RH series

- High frequency,low impedance
- Endurance +105°C 2,000~3,000 hours
- **RoHS Compliant**

SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-40~+105°C(160 ~400 Vdc) -25~+105°C(450 Vdc)							
Rated Voltage Range	160~450 Vdc							
Capacitance Tolerance	±20%(M) (at 20°C,120Hz)							
Leakage Current	I 0.02CV or 10μA, whichever is greater. Where, I:Max.leakage current (μA),C:Nominal capacitance (μF),V: Rated voltage (V) (at 20°C after 2 minutes)							
Dissipation Factor (tanδ)	Rated Voltage(Vdc)	160	200	250	350	400	450	
	tanδ (max.)	0.12	0.12	0.12	0.15	0.15	0.20	(at 20°C,120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated Voltage(Vdc)	160	200	250	350	400	450	
	Z(-25°C)/Z(+20°C)	3	5				6	
	Z(-40°C)/Z(+20°C)	4	7				-	(at 120Hz)

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
D.F. (tanδ)	≤200% of the initial specified value
Leakage Current	≤The initial specified value

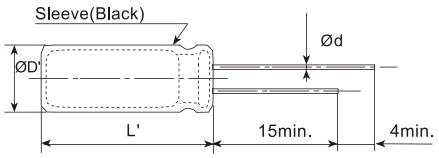
Case Dia.(mm)	Load life (hours)
ØD 8	2,000
ØD 10	3,000

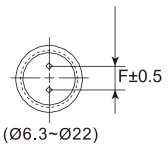
Shelf Life

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. (tanδ)	≤200% of the initial specified value
Leakage Current	≤200% of the initial specified value

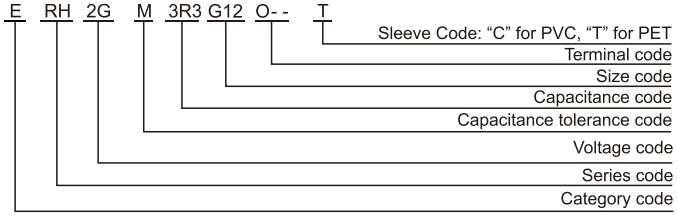
DIMENSIONS[mm]





ØD	6.3	8		10	12.5	16	18	22
Ød	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8
F	2.5	3.5		5.0	5.0	7.5	7.5	10.0
ØD'	ØD+0.5max.							
L'	L+2max.							

PART NUMBERING SYSTEM



RATED RIPPLE CURRENT MULTIPLIERS

Frequency correction factor for ripple current

Freq.(Hz) / Cap.(μF)	120	1k	10k	100k
Cap.<10	0.40	0.70	0.92	1.00
10 Cap.<100	0.56	0.83	0.95	1.00
100 Cap. 1000	0.67	0.87	0.96	1.00

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.

RH series

STANDARD RATINGS

WV (Vdc)	Cap (μF)	Size DxL(mm)	tanδ	Rated ripple current (mArms/105°C, 100kHz)	Part Number
160(2C)	2.2	6.3×11	0.12	80	ERH2CM2R2E11OT
	3.3	6.3×11	0.12	103	ERH2CM3R3E11OT
	4.7	8×12	0.12	121	ERH2CM4R7F12OT
	10	10×12	0.12	150	ERH2CM100G12OT
	22	10×16	0.12	228	ERH2CM220G16OT
	33	10×20	0.12	293	ERH2CM330G20OT
	47	12.5×20	0.12	368	ERH2CM470W20OT
	100	12.5×25	0.12	587	ERH2CM101W25OT
	220	16×30	0.12	883	ERH2CM221L30OT
200(2D)	1	5×11	0.12	50	ERH2DM010D11OT
	2.2	6.3×11	0.12	77	ERH2DM2R2E11OT
	3.3	6.3×11	0.12	103	ERH2DM3R3E11OT
	4.7	8×12	0.12	121	ERH2DM4R7F12OT
	10	10×12	0.12	152	ERH2DM100G12OT
	22	10×16	0.12	228	ERH2DM220G16OT
		10×20	0.12	238	ERH2DM220G20OT
	33	10×20	0.12	319	ERH2DM330G20OT
		12.5×20	0.12	365	ERH2DM330W20OT
	47	12.5×20	0.12	405	ERH2DM470W20OT
	56	12.5×25	0.12	476	ERH2DM560W25OT
	68	12.5×25	0.12	540	ERH2DM680W25OT
	82	10×30	0.12	574	ERH2DM820G30OT
	100	16×25	0.12	774	ERH2DM101L25OT
	120	16×25	0.12	801	ERH2DM121L25OT
	150	18×25	0.12	908	ERH2DM151M25OT
	180	12.5×35	0.12	948	ERH2DM181W35OT
	220	18×30	0.12	1032	ERH2DM221M30OT
250(2E)	0.47	6.3×11	0.12	32	ERH2EMR47E11OT
	1	6.3×11	0.12	59	ERH2EM010E11OT
	2.2	6.3×11	0.12	77	ERH2EM2R2E11OT
	3.3	8×12	0.12	106	ERH2EM3R3F12OT
	4.7	8×12	0.12	124	ERH2EM4R7F12OT
	10	10×12	0.12	152	ERH2EM100G12OT
	22	10×20	0.12	244	ERH2EM220G20OT
	33	12.5×20	0.12	371	ERH2EM330W20OT
	47	12.5×25	0.12	423	ERH2EM470W25OT
	56	12.5×25	0.12	472	ERH2EM560W25OT
	82	16×25	0.12	637	ERH2EM820L25OT
	100	16×30	0.12	795	ERH2EM101L30OT
	220	18×35	0.12	1085	ERH2EM221M35OT
	330	18×45	0.12	1182	ERH2EM331M45OT
	470	22×46	0.12	1290	ERH2EM471O46OT
350(2V)	0.47	6.3×11	0.15	32	ERH2VMR47E11OT
	1	6.3×11	0.15	59	ERH2VM010E11OT
	2.2	8×12	0.15	80	ERH2VM2R2F12OT
	3.3	8×12	0.15	109	ERH2VM3R3F12OT
		10×12	0.15	118	ERH2VM3R3G12OT
	4.7	10×16	0.15	153	ERH2VM4R7G16OT
	10	10×16	0.15	179	ERH2VM100G16OT
	22	12.5×25	0.15	316	ERH2VM220W25OT
	33	16×25	0.15	365	ERH2VM330L25OT
	47	16×30	0.15	532	ERH2VM470L30OT

