HXA Series

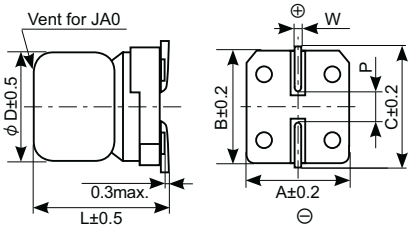
- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 4,000 hours at 125℃
- Rated voltage range : 16 to 80Vdc, Capacitance range : 33 to 470μF
- For automotive modules and other high temperature applications

◆ SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-55 to +125℃							
Rated Voltage Range	16 to 80Vdc							
Capacitance Tolerance	±20% (M)							(at 20℃ , 120Hz)
Leakage Current	I=0.01CV Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V)							(at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	16V	25V	35V	50V	63V	80V	
	tan δ (Max.)	0.16	0.14	0.12	0.10	0.08	0.08	(at 20℃ , 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Z(-25℃) / Z(+20℃) ≦ 1.5 Z(-55℃) / Z(+20℃) ≦ 2.0							(at 100kHz)
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20℃ 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℃ .							
	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						
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after exposing them for 1,000 hours at 125℃ 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						
	Leakage current	≦ The initial specified value						

◆ DIMENSIONS [mm]

●Terminal Code : A



Size Code	φD	L	A	B	C	W	P
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

◆ MARKING

EX) 50V68μF

●Rated voltage symbol

Rated voltage (Vdc)	Symbol
16	C
25	E
35	V
50	H
63	J
80	K

◆ PART NUMBERING SYSTEM

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
H	H	X	A				A	R	A				M				G

Supplement code
Size code
Capacitance tolerance code
Capacitance code (ex. 56μF:560, 100μF:101)
Taping code
Terminal code
Voltage code (ex. 35V:350)
Series code
Category

Please contact us for mass production schedule.
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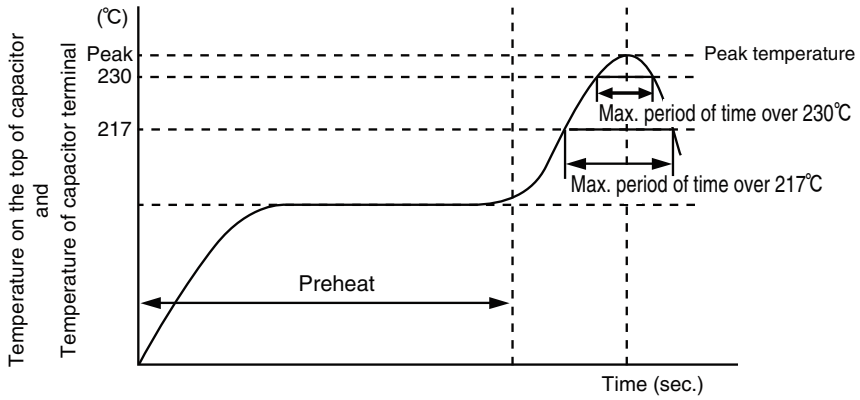
◆ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size code	ESR (mΩmax/20℃ , 100kHz)	Rated ripple current (mArms/125℃ , 100kHz)	Part No.
16	270	HA0	22	1,700	HHXA160ARA271MHA0G
	470	JA0	18	2,100	HHXA160ARA471MJA0G
25	220	HA0	27	1,600	HHXA250ARA221MHA0G
	330	JA0	20	2,000	HHXA250ARA331MJA0G
35	150	HA0	27	1,600	HHXA350ARA151MHA0G
	270	JA0	20	2,000	HHXA350ARA271MJA0G
50	68	HA0	30	1,250	HHXA500ARA680MHA0G
	100	JA0	28	1,600	HHXA500ARA101MJA0G
63	33	HA0	40	1,100	HHXA630ARA330MHA0G
	56	JA0	30	1,400	HHXA630ARA560MJA0G
80	39	JA0	35	1,200	HHXA800ARA390MJA0G

◆ 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℃) before the second reflow.

● Reflow Profile



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

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