

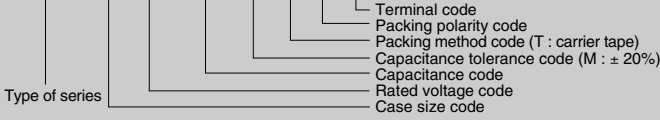
TMCU Series (Ultra Flat Low Profile Tantalum Chip Capacitors)

Features

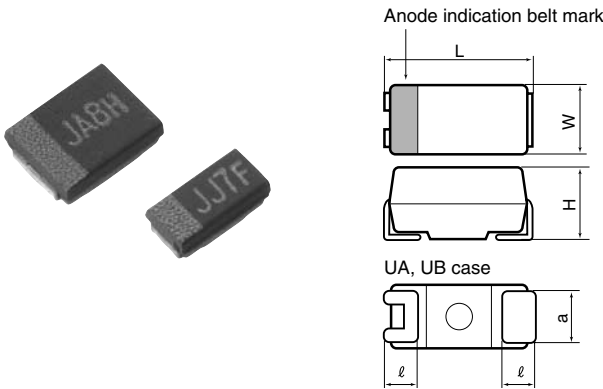
- Low profile tantalum chip capacitors developed to meet the growing needs for flat capacitors where height is critical.
- Small and low profile:
Obtained by thinning the TMCS type.

Product symbol : (Example) TMCU Series A case 4V 100 μ F \pm 20%

TMCU A 0G 107 M T R F



Outline of drawings and dimensions



Dimensions (Unit : mm)

Case code	Case size				
	L \pm 0.2	W \pm 0.2	H ^{MAX}	l \pm 0.3	a \pm 0.2
UA	3.2	1.6	1.2	0.7	1.2
UB	3.5	2.8	1.2	0.7	1.8

Standard value and case size

Capacitance	μ F	Code	Rated voltage (V.DC)							
			2.5	4	6.3 (7)	10	16	20	25	35
0.10	104									UA
0.15	154									UA
0.22	224									UA
0.33	334									UA
0.47	474									UA
0.68	684							UA	UA	
1.0	105							UA,UB	UA	UA,UB
1.5	155							UA	UA,UB	UA
2.2	225							UA,UB	UA,UB	UB
3.3	335							UA,UB	UA,UB	UB
4.7	475				UA	UA,UB	UB			UB
6.8	685				UA	UA,UB	UB			
10	106			UA	UA	UA,UB	UB			
15	156	UA	UA	UA	UA,UB	UB				
22	226	UA	UA	UA,UB	UA,UB	UB				
33	336	UA,UB	UA,UB	UA,UB	UB	UB				
47	476	UA,UB	UA,UB	UA,UB	UB					
68	686	UB	UA,UB	UB						
100	107	UB	UA,UB	UB						
150	157	UB	UB							
220	227	UB	UB							

For ratings not covered in the table, consult Holy Stone Polytech.

Product specifications	TMCU	Test conditions JIS C5101-1:1998	
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	0.1 ~ 220 μ F		
Capacitance tolerance	\pm 10% or 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.	
tan δ	Refer to standard product table	Paragraph 4.8, 120Hz	
Temperature characteristics	Δ C/C	Refer to standard product table	Paragraph 4.24
	tan δ	Refer to standard product table	
	Resistance or less	Refer to standard product table	
	LC	Refer to standard product table	
	LC	Refer to standard product table	
	LC	Refer to standard product table	
	LC	Refer to standard product table	
Solder heat resistance	Δ C/C	\pm 5% or less	Solder Dip 260 \pm 5°C 10 \pm 1 sec.
	tan δ	Specified initial value or less	
	LC	Specified initial value or less	Reflow-260°C 10 \pm 1 sec.
Moisture resistance no load	Δ C/C	\pm 10% or less	Paragraph 4.22, 40°C
	tan δ	Specified initial value or less	90 ~ 95%RH,500hrs
	LC	Specified initial value or less	
High-temperature load	Δ C/C	\pm 10% or less	Paragraph 4.23, 85°C
	tan δ	Specified initial value or less	The rated voltage is applied for 2000 hours.
	LC	125% Specified initial value or less	
Thermal shock	Δ C/C	\pm 5% 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.
	tan δ	Specified initial value or less	
	LC	Specified initial value or less	
Moisture resistance load	Δ C/C	\pm 10% or less	40°C, humidity 90 to 95%RH
	tan δ	150% Specified initial value or less	The rated voltage is applied for 500 hours.
	LC	200% Specified initial value or less	
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.

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Standard product tables - TMCU series

