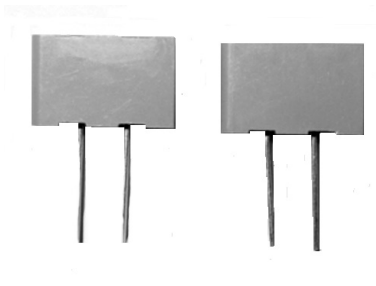


# Type TIM Solid Tantalum Capacitors

## Molded, Radial Lead, Solid Tantalum Capacitors



The Type TIM radial molded solid tantalum capacitor is great for saving board space with its higher profile and smaller board space requirement. It is ideal for high density packaging coupled with low DCL and low ESR performance needed in compact power supply designs. The radius on the vertical side allows for polarization during automatic or hand insertion. The Type TIM is available in bulk or on radial tape and reel.

### Highlights

- ◆ Precision Molded
- ◆ Low DCL
- ◆ Low ESR
- ◆ Radius on Vertical Edge for Polarity ID
- ◆ Excellent Temperature Stability
- ◆ Standoffs for Easier Flux Removal
- ◆ Resistant to Shock and Vibraton

### Specifications

**Capacitance Range:** 0.10  $\mu$ F to 220  $\mu$ F  
**Voltage Range:** 6 WVdc to 50 WVdc at 85 °C  
**Tolerance:**  $\pm$ 10%,  $\pm$ 20%  
**Operating Temperature Range:** -55 °C to +125 °C (with proper derating)

**DC Leakage:** +25 °C - See ratings limit  
+85 °C - 10 x 25 °C limit  
+125 °C - 12.5 x 25 °C limit

**Capacitance Change Maximum:** -10% @ -55 °C  
+10% @ +85 °C  
+15% @ +125 °C

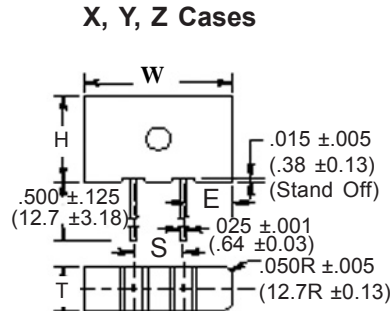
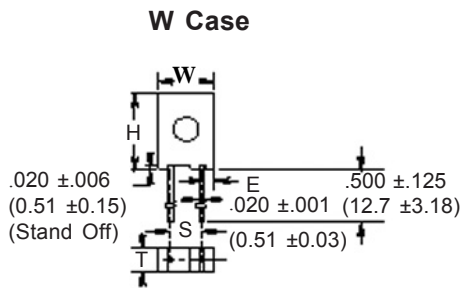
**Maximum Power Dissipation:** W & X .090 Watts  
Y .100 Watts  
Z .125 Watts

**Reel Packaging per EIA- RS-468:**

Case Code	Quantity
W	1,500 per 14" Reel
X	1,500 per 14" Reel
Y	1,500 per 14" Reel
Z	N/A

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## Capacitor Outline Drawing



**Note:**  
 On the X Case sizes  
 the standoff appears  
 only between the two leads.

Case Code	H Case Height	W Case Width	T Case Thickness	E Case to Wire	S Lead spacing
W	$.345 \pm .008$ (8.76 ±.203)	$.230 \pm .005$ (5.84 ±.127)	$.105 \pm .005$ (2.67 ±.127)	$.050 \pm .010$ (1.27 ±0.25)	$.125 \pm .005$ (3.18 ±0.127)
X	$.225 \pm .015$ (5.71 ±0.38)	$.285 \pm .015$ (7.24 ±0.38)	$.170 \pm .015$ (4.32 ±0.38)	$.042 \pm .010$ (1.07 ±0.25)	$.200 \pm .005$ (5.08 ±0.127)
Y	$.325 \pm .015$ (8.26 ±0.38)	$.325 \pm .015$ (8.26 ±0.38)	$.170 \pm .015$ (4.32 ±0.38)	$.062 \pm .010$ (1.57 ±0.25)	$.200 \pm .005$ (5.08 ±0.127)
Z	$.375 \pm .015$ (9.53 ±0.38)	$.600 \pm .015$ (15.24 ±0.38)	$.195 \pm .015$ (4.95 ±0.38)	$.200 \pm .010$ (5.08 ±0.25)	$.200 \pm .005$ (5.08 ±0.127)

Inches (Millimeters)

## Part Number System

<b>TIM</b>	<b>157</b>	<b>K</b>	<b>010</b>	<b>P</b>	<b>0</b>	<b>Z</b>
<b>Type</b>	<b>Capacitance</b>	<b>Tolerance</b>	<b>Voltage</b>	<b>Polar</b>	<b>Molded Case</b>	<b>Case Code</b>
<b>TIM</b>	<b>104</b> = 0.10 μF	<b>K</b> = ±10%	<b>006</b> = 6 Vdc	<b>P</b> = Polar	<b>0</b>	<b>W</b>
	<b>105</b> = 1.0 μF	<b>M</b> = ±20%	<b>010</b> = 10 Vdc			<b>X</b>
	<b>225</b> = 2.2 μF		<b>015</b> = 15 Vdc			<b>Y</b>
	<b>186</b> = 18 μF		<b>020</b> = 20 Vdc			<b>Z</b>
	<b>157</b> = 150 μF		<b>025</b> = 25 Vdc			
			<b>035</b> = 35 Vdc			
			<b>050</b> = 50 Vdc			

