

HS series

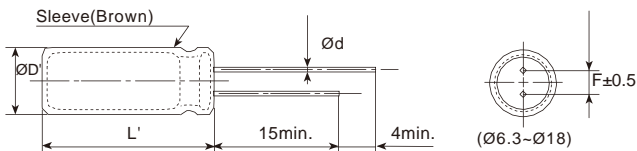
- High ripple current; For power supply applications
- Endurance: +105°C 3,000–5,000 hours
- RoHS Compliant



SPECIFICATIONS

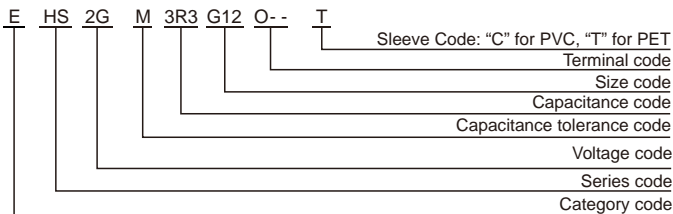
Items	Characteristics										
Category Temperature Range	-40~+105°C(160~400V _{dc})	-25~+105°C(450V _{dc})									
Rated Voltage Range	160~450 V _{dc}										
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)										
Leakage Current	<table border="1"> <tr> <td></td> <td>After 1 minute</td> <td>After 5 minutes</td> </tr> <tr> <td>CV 1000</td> <td> 0.1CV+40μA</td> <td> 0.03CV+15μA</td> </tr> <tr> <td>CV>1000</td> <td> 0.04CV+100μA</td> <td> 0.02CV+25μA</td> </tr> </table>			After 1 minute	After 5 minutes	CV 1000	0.1CV+40μA	0.03CV+15μA	CV>1000	0.04CV+100μA	0.02CV+25μA
		After 1 minute	After 5 minutes								
CV 1000	0.1CV+40μA	0.03CV+15μA									
CV>1000	0.04CV+100μA	0.02CV+25μA									
		Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage (V) (at 20°C)									
Dissipation Factor (tan δ)	Rated Voltage(V _{dc})	160 200 250 350 400 450									
	tan δ (max.)	0.15 0.15 0.15 0.20 0.20 0.20 (at 20°C,120Hz)									
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(V _{dc})	160 200 250 350 400 450									
	Z(-25°C)/Z(+20°C)	3 3 3 6 6 6 (at 120Hz)									
	Z(-40°C)/Z(+20°C)	8 8 8 10 10 -									
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after DC voltage plus the rated ripple current is applied for a specified period of time at 105°C.										
	Capacitance Change	±20% of the initial value				Case Dia.(mm)	Load life (hours)				
	D.F. (tan δ)	200% of the initial specified value				ØD 8	3,000				
	Leakage Current	The initial specified value				ØD 10	5,000				
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied.										
	Capacitance Change	±20% of the initial value									
	D.F. (tan δ)	200% of the initial specified value									
	Leakage Current	200% of the initial specified value									

DIMENSIONS[mm]



ØD	6.3	8	10	12.5	16	18
Ød	0.5	0.5	0.6	0.6	0.8	0.8
F	2.5	3.5	5.0	5.0	7.5	7.5
ØD'	ØD+0.5max.					
L'	L+2max.					

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Cap.(μF)	Freq.(Hz)			
	120	1k	10k	100k
<100	1.0	1.75	2.25	2.50
100	1.0	1.67	2.05	2.25

