

TANTALUM ELECTROLYTIC CAPACITORS

查询TMCM/A0E107供应商

捷多邦, 专业PCB打样工厂, 24小时加急出货

TMCM Series (Miniaturized Tantalum Chip Capacitors with Extended Capacitance Range)

Features

- A model type miniaturized chip capacitor developed on the basis of TMCS production technology ideal for high density component mounting applied in AV equipment.
- Super compact : Reduced size 1/2 to 1/3 in comparison with TMCS.

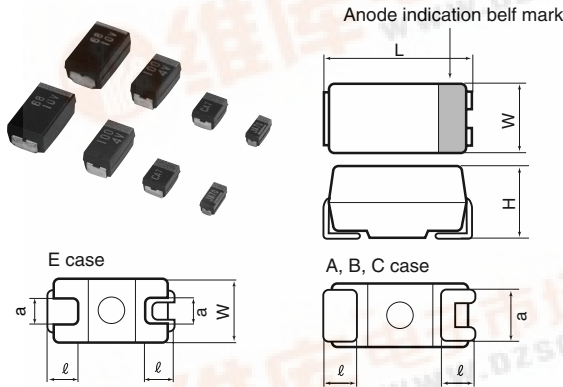
Product symbol : (Example) TMCM Series A case 7V 10 μ F \pm 20%

TMCM A 0J 106 M T R E

Terminal code
Packing polarity code
Packing method code (T:carrier tape)
Capacitance tolerance code
Capacitance code
Rated voltage code
Case size code

Type of series

Outline of drawings and dimensions



Dimensions (Unit : mm)

Case code	Case size				
	L \pm 0.2	W \pm 0.2	H \pm 0.2	ϕ \pm 0.3	a \pm 0.2
A	3.2	1.6	1.6	0.7	1.2
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 \pm 0.3	2.8	1.3	2.4

Standard value and case size

Capacitance	Code	Rated voltage (V.DC)								
		2.5	4	6.3 (7)	10	16	20	25	35	
μ F		0E	0G	0J	1A	1C	1D	1E	1V	
0.47	474								A	
0.68	684							A	A	
1.0	105							A	A	
1.5	155							A	B	
2.2	225						A	A,B	B	
3.3	335					A	A	B	B	
4.7	475				A	A	A,B	B	C	
6.8	685				A	A	B	C	C	
10	106				A	A,B	B,C	C	C,E	
15	156		A		A	A,B	C	C,E	E	
22	226		A	A	A,B	B,C	C,E	E	E	
33	336	A	A	A	B	B,C	(C)E	E		
47	476	A	A	A,B	B,C	C,E	E			
68	686	A,B	A,B	B,C	B,C	E	(E)			
100	107	(A)B,C	(A)B,C	B,C	C	E				
150	157	B,C	B,C	C	E					
220	227	B,C	B,C	C,E	E					
330	337	C,E	C,E	E	(E)					
470	477	E	E	E						

(): Under Developing

For ratings not covered the table, consult Hitachi AIC.

