

# Surface mount type

# TV Series



RoHS compliance, Halogen free  
 High reliability: 85°C85%RH rated voltage applied (warranty)  
 higher thermal resistance: 125°C guaranteed (ambient temperature)  
 Power supply circuit of entertainment equipment for the car.



OS-CON Line-up

Guidelines and precautions

Selection guide

Technical data

Surface mount type

Radial lead type

Catalog Deletion and EOL series



POSCAP Line-up

Guidelines and precautions

Selection guide  
 Series system diagram  
 Image of case size  
 Products list  
 Explanation of part numbers  
 Packing specifications

Technical data  
 Recommended soldering condition  
 Fundamental structure  
 Characteristics  
 Reliability

Surface mount type  
 TPU  
 TPH  
 TPG  
 TPSF  
 TPA  
 TPB  
 TPC  
 TPF  
 TA  
**TV**  
 TH  
 TQC

Catalog Deletion and EOL models

## Specifications

Items	Condition	Specifications		
Rated voltage (V)	-	6.3	10	
Surge voltage (V)	-	7.2	12	
Category temperature (°C)	-	-55 to +125		
Capacitance tolerance (%)	120Hz/20°C	M: ±20		
Rated capacitance range (μF)	120Hz/20°C	68 to 150		
Dissipation Factor (DF)	120Hz/20°C	Please see the attached characteristics list		
Leakage current	Rated voltage applied, after 5 minutes	Please see the attached characteristics list		
Equivalent series resistance (ESR)	100kHz/20°C	Please see the attached characteristics list		
Characteristics of impedance ratio at high temp. and low temp.	100kHz/+20°C	-55°C Z/Z <sub>20°C</sub>	0.6 to 2.0	
		+105°C Z/Z <sub>20°C</sub>	0.6 to 2.0	
Endurance	125°C, 1,000h, category voltage applied (105°C, 2,000h, rated voltage applied)	temp	125 105	
		ΔC/C	Within±20% of the initial value	Within±20% of the initial value
		DF	≤ 2 times of the initial limit	≤ 1.5 times of the initial limit
		LC	≤ 2 times of the initial limit	Within the initial limit
		ΔC/C	Within+40%, -20% of the initial value	
Damp heat (Load)	85°C, 85 to 90%RH, 500h, rated voltage applied	DF	≤ 1.5 times of the initial limit	
		LC	Within the initial limit	
		ΔC/C	Within±5% of the initial value	
Surge	105°C, 1,000 cycles, 1kΩ discharge resistance, surge voltage applied	DF	Within the initial limit	
		LC	≤ 3 times of the initial limit	
		ΔC/C	Within±5% of the initial value	

## Marking and dimensions

**D2E, D3L size**

Rated capacitance

Anode (+)

Lot. No. \*2

Rated voltage \*1

Size code	L ±0.3	W ±0.2	H ±0.2*1	S ±0.2	W1 ±0.1
D2E	7.3	4.3	1.8	1.3	2.4
D3L	7.3	4.3	2.8	1.3	2.4

※1 ±0.1:D2E

※1 The rated voltage is as follows.

R.V.	6.3	10
Mark	j	A

※2 Lot.No.shows roughly manufacturing date.

※3 The rated capacitance is as follows:

Capacitance (μF)	68	150
Mark	W7	E8

## Recommended land pattern dimension of PWB

Size code	a	b	c
D2E	2.4	2.9	3.7
D3L	2.4	2.9	3.7

(unit : mm)

## Size list

RV:Rated voltage

RV	6.3	10.0
68	D2E	D2E
150	D2E	D3L

## TV series characteristics list

Size code	Part number	Rated voltage (V)	Rated temperature (°C)	Rated capacitance (μF)	Category voltage (V)	Category temperature (°C)	DF (% max)	LC (μA) max/5min.	ESR (mΩmax) 100kHz/20°C	Maximum allowable ripple current (mA rms) 100kHz*1	MSL	
											Reflow temp. ≤ 260°C	Reflow temp. ≤ 250°C
D2E	10TVE68M	10	105	68	6.3	125	10	68.0	25	2400	5	13
	6TVE150M	6.3	105	150	4.0	125	10	94.5	25	2400	5	3
D3L	10TVE150ML	10	105	150	6.3	125	10	150.0	25	2400	5	3

※1 100k to 500kHz, 45°C