THF</b>	<b>157</b>	<b>M</b>	<b>006</b>	<b>P</b>	<b>1</b>	<b>F</b>
Type	Capacitance	Tolerance	Voltage	Polar	Mylar Sleeve	Case Code
THF	565 = 5.6 $\mu$ F 186 = 18.6 $\mu$ F 157 = 150 $\mu$ F	K = $\pm$ 10% M = $\pm$ 20%	006 = 6 Vdc 020 = 20 Vdc 050 = 50 Vdc	P = Polar	1	F G

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## Ratings

Cap ( $\mu$ F)	Catalog Part Number	Case Code	Max DCL @ +25 °C ( $\mu$ A)	Max DF % @ +25 °C 1 kHz	Max ESR (ohms) @ +25 °C 100 kHz	Max Ripple RMS Amps @ 40 kHz +25°C
<b>6 WVdc @ 85 °C</b> <b>4 WVdc @ 125 °C</b>						
150	THF157K006P1F	F	4.5	10	0.065	3.3
180	THF187K006P1F	F	5.5	10	0.060	3.4
270	THF277K006P1G	G	6.5	10	0.050	4.1
330	THF337K006P1G	G	7.5	12	0.045	4.3
<b>10 WVdc @ 85 °C</b> <b>7 WVdc @ 125 °C</b>						
82	THF826K010P1F	F	4	8	0.085	2.9
100	THF107K010P1F	F	5	8	0.075	3.0
120	THF127K010P1F	F	6	8	0.070	3.2
180	THF187K010P1G	G	9	8	0.060	3.7
220	THF227K010P1G	G	10	10	0.055	3.9
<b>15 WVdc @ 85 °C</b> <b>10 WVdc @ 125 °C</b>						
56	THF566K015P1F	F	4	6	0.100	2.6
68	THF686K015P1F	F	5	6	0.095	2.7
120	THF127K015P1G	G	9	8	0.070	3.5
150	THF157K015P1G	G	10	8	0.065	3.6
<b>20 WVdc @ 85 °C</b> <b>13 WVdc @ 125 °C</b>						
27	THF276K020P1F	F	2.5	5	0.145	2.2
33	THF336K020P1F	F	3.5	5	0.130	2.3
39	THF396K020P1F	F	4.0	5	0.120	2.4
47	THF476K020P1F	F	4.5	6	0.110	2.5
56	THF566K020P1G	G	5.5	6	0.100	2.9
68	THF686K020P1G	G	7.0	6	0.095	3.0
82	THF826K020P1G	G	8.0	6	0.085	3.1
100	THF107K020P1G	G	10.0	8	0.075	3.3
<b>35 WVdc @ 85 °C</b> <b>23 WVdc @ 125 °C</b>						
10	THF106K035P1F	F	4.0	4	0.161	1.5
22	THF226K035P1F	F	4.0	4	0.160	2.1
27	THF276K035P1G	G	4.5	4	0.145	2.4
33	THF336K035P1G	G	5.5	5	0.130	2.5
39	THF396K035P1G	G	7.0	5	0.120	2.6
47	THF476K035P1G	G	8.0	5	0.110	2.7
<b>50 WVdc @ 85 °C</b> <b>33 WVdc @ 125 °C</b>						
5.6	THF565K050P1F	F	2.2	3	0.300	1.5
6.8	THF685K050P1F	F	2.2	3	0.275	1.6
8.2	THF825K050P1F	F	2.5	3	0.250	1.6
10.0	THF106K050P1F	F	2.5	3	0.230	1.7
12.0	THF126K050P1F	F	3.0	3	0.210	1.8
15.0	THF156K050P1F	F	4.0	3	0.190	1.9
18.0	THF186K050P1F	F	4.5	4	0.175	2.0
22.0	THF226K050P1G	G	5.5	4	0.160	2.3

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