Product specifications

	TMCM	Test conditions JIS C5101-3-1998																																								
Operating temperature range	-55°C ~ +125°C																																									
Rated voltage	DC2.5 ~ 35V	85°C																																								
Surge voltage	DC3.2 ~ 45V	85°C																																								
Derated voltage	DC1.6 ~ 22V	125°C																																								
Capacitance	0.47 ~ 470 μ F																																									
Capacitance tolerance	\pm 10% or 20%	Paragraph 7.8, 120 Hz																																								
Leakage current	Refer to table standard product table	Paragraph 7.7, in 5 minutes after the rated voltage is applied.																																								
tan δ	Refer to table standard product table	Paragraph 7.9, 120Hz																																								
Surge withstanding voltage	Δ C/C \pm 5% or less tan δ Specified initial value or less LC Specified initial value or less	Paragraph 7.14																																								
Temperature characteristics	<table border="1"> <thead> <tr> <th></th> <th>Specified initial value</th> <th>-55</th> <th>85</th> <th>125</th> </tr> </thead> <tbody> <tr> <td>Δ C/C</td> <td>-</td> <td>-10 - 0%</td> <td>0 - +10%</td> <td>0 - +12%</td> </tr> <tr> <td rowspan="6">tanδ Maximum value or less</td> <td>0.04</td> <td>0.09</td> <td>0.07</td> <td>0.09</td> </tr> <tr> <td>0.06</td> <td>0.10</td> <td>0.08</td> <td>0.10</td> </tr> <tr> <td>0.08</td> <td>0.12</td> <td>0.10</td> <td>0.12</td> </tr> <tr> <td>0.10</td> <td>0.14</td> <td>0.12</td> <td>0.14</td> </tr> <tr> <td>0.12</td> <td>0.16</td> <td>0.14</td> <td>0.16</td> </tr> <tr> <td>0.16</td> <td>0.20</td> <td>0.18</td> <td>0.20</td> </tr> <tr> <td>LC</td> <td>0.01CV or 0.5μA or less</td> <td>-</td> <td>0.1CV or 5μA or less</td> <td>0.125CV or 6.25μA or less</td> </tr> </tbody> </table>		Specified initial value	-55	85	125	Δ C/C	-	-10 - 0%	0 - +10%	0 - +12%	tan δ Maximum value or less	0.04	0.09	0.07	0.09	0.06	0.10	0.08	0.10	0.08	0.12	0.10	0.12	0.10	0.14	0.12	0.14	0.12	0.16	0.14	0.16	0.16	0.20	0.18	0.20	LC	0.01CV or 0.5 μ A or less	-	0.1CV or 5 μ A or less	0.125CV or 6.25 μ A or less	Paragraph 7.12
	Specified initial value	-55	85	125																																						
Δ C/C	-	-10 - 0%	0 - +10%	0 - +12%																																						
tan δ Maximum value or less	0.04	0.09	0.07	0.09																																						
	0.06	0.10	0.08	0.10																																						
	0.08	0.12	0.10	0.12																																						
	0.10	0.14	0.12	0.14																																						
	0.12	0.16	0.14	0.16																																						
	0.16	0.20	0.18	0.20																																						
LC	0.01CV or 0.5 μ A or less	-	0.1CV or 5 μ A or less	0.125CV or 6.25 μ A or less																																						
Solder heat resistance	Δ C/C \pm 5% or less tan δ Specified initial value or less LC Specified initial value or less	Dip 260 \pm 5°C A, B case C, E case 10 \pm 1 sec. 5 \pm 0.5 sec. Reflow-260°C 10 \pm 1 sec.																																								
Moisture resistance leaving	Δ C/C \pm 10% or less tan δ Specified initial value or less LC Specified initial value or less	Paragraph 9.5, 40°C 90 ~ 95%RH,500h																																								
High-temperature load	Δ C/C \pm 10% or less tan δ Specified initial value or less LC 125% Specified initial value or less	Paragraph 9.10, 85°C The rated voltage is applied for 2000 hours.																																								
Thermal shock	Δ C/C \pm 10% or less tan δ Specified initial value or less LC Specified initial value or less	Leave at -55°C, normal temperature, 125°C, and normal temperature for 30 min., 3 min., 30 min., and 3 min. Repeat this operation 20 times running.																																								
Moisture resistance load	Δ C/C \pm 10% or less tan δ 150% Specified initial value or less LC 200% Specified initial value or less	40°C, humidity 90 to 95%RH The rated voltage is applied for 500 hours.																																								
Failure rate	1% / 1000h	85°C. The rated voltage is applied (through a protective resistor of 1 Ω /V).																																								

TANTALUM ELECTROLYTIC CAPACITORS



TANTALUM ELECTROLYTIC CAPACITORS

Standard product tables - TCM series

Standard product table - TCM series

Rated voltage V. DC	Capacitance μ F	tan δ	Leakage current μ A	Case code	Product name
2.5	33	0.08	0.8	A	TMCMA0E336
		0.12	1.2	A	TMCMA0E476
	68	0.18	1.7	A	TMCMA0E686
		0.08	1.7	B	TMCMB0E686
	100	(0.18)	(5.0)	(A)	TMCMA0E107
		0.12	2.5	B	TMCMB0E107
		0.08	2.5	C	TMCMB0E107
		0.08	3.8	B	TMCMB0E157
	150	0.08	3.8	C	TMCMC0E157
		0.08	3.8	E	TMCME0E157
		0.18	5.5	B	TMCMB0E227
	220	0.08	5.5	C	TMCMC0E227
		0.08	5.5	E	TMCME0E227
		0.18	8.3	C	TMCME0E337
	330	0.10	8.3	E	TMCME0E337
		0.10	11.8	E	TMCME0E477
4	15	0.08	0.6	A	TMCMA0G156
		0.08	0.9	A	TMCMA0G226
	33	0.08	1.3	A	TMCMA0G336
		0.12	1.9	A	TMCMA0G476
	68	0.12	5.4	A	TMCMA0G686
		0.08	2.7	B	TMCMB0G686
	100	0.12	4.0	B	TMCMB0G107
		0.08	4.0	C	TMCMC0G107
	150	0.18	6.0	B	TMCMB0G157
		0.08	6.0	C	TMCMC0G157
	220	0.18	17.6	B	TMCMB0G227
		0.12	8.8	C	TMCMC0G227
	330	0.18	13.2	C	TMCMC0G337
		0.10	13.2	E	TMCME0G337
	470	0.10	18.8	E	TMCME0G477
	6.3 (7)	22	0.08	1.5	A
0.10			2.3	A	TMCMA0J336
47		0.12	5.9	A	TMCMA0J476
		0.08	3.3	B	TMCMB0J476
68		0.10	4.8	B	TMCMB0J686
		0.08	4.8	C	TMCMC0J686
100		0.12	7.0	B	TMCMB0J107
		0.08	7.0	C	TMCMC0J107
150		0.10	10.5	C	TMCMC0J157
		0.18	15.4	C	TMCMC0J227
220		0.08	15.4	E	TMCME0J227
		0.10	23.1	E	TMCME0J337
470	0.20	32.9	E	TMCME0J477	
10	4.7	0.06	0.5	A	TMCMA1A475
		0.06	0.7	A	TMCMA1A685
	10	0.08	1.0	A	TMCMA1A106
		0.12	4.4	A	TMCMA1A226
	22	0.08	2.2	B	TMCMB1A226
		0.08	3.3	B	TMCMB1A336
	47	0.10	4.7	B	TMCMB1A476
		0.08	4.7	C	TMCMC1A476
	68	0.08	6.8	C	TMCMC1A686
		0.10	10.0	C	TMCMC1A107
	220	0.08	22.0	E	TMCME1A227

