NIPPON CHEMI-CON

CONDUCTIVE POLYMER HYBRID ALUMINUM ELECTROLYTIC CAPACITORS

Radial Lead

HSD Upgrade! Series

- High reliability and high voltage are realized by hybrid electrolyte
- Endurance with ripple current : 10,000 hours at 105℃
- Rated voltage range : 25 to 80Vdc, Capacitance range : 68 to 470μF
- For 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.

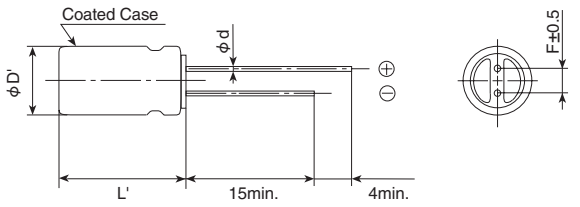
HSC
↑ Higher temperature
HSD

◆SPECIFICATIONS

Items	Characteristics		
Category Temperature Range	-55 to +105℃		
Rated Voltage Range	25 to 80Vdc		
Capacitance Tolerance	±20% (M)		(at 20℃, 120Hz)
Leakage Current	I=0.05CV Where, I : Max. leakage current (μA), C: Nominal capacitance(μF), V : Rated voltage(V)		(at 20℃ after 2 minutes)
Dissipation Factor (tan δ)	0.16 max.		(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 10,000 hours at 105 ℃.		
	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 105 ℃ 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 : E



Size Code	JC5
φD	10
φd	0.6
F	5.0
φD'	φD+0.5max.
L'	L+1.5max.

◆MARKING

EX) 25V330μF

●Rated voltage symbol

Rated voltage (Vdc)	Symbol
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	S	D				E						M	J	C	5	S

- 18 Supplement code
- 15-17 Size code
- 14 Capacitance tolerance code
- 11-13 Capacitance code (ex. 100μF:101, 330μF:331)
- 9-10 Taping code
- 8 Lead forming Terminal code
- 5-7 Voltage code (ex. 35V:350, 50V:500)
- 4 Series code
- 1 Category

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

HSD Upgrade! Series

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φ D×L (mm)	ESR (mΩ max./20℃, 100kHz)	Rated ripple current (mArms/105℃, 100kHz)	Part No.
25	330	10×12.5	16	3,100	HHSD250E□□331MJC5S
	470	10×12.5	16	3,100	HHSD250E□□471MJC5S
35	270	10×12.5	17	3,000	HHSD350E□□271MJC5S
	330	10×12.5	17	3,000	HHSD350E□□331MJC5S
50	120	10×12.5	19	2,800	HHSD500E□□121MJC5S
	180	10×12.5	19	3,000	HHSD500E□□181MJC5S
63	100	10×12.5	20	2,600	HHSD630E□□101MJC5S
	120	10×12.5	20	3,000	HHSD630E□□121MJC5S
80	68	10×12.5	28	3,000	HHSD800E□□680MJC5S

□□:Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	5k	10k	20k	30k	100k to 500k
68 to 180	0.10	0.40	0.60	0.70	0.80	0.80	1.00
270 to 470	0.13	0.45	0.65	0.75	0.85	0.85	1.00