

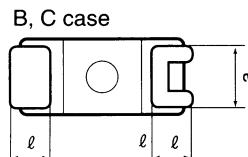
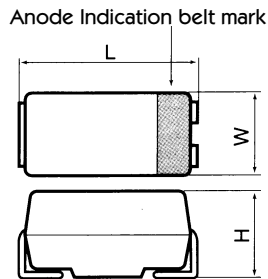
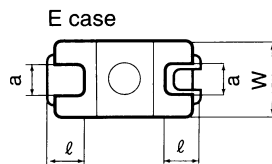
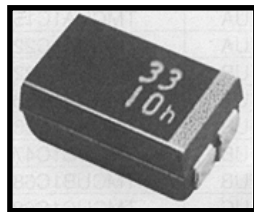
TANTALUM CAPACITORS

TMCR Series

•Low ESR Tantalum Chip Capacitors

The TMCR Series offers ultra low ESR for tantalum chip capacitors. They are suitable for high frequency applications such as high speed PC, Switching Regulators, DC/DC converters, and similar product designs.

Outline Drawings and Dimensions



TMCR Case Code Table

Case Code	Dimensions				
	L ± 0.2	W ± 0.2	H MAX	$\ell \pm 0.3$	a ± 0.2
B	3.5	2.8	1.9	0.8	2.2
C	5.8	3.2	2.5	1.3	2.2
E	7.3	4.3 ± 0.3	2.8	1.3	2.4

For Specifications see Table on Page 153.

TMCR Product Markings

B Case	C, E Case
Simplified code of rated voltage (G: 4V) GA7a Anode Indication belt mark Date Code (for manufacturing in January, 2003) Simplified code of nominal capacitance (A7: 10μF) Note: The simplified code is subject to JIS C 5143 10.1.2.	Nominal capacitance value (15μF) 15 16a Anode Indication belt mark Date Code (for manufacturing in January, 2003) Rated voltage (16V)

Tantalum Capacitor Date Code Table

Month Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000	n	p	q	r	s	t	u	v	w	n	n	n
2001	A	B	C	D	E	F	G	H	J	K	L	M
2002	N	P	Q	R	S	T	U	V	W	X	Y	Z
2003	a	b	c	d	e	f	g	h	j	k	l	m

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Rated Voltage (WVDC)	Part Number	Capacitance	Capacitance Tolerance	Tangent	ESR @20° C	Dimensions			Quantity	
						L x W* x H (±0.2) (±0.2) (MAX)	ℓ (±0.3)	a (±0.2)	180mm Dia. Reel	330mm Dia. Reel
6.3 Volts DC (Code: 0J)	TMCRB0J106KTR	10	±10%	0.06	0.7	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB0J106MTR	10	±20%	0.06	0.7	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB0J156KTR	15	±10%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB0J156MTR	15	±20%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB0J226KTR	22	±10%	0.06	0.5	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB0J226MTR	22	±20%	0.06	0.5	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCR0J336KTR	33	±10%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0J336MTR	33	±20%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0J476KTR	47	±10%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0J476MTR	47	±20%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCRE0J686KTR	68	±10%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J686MTR	68	±20%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J107KTR	100	±10%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J107MTR	100	±20%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J157KTR	150	±10%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J157MTR	150	±20%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J227KTR	220	±10%	0.10	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J227MTR	220	±20%	0.10	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J337KTR	330	±10%	0.15	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE0J337MTR	330	±20%	0.15	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
10 Volts DC (Code: 1A)	TMCRB1A106KTR	10	±10%	0.06	0.7	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB1A106MTR	10	±20%	0.06	0.7	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB1A156KTR	15	±10%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB1A156MTR	15	±20%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCR0A226KTR	22	±10%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0A226MTR	22	±20%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0A336KTR	33	±10%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0A336MTR	33	±20%	0.06	0.35	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0A476KTR	47	±10%	0.06	0.25	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR0A476MTR	47	±20%	0.06	0.25	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCRE1A686KTR	68	±10%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A686MTR	68	±20%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A107KTR	100	±10%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A107MTR	100	±20%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A157KTR	150	±10%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A157MTR	150	±20%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A227KTR	220	±10%	0.10	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1A227MTR	220	±20%	0.10	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500

*Case Code E: Width (W) = ±0.3

TANTALUM CAPACITORS

TMCR Series

•Low ESR Tantalum Chip Capacitors

Rated Voltage (WVDC)	Part Number	Capacitance	Capacitance Tolerance	Tangent	ESR @20° C	Dimensions			Quantity	
						L x W* x H (±0.2) (±0.2) (MAX)	ℓ (±0.3)	a (±0.2)	180mm Dia. Reel	330mm Dia. Reel
16 Volts DC (Code: 1C)	TMCRB1C106KTR	10	±10%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCRB1C106MTR	10	±20%	0.06	0.6	3.5 x 2.8 x 1.9	0.8	2.2	2000	8000
	TMCR1C156KTR	15	±10%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1C156MTR	15	±20%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1C226KTR	22	±10%	0.06	0.4	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1C226MTR	22	±20%	0.06	0.4	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCRE1C336KTR	33	±10%	0.06	0.25	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C336MTR	33	±20%	0.06	0.25	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C476KTR	47	±10%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C476MTR	47	±20%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C686KTR	68	±10%	0.06	0.15	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C686MTR	68	±20%	0.06	0.15	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C107KTR	100	±10%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1C107MTR	100	±20%	0.08	0.1	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
20 Volts DC (Code: 1D)	TMCR1D106KTR	10	±10%	0.06	0.6	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1D106MTR	10	±20%	0.06	0.6	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1D156KTR	15	±10%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCR1D156MTR	15	±20%	0.06	0.5	5.8 x 3.2 x 2.5	1.3	2.2	500	2500
	TMCRE1D226KTR	22	±10%	0.06	0.35	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1D226MTR	22	±20%	0.06	0.35	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1D336KTR	33	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1D336MTR	33	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1D476KTR	47	±10%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1D476MTR	47	±20%	0.06	0.2	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
25 Volts DC (Code: 1E)	TMCRE1E106KTR	10	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E106MTR	10	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E156KTR	15	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E156MTR	15	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E226KTR	22	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E226MTR	22	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E336KTR	33	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1E336MTR	33	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
35 Volts DC (Code: 1V)	TMCRE1V106KTR	10	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1V106MTR	10	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1V156KTR	15	±10%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1V156MTR	15	±20%	0.06	0.3	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1V226KTR	22	±10%	0.06	0.5	7.3 x 4.3* x 2.8	1.3	2.4	500	2500
	TMCRE1V226MTR	22	±20%	0.06	0.5	7.3 x 4.3* x 2.8	1.3	2.4	500	2500

*Case Code E: Width (W) = ±0.3