Rated voltage V. DC	Capacitance μ F	tan δ	Leakage current μ A	Case code	Product name	
16	3.3	0.06	0.5	A	TMCMA1C335	
		0.06	0.8	A	TMCMA1C475	
	6.8	0.06	1.1	A	TMCMA1C685	
		0.08	1.6	A	TMCMA1C106	
	10	0.08	1.6	B	TMCMB1C106	
		0.08	2.4	B	TMCMB1C156	
	22	0.08	3.5	B	TMCMB1C226	
		0.08	3.5	C	TMCMC1C226	
	33	0.08	5.3	C	TMCMC1C336	
		0.08	7.5	C	TMCMC1C476	
	47	0.08	7.5	E	TMCME1C476	
		0.08	10.9	E	TMCME1C686	
	100	0.08	16.0	E	TMCME1C107	
	20	2.2	0.06	0.5	A	TMCMA1D225
			0.06	0.7	A	TMCMA1D335
		4.7	0.06	0.9	A	TMCMA1D475
0.06			0.9	B	TMCMB1D475	
6.8		0.06	1.4	B	TMCMB1D685	
		0.08	2.0	B	TMCMB1D106	
10		0.08	2.0	C	TMCMC1D106	
		0.08	4.4	C	TMCMC1D226	
22	0.08	4.4	E	TMCME1D226		
	0.08	9.4	E	TMCME1D476		
	0.68	0.04	0.5	A	TMCMA1E684	
	1.0	0.04	0.5	A	TMCMA1E105	
25	1.5	0.06	0.5	A	TMCMA1E155	
		0.06	0.6	B	TMCMB1E225	
	3.3	0.06	0.8	B	TMCMB1E335	
		0.06	1.2	B	TMCMB1E475	
	6.8	0.06	1.7	C	TMCMC1E685	
		0.08	2.5	C	TMCMC1E106	
	10	0.08	3.8	C	TMCMC1E156	
		0.08	3.8	E	TMCME1E156	
	22	0.08	5.5	E	TMCME1E226	
		0.08	8.3	E	TMCME1E336	
	35	0.47	0.04	0.5	A	TMCMA1V474
			0.04	0.5	A	TMCMA1V684
1.0		0.04	0.5	A	TMCMA1V105	
		0.06	0.5	B	TMCMB1V155	
2.2		0.06	0.8	B	TMCMB1V225	
		0.06	1.2	B	TMCMB1V335	
4.7		0.06	1.6	C	TMCMC1V475	
		0.06	2.4	C	TMCMC1V685	
10		0.08	3.5	C	TMCMC1V106	
		0.08	3.5	E	TMCME1V106	
15		0.08	5.3	E	TMCME1V156	
		0.08	7.7	E	TMCME1V226	

Lot indication

Year \ Month	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
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
2004	n	p	q	r	s	t	u	v	w	x	y	z
2005	A	B	C	D	E	F	G	H	J	K	L	M

Marking indication TCM series

	TMCM * \triangle \square \square \square \square \square \square \square \square \square	TMCM * \triangle \square
A, B case	<p>*The simplified code is subject to JIS C 5143, paragraph 10 and EIAJ RC-3813, paragraph 7.</p>	<p>*The simplified code is subject to JIS C 5143, paragraph 10 and EIAJ RC-3813, paragraph 7.</p>
C, E case		