

HXJ Series

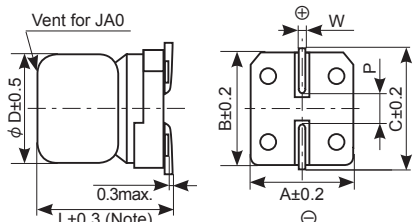
- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 4,000 hours at 125°C
- Rated voltage range : 16 to 35V_{dc}, Capacitance range : 56 to 820μF
- For high temperature and high reliability applications.
(Automotive equipment, Base station equipment, etc.)
- RoHS2 Compliant
- Halogen Free
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

◆ SPECIFICATIONS

Items	Characteristics			
Category	-55 to +125°C			
Temperature Range	-55 to +125°C			
Rated Voltage Range	16 to 35V _{dc}			
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)			
Leakage Current	I=0.01CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 2 minutes)			
Dissipation Factor (tan δ)	Rated voltage (V _{dc})	16V	25V	35V
	tan δ (Max.)	0.16	0.14	0.12
Low Temperature Characteristics (Max. Impedance Ratio)	Z(-25°C) / Z(+20°C) ≤ 1.5 Z(-55°C) / Z(+20°C) ≤ 2.0 (at 100kHz)			
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 4,000 hours at 125°C .			
	Capacitance change	≤ ±30% of the initial value		
	D.F. (tan δ)	≤ 200% of the initial specified value		
	ESR	≤ 200% of the initial specified value		
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.			
	Capacitance change	≤ ±30% of the initial value		
	D.F. (tan δ)	≤ 200% of the initial specified value		
	ESR	≤ 200% of the initial specified value		
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjecting them to the DC rated voltage at 85°C, 85% RH for 2,000 hours.			
	Appearance	No significant damage		
	Capacitance change	≤ ±30% of the initial value		
	D.F. (tan δ)	≤ 200% of the initial specified value		
	ESR	≤ 200% of the initial specified value		
	Leakage current	≤ The initial specified value		

◆ DIMENSIONS [mm]

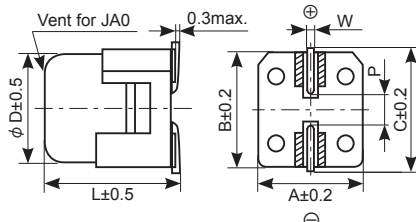
- Terminal Code : A
- Size code : F61 to JA0



Note :L±0.5 for HA0 and JA0

Size Code	φD	L	A	B	C	W	P
F61	6.3	5.8	6.6	6.6	7.2	0.5 to 0.8	1.9
F80	6.3	7.7	6.6	6.6	7.2	0.5 to 0.8	1.9
HA0	8	10.0	8.3	8.3	9.0	0.7 to 1.1	3.1
JA0	10	10.0	10.3	10.3	11.0	0.7 to 1.1	4.5

- Terminal Code : G(Vibration resistant structure)
- Size code : HA0 and JA0



▨ : Dummy terminals

◆ MARKING

EX) 35V330μF



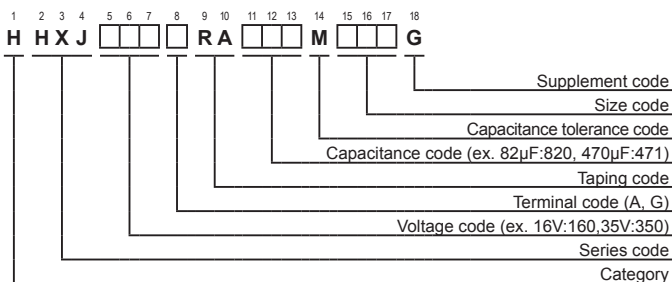
- Rated voltage symbol

Rated voltage (V _{dc})	Symbol
16	C
25	E
35	V

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◆ PART NUMBERING SYSTEM



◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	ESR (mΩ max./20°C, 100kHz)	Rated ripple current (mA rms/125°C, 100kHz)	Part No.
16	150	F61	45	1,080	HHXJ160ARA151MF61G
	220	F80	27	1,680	HHXJ160ARA221MF80G
	470	HA0	20	2,000	HHXJ160□RA471MHA0G
	820	JA0	18	2,800	HHXJ160□RA821MJA0G
25	82	F61	50	1,080	HHXJ250ARA820MF61G
	150	F80	30	1,680	HHXJ250ARA151MF80G
	270	HA0	22	2,000	HHXJ250□RA271MHA0G
	470	JA0	20	2,800	HHXJ250□RA471MJA0G
	560	JA0	20	2,800	HHXJ250□RA561MJA0G
35	56	F61	60	1,080	HHXJ350ARA560MF61G
	100	F80	35	1,680	HHXJ350ARA101MF80G
	180	HA0	22	2,000	HHXJ350□RA181MHA0G
	330	JA0	20	2,800	HHXJ350□RA331MJA0G

◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Capacitance (μF)	Frequency (Hz)	120	1k	5k	10k	20k	30k	100k to 500k
56 to 150		0.07	0.30	0.50	0.60	0.70	0.75	1.00
180 to 270		0.10	0.40	0.60	0.65	0.75	0.80	1.00
330 to 820		0.13	0.45	0.60	0.70	0.80	0.85	1.00

◆ RECOMMENDED REFLOW SOLDERING CONDITIONS

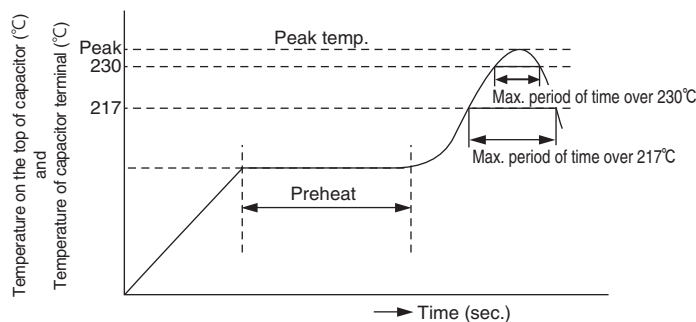
The following conditions are recommended for air convection and infrared reflow soldering on the SMD products on to a glass epoxy circuit boards by cream solder. The dimensions of the glass epoxy boards with resist are 90×50×0.8mm.

The temperatures shown are the surface temperature values on the top of the can and on the capacitor terminals.

Reflow should be performed twice or less.

Please ensure that the capacitor became cold enough to the room temperature (5 to 35°C) before the second reflow.

● Recommended soldering heat conditions



Size Code	Preheat	Time maintained above 217°C	Time maintained above 230°C	Peak temp.	Reflow number
F61, F80		50 sec. max.	40 sec. max.	260°C max.	2-cycles allowed
HA0, JA0	150 to 180°C	50 sec. max.	40 sec. max.	260°C max.	1-cycle only
	120 sec. max.			245°C max.	2-cycles allowed

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