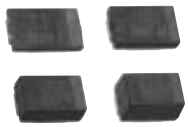
Surface Mount Type SP-Cap

Series: H

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

Country of Origin

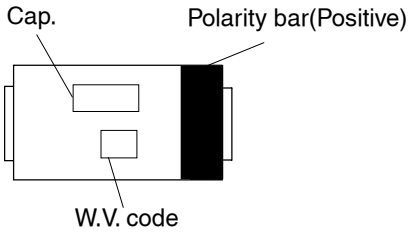
Japan



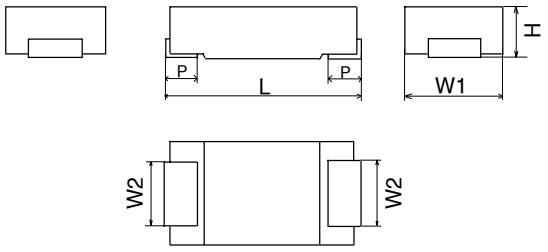
■ Specification

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

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■ High heat-resistant products(H series)

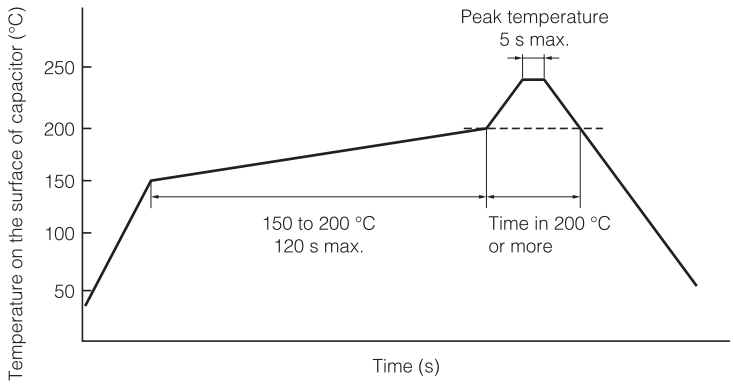
Series & Size Code	Rated W.V. (V.DC)	Capacitance (±20%) (μF)	Case Size L (mm)	Case Size W (mm)	Case Size H (mm)	Specification ※1 Ripple current (Ar.m.s.)	Specification ※2 ESR (Ω)	Reflow 240°C Part number	Reflow 260°C Part number	Min. Packaging Q'ty (pcs)
HL	2	100	7.3	4.3	1.8	1.8	0.018	EEFHL0D101R	–	3500
	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	–	2000
		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)

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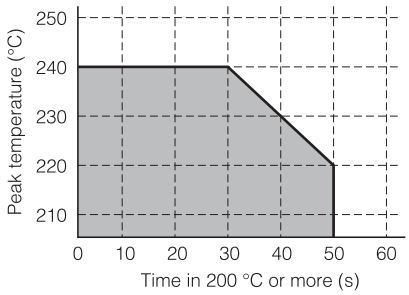
■ Mounting Specifications.

● Recommendable reflow soldering temperature 240°C



EX.)

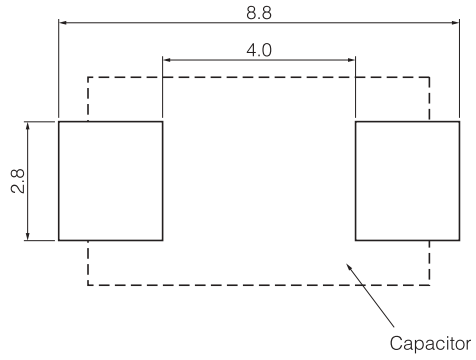
Peak temperature	Time in 200°C or more
240°C, 5s max.	30s max.
230°C, 5s max.	40s max.



● Typical land pattern (mm)

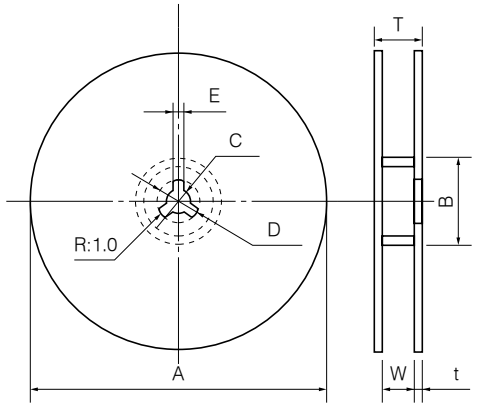
For standard terminal

(FD, CD, CX, UD, UE, S, H series)



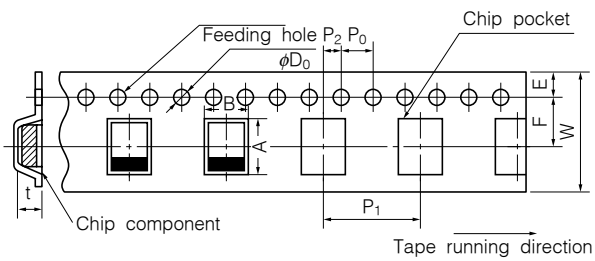
■ Packaging Specifications

● Reel Dimensions (mm)



A	B	C	D	E	W	T	t
330±2	50min.	13.0±0.5	21.0±0.8	2.0±0.5	14±1	20±1	3.0

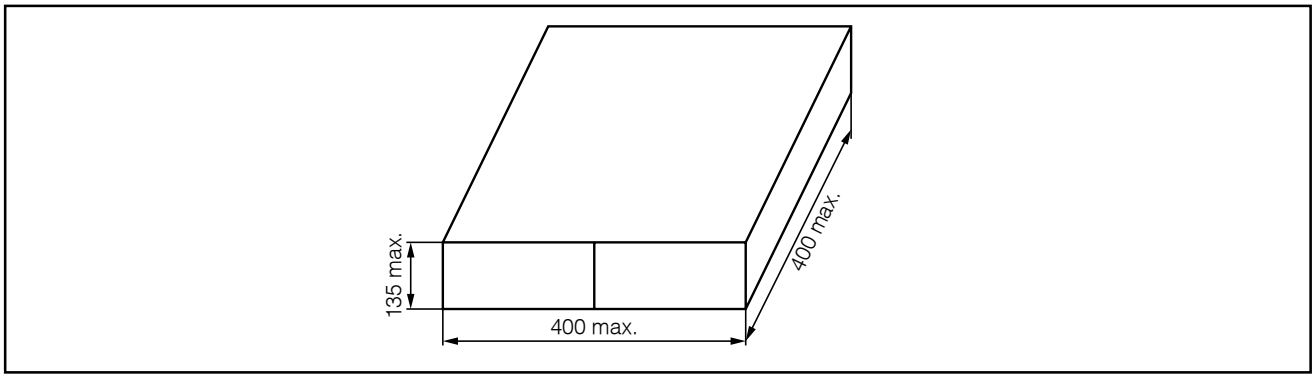
● Embossed Taping (mm)



A±0.2	B±0.2	W±0.3	F±0.1	E±0.1	P_1±0.1
7.7	4.6	12.0	5.5	1.75	8.0

P_2±0.1	P_0±0.1	ϕD_0	t±0.2 / Series			
			FD	CD/CX/SL SX/HL/LL	UD/SD/ HD	UE/SE/ HE
2.0	4.0	$1.5^{+0.1}_{0}$	1.5	2.1	3.4	4.5

■ Packaging Box Dimensions (mm)



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