Standard product table - TMCU series

Rated voltage V.DC	Capacitance μF	tanδ	Leakage current μA	Case code	Product name	ESR 100kHz Ω
2.5	15	0.08	0.5	UA	TMCUA0E156	3.0
	22	0.08	0.6	UA	TMCUA0E226	1.8
		0.12	1.7	UA	TMCUA0E336	1.8
	33	0.12	0.8	UB	TMCUB0E336	1.7
		0.18	2.4	UA	TMCUA0E476	1.8
	47	0.12	1.2	UB	TMCUB0E476	1.7
		0.12	1.7	UB	TMCUB0E686	1.7
	100	0.20	5.0	UB	TMCUB0E107	1.1
	150	0.30	7.5	UB	TMCUB0E157	1.1
	220	0.30	11.0	UB	TMCUB0E227	1.1
	4	15	0.08	0.6	UA	TMCUA0G156
22		0.08	0.9	UA	TMCUA0G226	1.8
33		0.12	2.6	UA	TMCUA0G336	1.8
		0.12	1.3	UB	TMCUB0G336	1.7
47		0.18	3.8	UA	TMCUA0G476	1.8
		0.12	1.9	UB	TMCUB0G476	1.7
68		0.30	5.4	UA	TMCUA0G686	4.0
		0.15	2.7	UB	TMCUB0G686	1.7
100		0.30	20.0	UA	TMCUA0G107	2.9
		0.20	8.0	UB	TMCUB0G107	1.1
150		0.30	12.0	UB	TMCUB0G157	1.1
220		0.30	17.6	UB	TMCUB0G227	1.1
6.3 (7)		10	0.08	0.7	UA	TMCUA0J106
	15	0.08	1.1	UA	TMCUA0J156	2.9
		0.12	2.8	UA	TMCUA0J226	2.9
	22	0.10	1.4	UB	TMCUB0J226	1.7
		0.18	4.2	UA	TMCUA0J336	2.9
	33	0.10	2.3	UB	TMCUB0J336	1.7
		0.20	5.9	UA	TMCUA0J476	2.9
	47	0.12	3.3	UB	TMCUB0J476	1.7
		0.20	8.6	UB	TMCUB0J686	1.7
	100	0.20	12.6	UB	TMCUB0J107	1.1
10	4.7	0.06	0.5	UA	TMCUA1A475	4.0
	6.8	0.06	0.7	UA	TMCUA1A685	4.0
	10	0.08	1.0	UA	TMCUA1A106	4.0
		0.12	3.0	UA	TMCUA1A156	2.9
	15	0.10	1.5	UB	TMCUB1A156	2.8
		0.18	4.4	UA	TMCUA1A226	2.9
	22	0.10	2.2	UB	TMCUB1A226	1.7
		0.12	6.6	UB	TMCUB1A336	1.7
47	0.30	9.4	UB	TMCUB1A476	1.7	
16	1.5	0.06	0.5	UA	TMCUA1C155	8.8
		0.06	0.5	UA	TMCUA1C225	7.7
	2.2	0.06	0.5	UB	TMCUB1C225	6.6
		0.06	0.5	UA	TMCUA1C335	7.7
	3.3	0.06	0.5	UB	TMCUB1C335	4.0
		0.08	0.8	UA	TMCUA1C475	4.0
	4.7	0.06	0.8	UB	TMCUB1C475	4.0
		0.12	1.1	UA	TMCUA1C685	4.0
	6.8	0.06	1.1	UB	TMCUB1C685	4.0
		0.18	1.6	UA	TMCUA1C106	3.3
	10	0.08	1.6	UB	TMCUB1C106	2.8
		0.12	4.8	UB	TMCUB1C156	2.8
	22	0.18	7.0	UB	TMCUB1C226	1.7
33	0.30	10.6	UB	TMCUB1C336	1.7	
20	0.68	0.04	0.5	UA	TMCUA1D684	19.8
		0.04	0.5	UA	TMCUA1D105	16.5
	1.0	0.04	0.5	UB	TMCUB1D105	8.8
		0.06	0.5	UA	TMCUA1D155	16.5
	1.5	0.06	0.5	UB	TMCUB1D155	8.8
		0.06	0.5	UA	TMCUA1D225	7.7
	2.2	0.06	0.5	UB	TMCUB1D225	6.6
		0.06	0.7	UA	TMCUA1D335	7.7
	3.3	0.06	0.7	UB	TMCUB1D335	4.0
		0.06	0.9	UB	TMCUB1D475	4.0
	6.8	0.06	1.4	UB	TMCUB1D685	2.8
	10	0.08	2.0	UB	TMCUB1D106	2.8
25	0.33	0.04	0.5	UA	TMCUA1E334	26.4
	0.47	0.04	0.5	UA	TMCUA1E474	22.0
	0.68	0.08	0.5	UA	TMCUA1E684	19.8
	1.0	0.08	0.5	UA	TMCUA1E105	16.5
	1.5	0.06	0.4	UB	TMCUB1E155	8.8
	2.2	0.06	0.6	UB	TMCUB1E225	6.6
	3.3	0.06	0.8	UB	TMCUB1E335	4.0
	4.7	0.06	1.2	UB	TMCUB1E475	4.0
35	0.1	0.04	0.5	UA	TMCUA1V104	40.0
	0.15	0.04	0.5	UA	TMCUA1V154	40.0

Rated voltage V.DC	Capacitance μF	tanδ	Leakage current μA	Case code	Product name	ESR 100kHz Ω
35	0.22	0.04	0.5	UA	TMCUA1V224	40.0
		0.08	0.5	UA	TMCUA1V105	16.5
	1.0	0.06	0.4	UB	TMCUB1V105	8.8
		0.06	0.5	UB	TMCUB1V155	8.8
	2.2	0.06	0.8	UB	TMCUB1V225	6.6

Marking indication

TMCU * △△□□□○○○F

10V1μF□
UA case

16V1μF□
UA case

① Simplified code of nominal capacitance (A6 : 1μF)

② Marking code

③ Anode indication belt mark

④ Simplified code of rated voltage (C : 16V)

*When the capacitance code is the same in the same case, use the voltage code for the higher rated voltage.

Marking code

Year	Month											
	1	2	3	4	5	6	7	8	9	10	11	12
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
2013	A	B	C	D	E	F	G	H	J	K	L	M
2014	N	P	Q	R	S	T	U	V	W	X	Y	Z