

### Surface Mount Type

# SP-Cap

Series: H

- Features Endurance:125°C 1000h
- Low ESR
- RoHS directive compliant
- Reflow 240°C

Country of Origin

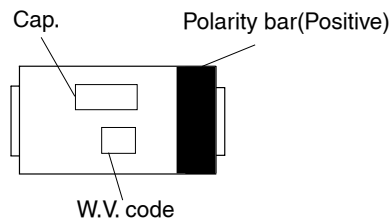
Japan



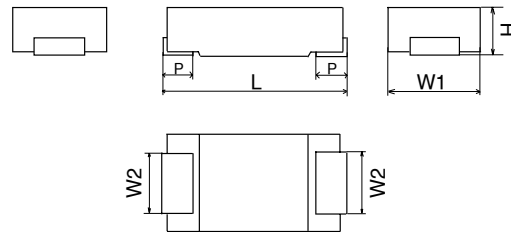
### ■ Specification

Series & Size Code	HL	HD	HE		
Category Temp.Range	-40 to 125°C				
Rated W.V.Range	2 to 8V.DC				
Nominal Cap.Range	33 to 100μF	68 to 220μF	100 to 330μF		
Capacitance Tolerance	±20 %				
DC Leakage Current	I ≤ 0.1 CV 2minutes				
tan δ	≤ 0.06(120Hz/+20 °C)	≤ 0.10(120Hz/ +20° C)			
Surge Voltage	Rated Working Voltage × 1.25 (15 to 35°C)				
Endurance	After applying rated working voltage for 1000 hours at 105±2°C or derated voltage(W.V.×0.875 at 115°C or W.V.×0.75 at 125°C), and then being stabilized at +20°C,capacitor shall meet the following limits.				
	Capacitance change	±10%of initial measured value			
	tan δ	≤ Initial specified value			
	DC leakage current	≤ Initial specified value			
Moisture resistance	After storing for 500 hours at 60°C,90%				
	Capacitance change of initial measurd value	2, 2.5V.DC +70, -20%	4 V.DC +60, -20%	6.3V.DC +50, -20%	8V.DC +40, -20%
	tan δ	≤ 200% of initial specified value			
	DC leakage current	≤ Initial specified value			

### ■ Marking



### ■ Dimensions in mm(not to scale)



(mm)

Series & Size Code	L±0.2	W1±0.2	W2±0.1	H	P±0.3
HL	7.3	4.3	2.4	1.8±0.1	1.3
HD	7.3	4.3	2.4	2.8±0.2	1.3
HE	7.3	4.3	2.4	4.2±0.1	1.3

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.

Mar.2006

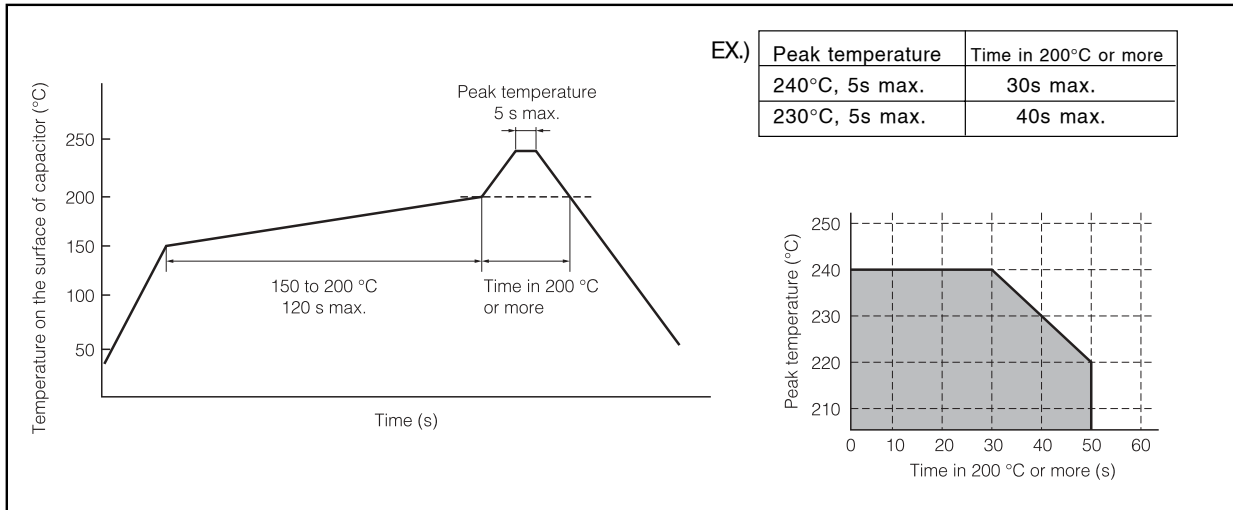
■ High heat-resistant products(H series)

