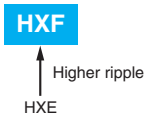
NIPPON CHEMI-CON

CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

Surface Mount

HXF Upgrade! Series

- Guaranteed short time operating temperature at 150℃
- High reliability is realized by hybrid electrolyte
- Endurance with ripple current : 4,000 hours at 135℃
- Rated voltage range : 25 to 63Vdc, Capacitance range : 33 to 560μF
- 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.

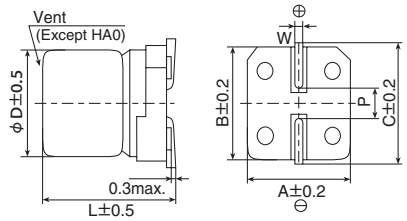


◆SPECIFICATIONS

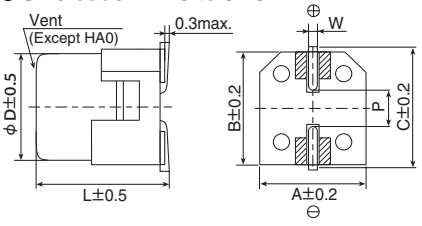
Items	Characteristics					
Category Temperature Range	-55 to +135℃					
Rated Voltage Range	25 to 63Vdc					
Capacitance Tolerance	±20% (M)					(at 20℃, 120Hz)
Leakage Current	I=0.01CV or 3μA, whichever is greater Where, I : Max. leakage current (μA), C: Nominal capacitance(μF), V : Rated voltage(V)					(at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	Rated voltage(Vdc)	25V	35V	50V	63V	
	tan δ (Max.)	0.14	0.12	0.10	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 1	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℃ or 135℃.					
	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				
Endurance 2	The following specifications shall be satisfied when the temperatures of capacitors are restored to 20℃ after the rated voltage is applied for 300 hours at 150℃ and subjected to DC voltage while the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 3,000 hours at 125℃ or 135℃.					
	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 135℃ 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				
Bias Humidity Test	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to the DC rated voltage at 85℃, 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 : HA0 to JH0



- Terminal Code : G(Vibration resistant structure)
- Size code : HA0 to JH0



: Dummy terminals

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
JC5	10	12.5	10.3	10.3	11.0	0.7 to 1.1	4.5
JH0	10	16.5	10.3	10.3	11.0	1.0 to 1.3	4.2

◆PART NUMBERING SYSTEM

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

- Supplement code
- Size code
- Capacitance tolerance code
- Capacitance code (ex. 47μF:470, 100μF:101)
- Taping code
- Terminal code (A, G)
- Voltage code (ex. 35V:350, 50V:500)
- Series code
- Category

Please refer to "Product code guide (conductive polymer hybrid type)"

◆MARKING

EX) 35V270μF

●Rated voltage symbol

Rated voltage (Vdc)	Symbol
25	E
35	V
50	H
63	J

Product specifications in this catalog are subject to change without notice.Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

HXF Upgrade! Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Size code	ESR (mΩ max./20℃, 100kHz)	Rated ripple current (mArms/100kHz)		Part No.
				125℃	135℃	
25	150	HA0	18	3,900	2,800	HHXF250□RA151MHA0G
	220	HA0	18	3,900	2,800	HHXF250□RA221MHA0G
	270	JA0	16	4,500	3,300	HHXF250□RA271MJA0G
	330	JA0	16	4,500	3,300	HHXF250□RA331MJA0G
	470	JC5	14	5,100	3,600	HHXF250□RA471MJC5G
	560	JH0	10	6,000	4,300	HHXF250□RA561MJH0G
35	100	HA0	18	3,900	2,800	HHXF350□RA101MHA0G
	150	HA0	18	3,900	2,800	HHXF350□RA151MHA0G
	150	JA0	16	4,500	3,300	HHXF350□RA151MJA0G
	270	JA0	16	4,500	3,300	HHXF350□RA271MJA0G
	330	JC5	15	4,900	3,500	HHXF350□RA331MJC5G
	470	JH0	11	5,800	4,100	HHXF350□RA471MJH0G
50	47	HA0	24	3,600	2,500	HHXF500□RA470MHA0G
	68	HA0	24	3,600	2,500	HHXF500□RA680MHA0G
	100	JA0	20	4,300	3,000	HHXF500□RA101MJA0G
	120	JA0	20	4,300	3,000	HHXF500□RA121MJA0G
	150	JC5	17	4,600	3,300	HHXF500□RA151MJC5G
	220	JH0	13	5,300	3,800	HHXF500□RA221MJH0G
63	33	HA0	27	3,300	2,300	HHXF630□RA330MHA0G
	47	HA0	27	3,300	2,300	HHXF630□RA470MHA0G
	56	JA0	22	4,000	2,800	HHXF630□RA560MJA0G
	82	JA0	22	4,000	2,800	HHXF630□RA820MJA0G
	100	JC5	17	4,600	3,300	HHXF630□RA101MJC5G
	150	JH0	13	5,300	3,800	HHXF630□RA151MJH0G

□ : Enter the appropriate terminal code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	5k	10k	20k	30k	100k to 500k
33 to 150	0.10	0.30	0.50	0.60	0.75	0.75	1.00
220 to 560	0.10	0.40	0.60	0.70	0.80	0.85	1.00

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