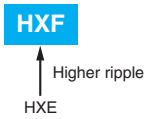
HXF Series

- 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.

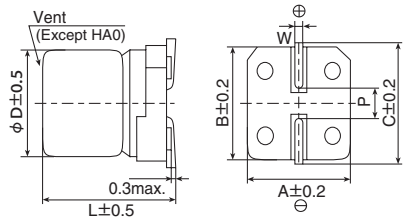


◆SPECIFICATIONS

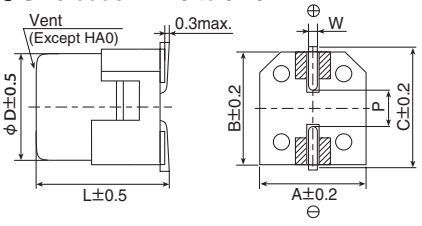
Items	Characteristics					
Category Temperature Range	-55 to +135℃					
Rated Voltage Range	25 to 63Vdc					
Capacitance Tolerance	±20% (M)					(at 20℃, 120Hz)
Leakage Current	I=0.01CV or 3μA, whichever is greater Where, I : Max. leakage current (μA), C: Nominal capacitance(μF), V : Rated voltage(V)					(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



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

▨ : Dummy terminals

◆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

- 18 : Supplement code
- 15 16 17 : Size code
- 14 : Capacitance tolerance code
- 11 12 13 : Capacitance code (ex. 47μF:470, 100μF:101)
- 9 10 : Taping code
- 8 : Terminal code (A, G)
- 5 6 7 : Voltage code (ex. 35V:350, 50V:500)
- 4 : Series code
- 1 2 3 : 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

HXF 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

■ Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.

■ Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.

■ The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.

■ The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.
Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.

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■ We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future.
The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products

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In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

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