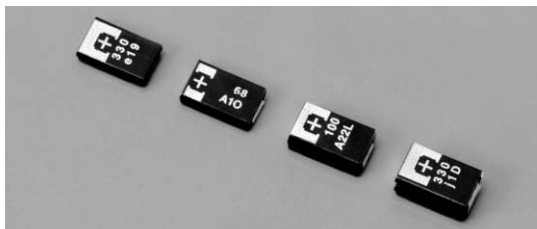


# TH Series

## 125°C Guaranteed Products (THB/THC/THD/THE series)

TH series has 125 °C capability guaranteed. It is most suitable for the high reliability industrial equipment.

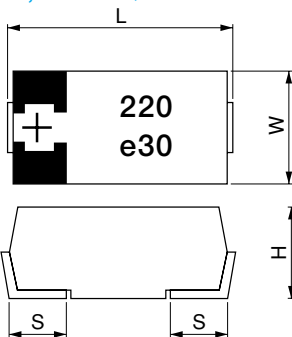


### Specifications

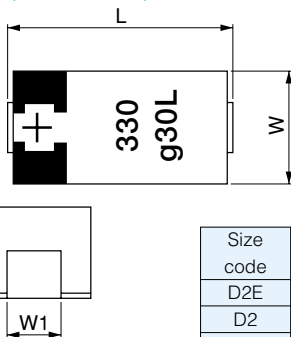
Items	Condition	Characteristics			
		THB	THC	THD	THE
Series	—	THB	THC	THD	THE
Operating Temperature range	—	-55 to +125 (°C)			
Rated capacitance range	120Hz/20°C	100 to 1000 (μF)	68 to 220 (μF)	330 to 680 (μF)	150 to 330 (μF)
Capacitance tolerance	120Hz/20°C	M:±20%			
Rated voltage	—	2.5 to 10 (V.DC)	2.5 to 10 (V.DC)	2.5 to 6.3 (V.DC)	2.5 to 6.3 (V.DC)
Dissipation Factor (D.F.)	120Hz/20°C	≤8.0 or 10.0 or 15.0 (%)	≤10.0 (%)	≤10.0 (%)	≤10.0 (%)
Leakage current	Rated voltage applied, after 5 minutes	≤0.1CV (μA)			
Equivalent series resistance E.S.R (mΩmax.)	100kHz/20°C	Please see the attached characteristic list			
Temperature characteristics of Impedance ratio	100kHz/+20°C	-55°C	Z/Z <sub>20°C</sub>	1.0 to 2.0	
		+125°C	Z/Z <sub>20°C</sub>	0.6 to 1.0	
Endurance	125°C, 1000h, category voltage applied	ΔC/C	Within±20% of the initial value		
		tanδ	≤2 times the initial limit		
		L.C.	≤2 times the initial limit		
Damp heat (Steady state)	60°C, 90 to 95%RH, 500h, No voltage applied	ΔC/C	Within+50%, -20% of the initial value (2R5THB1000M) Within+40%, -20% of the initial value (Except for the above model)		
		tanδ	≤1.5 times the initial limit		
		L.C.	≤3 times the initial limit		
Surge	105°C, 1000 cycles, 1kΩdischarge resistance, surge voltage applied	ΔC/C	Within±5% of the initial value		
		tanδ	≤The initial limit		
		L.C.	≤3 times the initial limit		

### Dimensions (unit: mm)

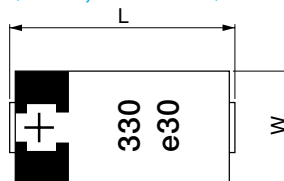
(D2, D4size)



(D3L size)



(D2E, D4Dsize)



Size code	L*1 (±0.3)	W (±0.2)	H*2 (±0.1)	S (±0.2)	W1 (±0.1)
D2E	7.3	4.3	1.8	1.3	2.4
D2	7.3	4.3	1.9	1.3	2.4
D3L	7.3	4.3	2.8	1.3	2.4
D4	7.3	4.3	3.8	1.3	2.4
D4D	7.3	4.3	3.6	1.3	2.4

\*1 ±0.2: D2 \*2 ±0.2: D3L, D4, D4D

### Size List

μF	Series	RV (SV)					μF	Series	RV (SV)				
		2.5 (3.2)	4.0 (5.0)	6.3 (8.0)	10.0 (13.0)				2.5 (3.2)	4.0 (5.0)	6.3 (8.0)	10.0 (13.0)	
68	THC					D2	330	THB	D3L	D3L	D4	D4	
	THB					D3L		THD			D4D		
150	THC					D2	470	THE	D2E				
	THE					D2E		THB	D3L		D4		
220	THB					D3L	470	THD		D4D			
	THC	D2	D2					THB	D4	D4			
	THE		D2E				THD	D4D					
							1000	THB	D4				

# TH Series

## Characteristics List

Series	Size Code	SANYO Part number	Rated Voltage (V)	Rated Temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Rated Capacitance (μF)	D.F. (%max.)	L.C. (μA) max./5min.	E.S.R. (mΩmax.) 100kHz/20°C	Maximum allowable ripple current (mA <sub>rms</sub> ) 100kHz*1	MSL	
												Reflow Temp. ≤260°C	Reflow Temp. ≤250°C
THB	D3L	10THB100ML	10.0	105	6.3	125	100	8.0	100.0	55	1900	Under evaluation	5
		6THB220ML	6.3	105	4.0	125	220	10.0	138.6	40	2000		
		4THB330ML	4.0	105	2.5	125	330	10.0	132.0	40	2000		
		2R5THB330ML	2.5	105	1.6	125	330	8.0	82.5	55	1900		
		2R5THB470ML	2.5	105	1.6	125	470	10.0	117.5	40	2000		
	D4	10THB220M	10.0	105	6.3	125	220	10.0	220.0	40	3000		
		10THB330M	10.0	105	6.3	125	330	10.0	330.0	35	3000		
		6THB330M	6.3	105	4.0	125	330	10.0	207.9	40	3000		
		6THB470M	6.3	105	4.0	125	470	15.0	296.1	35	3000		
		4THB680M	4.0	105	2.5	125	680	15.0	272.0	35	3000		
		2R5THB680M	2.5	105	1.6	125	680	10.0	170.0	40	3000		
		2R5THB1000M	2.5	105	1.6	125	1000	15.0	250.0	30	3000		
		THC	D2	10THC68M	10.0	105	6.3	125	68	10.0	68.0		
6THC150M	6.3	105		4.0	125	150	10.0	94.5	40	1900			
4THC220M	4.0	105		2.5	125	220	10.0	88.0	40	1900			
2R5THC220M	2.5	105		1.6	125	220	10.0	55.0	45	1700			
THE	D2E	6THE150M	6.3	105	4.0	125	150	10.0	94.5	25	2400		
		6THE150MI								18	2800		
		4THE220M	4.0	105	2.5	125	220	10.0	88.0	25	2400		
		4THE220MI								18	2800		
		4THE220MF								15	3100		
		2R5THE330M	2.5	105	1.6	125	330	10.0	82.5	25	2400		
		2R5THE330MI								18	2800		
		2R5THE330MF								15	3100		
THD	D4D	6THD330M	6.3	105	4.0	125	330	10.0	207.9	10	4400		
		4THD470M	4.0	105	2.5	125	470	10.0	188.0	10	4400		
		2R5THD680M	2.5	105	1.6	125	680	10.0	170.0	10	4400		

\*1: 100k to 500kHz, 45°C