Series & Size Code	Rated W.V. (V.DC)	Capacitance (±20%) (μF)	Case Size			Specification		Reflow 240°C	Reflow 260°C	Min. Packaging Q'ty (pcs)
			L (mm)	W (mm)	H (mm)	Ripple current (Ar.m.s.) *1	ESR (Ω) *2	Part number	Part number	
HL	2	100	7.3	4.3	1.8	1.8	0.018	EEFHL0D101R	—	3500
	2.5	82	7.3	4.3	1.8	1.8	0.018	EEFHL0E820R	—	3500
	4	56	7.3	4.3	1.8	1.8	0.018	EEFHL0G560R	—	3500
		68	7.3	4.3	1.8	1.8	0.018	EEFHL0G680R	—	3500
	6.3	47	7.3	4.3	1.8	1.8	0.018	EEFHL0J470R	—	3500
	8	33	7.3	4.3	1.8	1.8	0.018	EEFHL0K330R	—	3500
HD	2	180	7.3	4.3	2.8	2.5	0.015	EEFHD0D181R	—	2000
		220	7.3	4.3	2.8	2.5	0.015	EEFHD0D221R	—	2000
	2.5	150	7.3	4.3	2.8	2.5	0.015	EEFHD0E151R	—	2000
		180	7.3	4.3	2.8	2.5	0.015	EEFHD0E181R	—	2000
	4	120	7.3	4.3	2.8	2.5	0.015	EEFHD0G121R	—	2000
	6.3	100	7.3	4.3	2.8	2.5	0.015	EEFHD0J101R	—	2000
	8	68	7.3	4.3	2.8	2.5	0.015	EEFHD0K680R	—	2000
	HE	2	270	7.3	4.3	4.2	3.0	0.012	EEFHE0D271R	—
330			7.3	4.3	4.2	3.0	0.012	EEFHE0D331R	—	2000
2.5		220	7.3	4.3	4.2	3.0	0.012	EEFHE0E221R	—	2000
		270	7.3	4.3	4.2	3.0	0.012	EEFHE0E271R	—	2000
4		180	7.3	4.3	4.2	3.0	0.012	EEFHE0G181R	—	2000
6.3		150	7.3	4.3	4.2	3.0	0.012	EEFHE0J151R	—	2000
8		100	7.3	4.3	4.2	3.0	0.012	EEFHE0K101R	—	2000

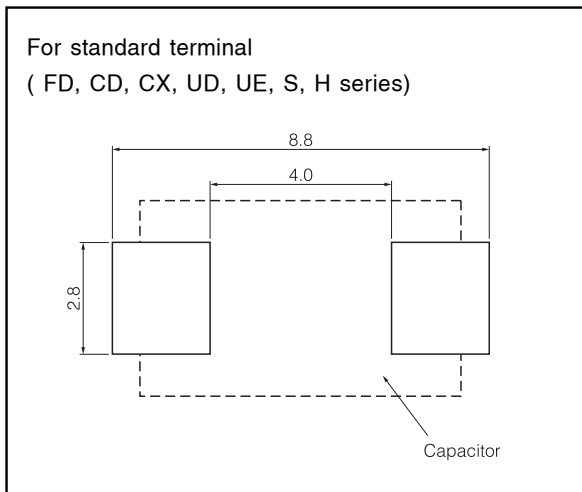
\*1: Ripple current (100kHz/ +20 to +105°C),      \*2: ESR (100kHz/+20°C)

■ Mounting Specifications.