# Type TIM Solid Tantalum Capacitors

## Ratings

Cap ( $\mu$ F)	Case Code	Max DCL @ +25 °C ( $\mu$ A)	Max DF % @ +25 °C 120 Hz	Max Ripple mA rms		Catalog Part Number
				@ 120 Hz +25 C	@ 1 kHz +25 C	
<b>6 WVdc @ 85 °C 4 WVdc @ 125 °C</b>						
22	X	1	6	35	290	TIM226K006P0X
56	Y	5	6	89	570	TIM566K006P0Y
68	Y	5	6	100	630	TIM686K006P0Y
220	Z	10	6	350	1000	TIM227K006P0Z
<b>10 WVdc @ 85 °C 7 WVdc @ 125 °C</b>						
6.8	X	1	6	18	150	TIM685K010P0X
10	W	1	6	26	220	TIM106K010P0W
10	X	1	6	26	220	TIM106K010P0X
15	W	1	6	39	270	TIM156K010P0W
15	X	1	6	39	270	TIM156K010P0X
22	Y	2	6	58	360	TIM226K010P0Y
33	Y	2	6	87	440	TIM336K010P0Y
39	Y	5	6	100	480	TIM396K010P0Y
47	Y	5	6	120	590	TIM476K010P0Y
56	Y	5	6	140	650	TIM566K010P0Y
150	Z	10	6	390	920	TIM157K010P0Z
<b>15 WVdc @ 85 °C 10 WVdc @ 125 °C</b>						
5.6	X	1	6	22	180	TIM565K015P0X
6.8	X	1	6	27	180	TIM685K015P0X
8.2	X	1	6	32	200	TIM825K015P0X
10	Y	1	6	35	270	TIM106K015P0Y
15	Y	2	6	59	290	TIM156K015P0Y
22	Y	5	6	87	360	TIM226K015P0Y
27	Y	5	6	100	390	TIM276K015P0Y
33	Y	5	6	130	440	TIM336K015P0Y
<b>20 WVdc @ 85 °C 13 WVdc @ 125 °C</b>						
5.6	W	1	6	29	180	TIM565K020POW
6.8	W	1	6	36	200	TIM685K020POW
<b>25 WVdc @ 85 °C 17 WVdc @ 125 °C</b>						
1.0	X	1	6	9.3	77	TIM105K025P0X
3.3	W	1	4	21	150	TIM335K025P0W
3.3	X	1	6	21	150	TIM335K025P0X
4.7	X	1	6	31	180	TIM475K025P0X
6.8	Y	1	6	45	200	TIM685K025P0Y
10	X	1	6	4	190	TIM106K025P0X
10	Y	1	6	66	240	TIM106K025P0Y
12	Y	1	6	79	260	TIM126K025P0Y
15	Y	2	6	99	290	TIM156K025P0Y

CDE may improve your order and shorten delivery by substituting tighter tolerance or higher voltage capacitors in the same case size.

# Type TIM Solid Tantalum Capacitors

Cap ( $\mu$ F)	Case Code	Max DCL @ +25 °C ( $\mu$ A)	Max DF % @ +25 °C 120 Hz	Max Ripple mA rms		Catalog Part Number
				@ 120 Hz +25 C	@ 1 kHz +25 C	
<b>35 WVdc @ 85 °C</b>						
<b>23 WVdc @ 125 °C</b>						
0.10	X	1	6	1	9	TIM104K035P0X
0.22	X	1	6	2	17	TIM224K035P0X
0.47	X	1	6	4.3	36	TIM474K035P0X
1.00	X	1	6	9.3	77	TIM105K035P0X
2.20	W	1	4	20	120	TIM225K035P0W
2.20	X	1	6	20	120	TIM225K035P0X
2.70	W	1	4	25	140	TIM275K035P0W
3.30	X	1	6	30	150	TIM335K035P0X
3.90	Y	1	6	35	180	TIM395K035P0Y
4.70	X	1	6	32	155	TIM475K035P0X
4.70	Y	1	6	43	200	TIM475K035P0Y
6.80	Y	2	6	63	210	TIM685K035P0Y
8.20	Y	5	6	76	220	TIM825K035P0Y
10.00	Y	5	6	93	240	TIM106K035P0Y
22.00	Z	10	6	200	400	TIM226K035P0Z
27.00	Z	10	6	250	450	TIM276K035P0Z
33.00	Z	10	6	300	490	TIM336K035P0Z
<b>50 WVdc @ 85 °C</b>						
<b>33 WVdc @ 125 °C</b>						
0.10	X	1	6	1.3	11	TIM104K050P0X
0.22	X	1	6	2.9	24	TIM224K050P0X
0.33	X	1	6	4.4	36	TIM334K050P0X
1.0	W	1	4	13	86	TIM105K050P0W
1.0	X	1	6	13	87	TIM105K050P0X
1.5	W	1	4	19	100	TIM155K050P0W
1.5	X	1	6	19	100	TIM155K050P0X
2.2	X	1	6	29	120	TIM225K050P0X
4.7	Y	5	6	62	200	TIM475K050P0Y
5.6	Y	5	6	74	220	TIM565K050P0Y
6.8	Z	5	6	90	220	TIM685K050P0Z
10.0	Z	5	6	130	270	TIM106K050P0Z
15.0	Z	10	6	190	330	TIM156K050P0Z

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