

Surface Mount Type

POSCAP



Series : **TPH**

Features

- Small size, Low profile (L3.2 × W 1.6 × H 0.9 mm)
- Face down terminal type
- RoHS compliance, Halogen free

Specifications

Size code	A09	A14
Category temperature range	-55 °C to +105 °C / -55 °C to +85 °C (Rated temp. +85 °C)	
Rated voltage range	2.5 V.DC to 10 V.DC	2.5 V.DC to 6.3 V.DC
Category voltage range	2.5 V.DC to 10 V.DC	2.5 V.DC to 6.3 V.DC
Rated capacitance range	33 µF to 100 µF	100 µF to 220 µF
Capacitance tolerance	±20 % (120 Hz / + 20 °C)	
Leakage current	Please see the attached characteristics list	
Dissipation factor (tan δ)	Please see the attached characteristics list	
Surge voltage (V.DC)	Rated voltage × 1.15	
Endurance	+105 °C, 1000 h rated voltage applied	
	* Rated temp, +85 °C Products : +85 °C, 1000 h, rated voltage applied	
	Capacitance change	Within ±20 % of the initial value
	tan δ	≤ 1.5 times of the initial limit
Damp heat (Steady State)	+60 °C, 90 % to 95 %, 500 h, No-applied voltage	
	Capacitance change	Within +50 %, -20 % of the initial value (ETPH220MABC)
	tan δ	≤ 1.5 times of the initial limit
	DC leakage current	≤ 3 times of the initial limit

Marking

A09/A14 Size

Diagram illustrating the marking layout for the A09/A14 size component. The marking area is a rectangle containing a solid black circle on the left. To the right of the circle is a dashed rectangle divided into four quadrants. The top-left quadrant contains the R.Cap. code, the top-right contains the Year, the bottom-left contains the Week, and the bottom-right contains the R. Voltage code. Arrows point from the labels to their respective markings: Polarity marking(+) points to the solid circle, R.Cap. code points to the top-left quadrant, Year points to the top-right quadrant, Week points to the bottom-right quadrant, and R. Voltage code points to the bottom-left quadrant.

A09 Size (6TPH100MAEA)

Diagram illustrating the marking layout for the A09 Size (6TPH100MAEA) component. The marking area is a rectangle containing a solid black vertical bar on the left. To the right of the bar is a dashed rectangle divided into four quadrants. The top-left quadrant contains the R.Cap. code, the top-right contains the Year, the bottom-left contains the Week, and the bottom-right contains the R. Voltage code. Arrows point from the labels to their respective markings: Polarity marking(+) points to the solid bar, R.Cap. code points to the top-left quadrant, Year points to the top-right quadrant, Week points to the bottom-right quadrant, and R. Voltage code points to the bottom-left quadrant.

R. Voltage (V.DC)	2.5	4.0	6.3	10.0
Code	e	g	j	A

R. Cap. (μF)	33	47	68	100	150	220
Code	N7	S7	W7	A8	E8	J8

Dimensions (not to scale)

A09/A14 Size

A09 Size (6TPH100MAEA)

Unit : mm

Size code	L ± 0.2	W ± 0.2	H ± 0.1	S ± 0.2	W1 ± 0.1
A09	3.2	1.6	0.9	0.8	1.2
A14	3.2	1.6	1.4	0.8	1.2

* Externals of figure are the reference.

Characteristics list

Series	Rated voltage (V.DC)	Rated temp. (°C)	Category voltage (V.DC)	Category temp. (°C)	Rated capacitance (µF)	Case size (mm)			Size code	Specifications				Standard		Floor life	
						L	W	H		Ripple current (mA r.m.s.)	ESR *2 (mΩ max.)	tan δ *3	LC *4 (µA)	Part number	Min. Packaging Qty (pcs)	Reflow Temp ≤ 260°C	Reflow Temp ≤ 250°C
TPH	2.5	105	2.5	105	100	3.2	1.6	0.9	A09	510	150	0.10	25.0	ETPH100MHA	3000	3	3
		85	2.5	85	220	3.2	1.6	1.4	A14	740	70	0.10	110.0	ETPH220MABC	2500		
	4	105	4.0	105	68	3.2	1.6	0.9	A09	510	150	0.10	27.2	4TPH68MHA	3000		
		85	4.0	85	150	3.2	1.6	1.4	A14	740	70	0.10	120.0	4TPH150MABC	2500		
	6.3	105	6.3	105	47	3.2	1.6	0.9	A09	510	150	0.10	29.6	6TPH47MHA	3000		
		85	6.3	85	100	3.2	1.6	0.9		670	100	0.10	63.0	6TPH100MAEA	3000		
		85	6.3	85	100	3.2	1.6	1.4		740	70	0.10	126.0	6TPH100MABC	2500		
		85	6.3	85	33	3.2	1.6	0.9		510	150	0.10	33.0	ATPH33MAHA	3000		
	10	85	10.0	85					A09								

*1 Ripple current (100 kHz/ +45 °C), *2 ESR (100 kHz/+20 °C) *3 tan δ (120 Hz/+20 °C) *4 After 5 minutes

◆ Please refer to each page in this catalog for "Reflow conditions" and "Taping specifications".