- Recommendable reflow soldering temperature 240°C

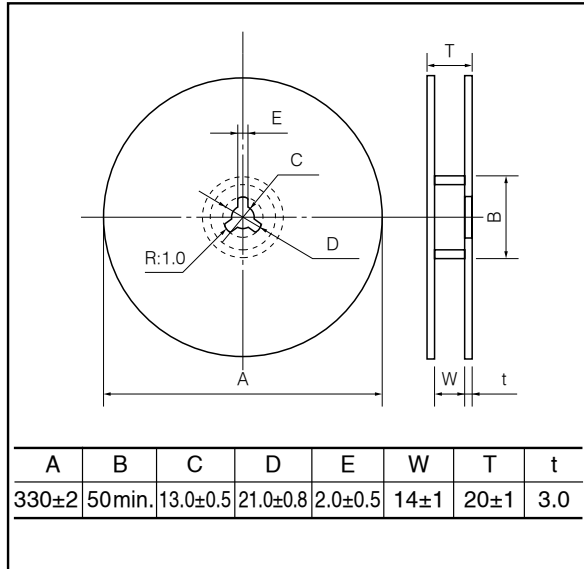


● Typical land pattern (mm)

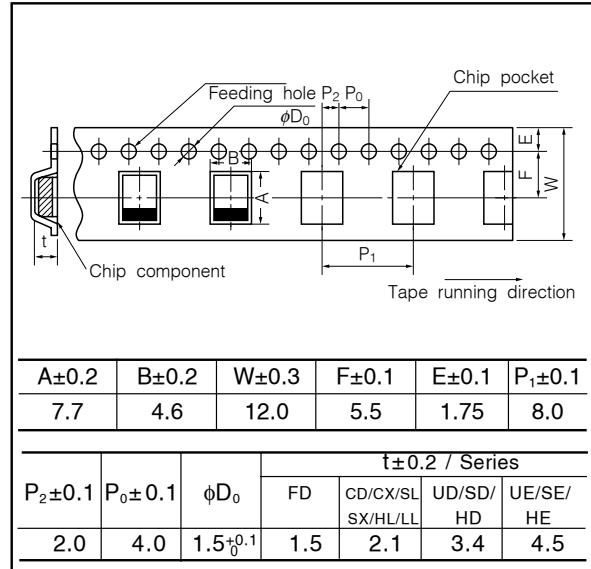


### ■ Packaging Specifications

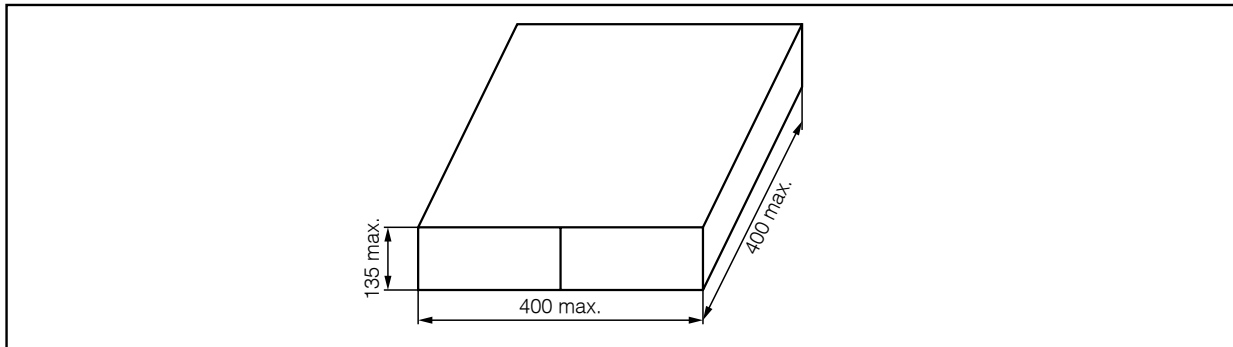
#### ● Reel Dimensions (mm)



#### ● Embossed Taping (mm)



### ■ Packaging Box Dimensions (mm)



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. Mar.2006