The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

HS series

■ STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size DxL(mm)	tan	Rated ripple current (mA _{RMS} /105°C, 120Hz)	Part Number
160(2C)	1	6.3x12	0.15	21	EHS2CM010E12OT
	2.2	6.3x12	0.15	32	EHS2CM2R2E12OT
	3.3	6.3x12	0.15	40	EHS2CM3R3E12OT
	4.7	6.3x12	0.15	47	EHS2CM4R7E12OT
	6.8	8x12	0.15	62	EHS2CM6R8F12OT
	10	8x12	0.15	75	EHS2CM100F12OT
	15	10x16	0.15	115	EHS2CM150G16OT
	22	10x20	0.15	140	EHS2CM220G20OT
	33	10x20	0.15	175	EHS2CM330G20OT
	47	12.5x20	0.15	240	EHS2CM470W20OT
	68	12.5x25	0.15	370	EHS2CM680W25OT
	100	16x25	0.15	430	EHS2CM101L25OT
	150	16x25	0.15	500	EHS2CM151L25OT
	220	16x30	0.15	815	EHS2CM221L30OT
	270	18x30	0.15	880	EHS2CM271M30OT
330	18x40	0.15	980	EHS2CM331M40OT	
200(2D)	0.47	6.3x12	0.15	13	EHS2DMR47E12OT
	1	6.3x12	0.15	19	EHS2DM010E12OT
	2.2	6.3x12	0.15	32	EHS2DM2R2E12OT
	3.3	6.3x12	0.15	40	EHS2DM3R3E12OT
	4.7	8x12	0.15	47	EHS2DM4R7F12OT
	6.8	10x12	0.15	70	EHS2DM6R8G12OT
	10	10x12	0.15	80	EHS2DM100G12OT
	15	10x16	0.15	118	EHS2DM150G16OT
	22	10x20	0.15	140	EHS2DM220G20OT
	33	10x20	0.15	160	EHS2DM330G20OT
	47	12.5x20	0.15	250	EHS2DM470W20OT
	68	12.5x25	0.15	330	EHS2DM680W25OT
	100	16x25	0.15	440	EHS2DM101L25OT
	150	16x25	0.15	600	EHS2DM151L25OT
	220	18x30	0.15	680	EHS2DM221M30OT
270	18x40	0.15	1040	EHS2DM271M40OT	
250(2E)	0.47	6.3x12	0.15	13	EHS2EMR47E12OT
	1	6.3x12	0.15	19	EHS2EM010E12OT
	2.2	6.3x12	0.15	37	EHS2EM2R2E12OT
	3.3	8x12	0.15	50	EHS2EM3R3F12OT
	4.7	8x12	0.15	58	EHS2EM4R7F12OT
	6.8	10x12	0.15	72	EHS2EM6R8G12OT
	10	10x16	0.15	100	EHS2EM100G16OT
	15	10x16	0.15	120	EHS2EM150G16OT
	22	10x20	0.15	168	EHS2EM220G20OT
	33	12.5x20	0.15	210	EHS2EM330W20OT
	47	12.5x25	0.15	320	EHS2EM470W25OT
	68	16x25	0.15	410	EHS2EM680L25OT
	100	16x30	0.15	530	EHS2EM101L30OT
	150	18x25	0.15	550	EHS2EM151M25OT
	220	18x35	0.15	710	EHS2EM221M35OT

WV (Vdc)	Cap (μF)	Size DxL(mm)	tan	Rated ripple current (mA _{RMS} /105°C, 120Hz)	Part Number	
350(2V)	0.47	6.3x12	0.20	20	EHS2VMR47E12OT	
	1	6.3x12	0.20	24	EHS2VM010E12OT	
	2.2	8x12	0.20	40	EHS2VM2R2F12OT	
	3.3	8x12	0.20	52	EHS2VM3R3F12OT	
	4.7	10x12	0.20	65	EHS2VM4R7G12OT	
	6.8	10x20	0.20	88	EHS2VM6R8G20OT	
	10	10x20	0.20	105	EHS2VM100G20OT	
	15	12.5x20	0.20	130	EHS2VM150W20OT	
	22	12.5x20	0.20	182	EHS2VM220W20OT	
	33	12.5x25	0.20	240	EHS2VM330W25OT	
	47	16x25	0.20	305	EHS2VM470L25OT	
	68	16x30	0.20	390	EHS2VM680L30OT	
	100	18x30	0.20	480	EHS2VM101M30OT	
	400(2G)	1	8x12	0.20	25	EHS2GM010F12OT
		2.2	8x12	0.20	40	EHS2GM2R2F12OT
3.3		10x12	0.20	55	EHS2GM3R3G12OT	
4.7		10x16	0.20	76	EHS2GM4R7G16OT	
6.8		10x20	0.20	80	EHS2GM6R8G20OT	
10		12.5x20	0.20	110	EHS2GM100W20OT	
15		12.5x20	0.20	135	EHS2GM150W20OT	
22		12.5x25	0.20	205	EHS2GM220W25OT	
33		16x20	0.20	255	EHS2GM330L20OT	
47		16x25	0.20	330	EHS2GM470L25OT	
68		16x35	0.20	400	EHS2GM680L35OT	
82		18x30	0.20	420	EHS2GM820M30OT	
100		18x35	0.20	495	EHS2GM101M35OT	
120		18x40	0.20	520	EHS2GM121M40OT	
450(2W)		1	8x12	0.20	35	EHS2WM010F12OT
	2.2	10x12	0.20	40	EHS2WM2R2G12OT	
	3.3	10x16	0.20	65	EHS2WM3R3G16OT	
	4.7	10x16	0.20	85	EHS2WM4R7G16OT	
	6.8	10x20	0.20	90	EHS2WM6R8G20OT	
	10	12.5x20	0.20	140	EHS2WM100W20OT	
	15	16x20	0.20	160	EHS2WM150L20OT	
	22	16x25	0.20	200	EHS2WM220L25OT	
	33	16x25	0.20	320	EHS2WM330L25OT	
	47	18x25	0.20	350	EHS2WM470M25OT	
	68	18x30	0.20	440	EHS2WM680M30OT	
	82	18x35	0.20	500	EHS2WM820M35OT	
	100	18x40	0.20	560	EHS2WM101M40OT	

Radial Type