



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## 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
	DC leakage current	Within 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) Within +40 %, -20 % of the initial value (Except for above model)
	tan δ	≤ 1.5 times of the initial limit
	DC leakage current	≤ 3 times of the initial limit

### Marking

A09/A14 Size		A09 Size (6TPH100MAEA)					
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	
						L	W	H		Ripple current (mAr.m.s.)	ESR *2 (mΩ max.)	tan δ *3	LC *4 (µA)	Part number	Min. Packaging Qty (pcs)
TPH	2.5	105	2.5	105	100	3.2	1.6	0.9	A09	510	150	0.10	25.0	ETPH100MHA	3000
		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		A14	740	70	0.10	126.0	6TPH100MABC
	10	85	10.0	85	33	3.2	1.6	0.9	A09	510	150	0.10	33.0	ATPH33MAHA	3000

\*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".

Design and specifications are each subject to change without notice. Ask factory for the current technical specifications before purchase and/or use.

Should a safety concern arise regarding this product, please be sure to contact us immediately.