

# HXA Series

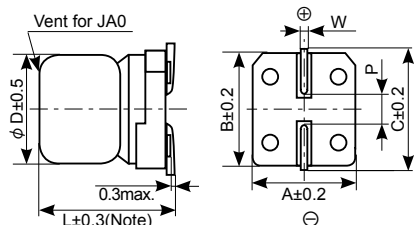
- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 4,000 hours at 125°C
- Rated voltage range : 16 to 80Vdc, Capacitance range : 10 to 470μF
- For high temperature and high reliability applications.  
(Automotive equipment, Base station equipment, etc.)

## ◆ SPECIFICATIONS

Items	Characteristics
Category	-55 to +125°C
Temperature Range	-55 to +125°C
Rated Voltage Range	16 to 80Vdc
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 (Vdc) 16V 25V 35V 50V 63V 80V tan δ (Max.) 0.16 0.14 0.12 0.10 0.08 0.08 (at 20°C, 120Hz)
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 Leakage current ≤ 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 Leakage current ≤ The initial specified value

## ◆ DIMENSIONS [mm]

- Terminal Code : A

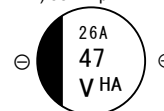


Note : L±0.5 for HA0 and JA0

Size Code	φ D	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

## ◆ MARKING

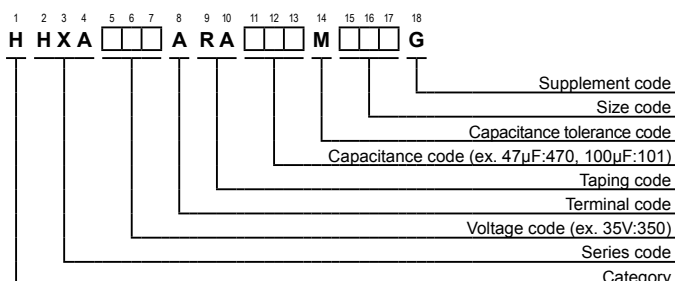
EX) 35V47μF



- Rated voltage symbol

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

## ◆ PART NUMBERING SYSTEM



Please contact us for mass production schedule.  
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## ◆ STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Size code	ESR (mΩmax/20°C, 100kHz)	Rated ripple current (mA rms/125°C, 100kHz)	Part No.
16	82	F61	45	950	HHXA160ARA820MF61G
	150	F80	27	1,300	HHXA160ARA151MF80G
	270	HA0	22	1,700	HHXA160ARA271MHA0G
	470	JA0	18	2,100	HHXA160ARA471MJA0G
25	56	F61	50	900	HHXA250ARA560MF61G
	100	F80	30	1,400	HHXA250ARA101MF80G
	220	HA0	27	1,600	HHXA250ARA221MHA0G
	330	JA0	20	2,000	HHXA250ARA331MJA0G
35	47	F61	60	900	HHXA350ARA470MF61G
	68	F80	35	1,400	HHXA350ARA680MF80G
	150	HA0	27	1,600	HHXA350ARA151MHA0G
	270	JA0	20	2,000	HHXA350ARA271MJA0G
50	22	F61	80	750	HHXA500ARA220MF61G
	33	F80	40	1,100	HHXA500ARA330MF80G
	68	HA0	30	1,250	HHXA500ARA680MHA0G
	100	JA0	28	1,600	HHXA500ARA101MJA0G
63	10	F61	120	700	HHXA630ARA100MF61G
	22	F80	80	900	HHXA630ARA220MF80G
	33	HA0	40	1,100	HHXA630ARA330MHA0G
	56	JA0	30	1,400	HHXA630ARA560MJA0G
80	22	HA0	45	1,100	HHXA800ARA220MHA0G
	39	JA0	35	1,200	HHXA800ARA390MJA0G

## ◆ RECOMMENDED REFLOW SOLDERING CONDITIONS

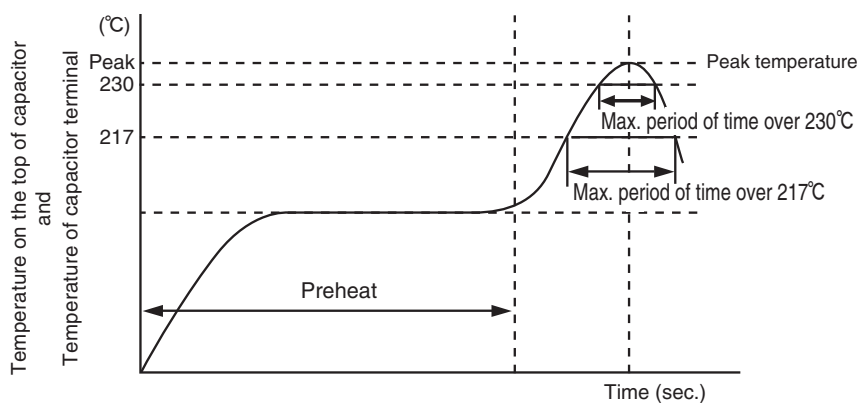
The following conditions are recommended for air convection and infrared reflow soldering on the SMD products on to a glass epoxy circuit boards by cream solder. The dimensions of the glass epoxy boards with resist are 90×50×0.8mm.

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°C) before the second reflow.

### ● Reflow Profile



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

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