TMF Series Chip Tantalum Capacitor With face down Terminals

Features

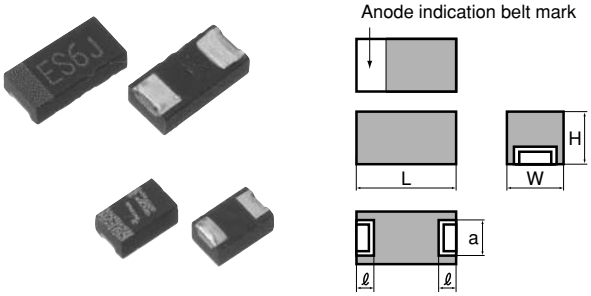
- A new, originally designed structure with reduced space requirement, resulting in the small size and large capacitance of units.
- Best suited for multi-media applications, such as cell phones, digital video cameras, etc.
- Environmentally friendly terminal plating -- lead-free (100% Sn) solder plating.

Produt code : (Example) TMF Series LM case 6.3V 22μF±20%

TMF LM 0J 226 M T R F

- TMF: Type of series
- LM: Case size code
- 0J: Rated voltage code
- 226: Capacitance code
- M: Capacitance tolerance code (M : ± 20%)
- T: Packing method code (T: carrier tape)
- R: Packing polarity code
- F: Tinned plated terminals (Sn 100)

Outline of drawings and dimensions



Dimensions (Unit : mm)

Case code	Case size				
	L±0.1	W±0.1	H±0.1	ℓ ±0.1	a±0.1
LM	1.6	0.85	0.8	0.5	0.65
LP	2.0	1.25	0.9	0.5	0.90
LA	3.2	1.60	0.9	0.8	1.20

Standard value and case size

Capacitance		Rated voltage (V.DC)				
		2.5	4	6.3	10	16
μF	Code	0E	0G	0J	1A	1C
1.0	105					
1.5	155					
2.2	225					LM
3.3	335					LM
4.7	475					LP
6.8	685				LM	LP
10	106				LM	LA
15	156			LM	LP	LA
22	226		LM	LM	LP	
33	336	LM	LM	LP	LA	
47	476	LM	LP	LP	LA	
68	686	LP	LP	LA		
100	107	LP	LA	LA		
150	157	LA	LA			
220	227	LA				

Product specifications	TMF	Test conditions JIS C5101-1:1998
Operating temperature range	−55℃～+125℃	
Rated voltage	DC2.5～16V	85℃
Surge voltage	DC3.2～20V	85℃
Derated voltage	DC1.6～10V	125℃
Capacitance	2.2～220 μF	
Capacitance tolerance	±20%	Paragraph 4.7, 120 Hz
Leakage current	Refer to standard product table	Paragraph 4.9, in 5 minutes after the rated voltage is applied.
tanδ	0.3 or less	Paragraph 4.8, 120Hz
Surge withstanding voltage	△C/C ±20% or less tan δ Specified initial value or less LC Specified initial value or less	Paragraph 4.26
Temperature characteristics	Specified initial value: −55 / 85 / 125 △C/C: − / −20～+20% / 0～+20% / 0～+20% tan δ: 0.3 / 0.6 / 0.3 / 0.4 Value shown table or less LC: Refer to standard product table / − / 1000% or less specified initial value or less / 1250% or less specified initial value or less	Paragraph 4.24
Solder heat resistance	△C/C ±20% or less tan δ Specified initial value or less LC Specified initial value or less	Solder Dip 260±5℃ 10±1 sec. Reflow 260℃ 10±1 sec.
Moisture resistance no load	△C/C ±20% or less tan δ 150% Specified initial value or less LC Specified initial value or less	Paragraph 4.22, 40°C 90 ~ 95%RH,500hrs
High-temperature load	△C/C ±20% or less tan δ Specified initial value or less LC 200% Specified initial value or less	Paragraph 4.23, 85°C The rated voltage is applied for 2000 hours.
Thermal shock	△C/C ±20% 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 5 times running.
Failure rate	1%／1000hrs	85°C. The rated voltage is applied (through a protective resistor of 1 Ω/V).

※This catalog is designed for providing general information. Please inquire of our Sales Department to confirm specifications prior to use.

Standard product tables - TMF series

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Rated voltage V.DC	capacitance μF	tanδ	Leakage current μA	case code	Product name
2.5	33	0.30	8.2	LM	TMFLM0E336
	47	0.30	11.7	LM	TMFLM0E476
	68	0.30	17.0	LP	TMFLP0E686
	100	0.30	25.0	LP	TMFLP0E107
	150	0.30	37.5	LA	TMFLA0E157
	220	0.30	55.0	LA	TMFLA0E227
4	22	0.30	8.8	LM	TMFLM0G226
	33	0.30	13.2	LM	TMFLM0G336
	47	0.30	18.8	LP	TMFLP0G476
	68	0.30	27.2	LP	TMFLP0G686
	100	0.30	40.0	LA	TMFLA0G107
	150	0.30	60.0	LA	TMFLA0G157
6.3	15	0.30	9.4	LM	TMFLM0J156
	22	0.30	13.8	LM	TMFLM0J226
	33	0.30	20.7	LP	TMFLP0J336
	47	0.30	29.6	LP	TMFLP0J476
	68	0.30	42.8	LA	TMFLA0J686
	100	0.30	63.0	LA	TMFLA0J107
10	6.8	0.30	6.8	LM	TMFLM1A685
	10	0.30	10.0	LM	TMFLM1A106
	15	0.30	15.0	LP	TMFLP1A156
	22	0.30	22.0	LP	TMFLP1A226
	33	0.30	33.0	LA	TMFLA1A336
	47	0.30	47.0	LA	TMFLA1A476
16	2.2	0.30	3.5	LM	TMFLM1C225
	3.3	0.30	5.2	LM	TMFLM1C335
	4.7	0.30	7.5	LP	TMFLP1C475
	6.8	0.30	10.8	LP	TMFLP1C685
	10	0.30	16.0	LA	TMFLA1C106
	15	0.30	24.0	LA	TMFLA1C156

Marking indication TMF series

LM · LP case	⊕ JA ⊖ ① ② ③	①Anode indication belt mark ②Simplified code of rated voltage (J:6.3V) ③Simplified code of nominal capacitance (A:10μF)
LA case	⊕ GA8A ⊖ ① ② ③④	①Anode indication belt mark ②Simplified code of rated voltage (G:4V) ③Simplified code of nominal capacitance (A8:100μF) ④Lot indication (A:for manufacturing in January, 2009)

Lot indication

Year \ Month	1	2	3	4	5	6	7	8	9	10	11	12
2009	A	B	C	D	E	F	G	H	J	K	L	M
2010	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011	a	b	c	d	e	f	g	h	j	k	l	m
2012	n	p	q	r	s	t	u	v	w	x	y	z