

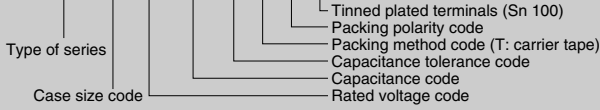
## TMCJ Series (Ultra Small Package, 0603 Size Chip Tantalum Capacitor.)

### Features

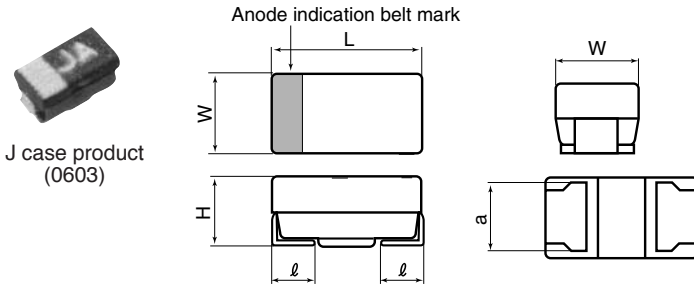
- Rendered even smaller-sized thanks to accumulated technological know-how of TMCP. (reduced to about 1/3 the cubic volume of the TMCP type)
- Suitable for high-density packaging essential to Audio Visual and other equipment downsizing.

Product symbol : (Example) TMCJ Series 6.3V 10 $\mu$ F $\pm$ 20%

**TMC J 0J 106 M T R F**



### Outline of drawings and dimensions



### Dimensions

(Unit: mm)

Case code	Case size				
	L $\pm$ 0.1	W $\pm$ 0.1	H $\pm$ 0.1	l $\pm$ 0.15	a $\pm$ 0.1
J	1.6	0.8	0.8	0.3	0.6

### Standard value and case size, Marking tables

Capacitance	Rated voltage (V.DC)						
	2.5	4	6.3	10	16	20	
$\mu$ F	Code	0E	0G	0J	1A	1C	1D
0.68	684						DW
1.0	105					CA	
1.5	155				AE	CE	
2.2	225			JJ	AJ	CJ	
3.3	335			JN	AN		
4.7	475	eS	GS	JS	AS		
6.8	685	eW	GW	JW			
10	106	eA	GA	JA			
15	156	eE	GE				
22	226	eJ	gJ				

### Standard product tables - TMCJ series

Rated voltage V. DC	capacitance $\mu$ F	tan $\delta$	Leakage current $\mu$ A	case code	Product name
2.5	4.7	0.2	0.5	J	TMCJ0E475
	6.8	0.2	0.5	J	TMCJ0E685
	10	0.2	0.5	J	TMCJ0E106
	15	0.2	0.5	J	TMCJ0E156
	22	0.2	0.5	J	TMCJ0E226
4	4.7	0.2	0.5	J	TMCJ0G475
	6.8	0.2	0.5	J	TMCJ0G685
	10	0.2	0.5	J	TMCJ0G106
	15	0.2	6.0	J	TMCJ0G156
	22	0.2	8.8	J	TMCJ0G226
6.3	2.2	0.2	0.5	J	TMCJ0J225
	3.3	0.2	0.5	J	TMCJ0J335
	4.7	0.2	0.5	J	TMCJ0J475
	6.8	0.2	0.5	J	TMCJ0J685
	10	0.2	0.6	J	TMCJ0J106
10	1.5	0.2	0.5	J	TMCJ1A155
	2.2	0.2	0.5	J	TMCJ1A225
	3.3	0.2	0.5	J	TMCJ1A335
	4.7	0.2	0.5	J	TMCJ1A475
16	1	0.2	0.5	J	TMCJ1C105
	1.5	0.2	0.5	J	TMCJ1C155
	2.2	0.2	0.5	J	TMCJ1C225
20	0.68	0.2	0.5	J	TMCJ1D684

Product specifications	TMCJ	Test conditions JIS C5101-1:1998														
Operating temperature range	-55°C ~ +125°C															
Rated voltage	DC2.5 ~ 20V	85°C														
Surge voltage	DC3.2 ~ 26V	85°C														
Derated voltage	DC1.6 ~ 13V	125°C														
Capacitance	0.68 ~ 22 $\mu$ F															
Capacitance tolerance	$\pm$ 20%	Paragraph 4.7, 120 Hz														
Leakage current	Refer to table standard product table	Paragraph 4.9, in 5 minutes after the rated voltage is applied.														
tan $\delta$	0.2 or less	Paragraph 4.8, 120Hz														
Surge withstanding voltage	$\Delta$ C/C $\pm$ 20% or less tan $\delta$ Specified initial value or less LC Specified initial value or less	Paragraph 4.26														
Temperature characteristics	<table border="1"> <thead> <tr> <th>Specified initial value</th> <th>-55</th> <th>85</th> <th>125</th> </tr> </thead> <tbody> <tr> <td><math>\Delta</math> C/C</td> <td>-</td> <td>-20 ~ 0%</td> <td>0 ~ +20%</td> <td>0 ~ +20%</td> </tr> <tr> <td>tan<math>\delta</math></td> <td>0.2</td> <td>0.3</td> <td>0.2</td> <td>0.3</td> </tr> </tbody> </table> Refer to standard product table	Specified initial value	-55	85	125	$\Delta$ C/C	-	-20 ~ 0%	0 ~ +20%	0 ~ +20%	tan $\delta$	0.2	0.3	0.2	0.3	Paragraph 4.24
Specified initial value	-55	85	125													
$\Delta$ C/C	-	-20 ~ 0%	0 ~ +20%	0 ~ +20%												
tan $\delta$	0.2	0.3	0.2	0.3												
Solder heat resistance	$\Delta$ C/C $\pm$ 20% or less tan $\delta$ Specified initial value or less LC Specified initial value or less	Solder Dip 260 $\pm$ 5°C 10 $\pm$ 1 sec. Reflow 260°C 10 $\pm$ 1 sec.														
Moisture resistance no load	$\Delta$ C/C $\pm$ 20% or less tan $\delta$ 150% Specified initial value or less LC Specified initial value or less	Paragraph 4.22, 40°C 90 ~ 95%RH,500hours														
High-temperature load	$\Delta$ C/C $\pm$ 20% or less tan $\delta$ 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	$\Delta$ C/C $\pm$ 20% or less tan $\delta$ 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%/1000hours	85°C. The rated voltage is applied (through a protective resistor of 1 $\Omega$ /V).														

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