WV (Vdc)	Cap (μF)	Size DxL(mm)	tanδ	Rated ripple current (mArms/105°C, 100kHz)	Part Number
400(2G)	1	8×12	0.15	59	ERH2GM010F12OT
	2.2	8×12	0.15	91	ERH2GM2R2F12OT
	3.3	8×12	0.15	125	ERH2GM3R3F12OT
		10×12	0.15	133	ERH2GM3R3G12OT
	4.7	10×12	0.15	156	ERH2GM4R7G12OT
	10	10×16	0.15	184	ERH2GM100G16OT
		10×20	0.15	211	ERH2GM100G20OT
	22	12.5×20	0.15	332	ERH2GM220W20OT
	27	10×30	0.15	426	ERH2GM270G30OT
	33	10×35	0.15	498	ERH2GM330G35OT
		16×20	0.15	487	ERH2GM330L20OT
	39	10×40	0.15	543	ERH2GM390G40OT
	47	12.5×30	0.15	659	ERH2GM470W30OT
		16×25	0.15	647	ERH2GM470L25OT
	56	10×45	0.15	725	ERH2GM560G45OT
		12.5×35	0.15	720	ERH2GM560W35OT
	68	12.5×40	0.15	902	ERH2GM680W40OT
		16×30	0.15	864	ERH2GM680L30OT
	82	12.5×40	0.15	941	ERH2GM820W40OT
		18×30	0.15	924	ERH2GM820M30OT
	100	12.5×50	0.15	956	ERH2GM101W50OT
		18×30	0.15	935	ERH2GM101M30OT
	120	22×31	0.15	962	ERH2GM121O31OT
	150	12.5×60	0.15	1021	ERH2GM151W60OT
		22×31	0.15	1010	ERH2GM151O31OT
450(2W)	1	8×12	0.20	59	ERH2WM010F12OT
	2.2	10×12	0.20	96	ERH2WM2R2G12OT
	3.3	10×16	0.20	136	ERH2WM3R3G16OT
	4.7	10×20	0.20	159	ERH2WM4R7G20OT
	10	12.5×20	0.20	169	ERH2WM100W20OT
	18	10×30	0.20	221	ERH2WM180G30OT
	22	16×20	0.20	338	ERH2WM220L20OT
	27	10×30	0.20	426	ERH2WM270G30OT
	33	10×35	0.20	509	ERH2WM330G35OT
		16×25	0.20	504	ERH2WM330L25OT
	39	10×40	0.20	554	ERH2WM390G40OT
	47	10×45	0.20	703	ERH2WM470G45OT
		12.5×30	0.20	698	ERH2WM470W30OT
		18×25	0.20	686	ERH2WM470M25OT
	56	12.5×35	0.20	781	ERH2WM560W35OT
		18×25	0.20	769	ERH2WM560M25OT
	68	12.5×40	0.20	830	ERH2WM680W40OT
		18×30	0.20	808	ERH2WM680M30OT
	82	12.5×45	0.20	886	ERH2WM820W45OT
		18×30	0.20	853	ERH2WM820M30OT
	100	18×35	0.20	924	ERH2WM101M35OT
	120	18×40	0.20	1128	ERH2WM121M40OT
	150	22×40	0.20	1354	ERH2WM151O40OT
	220	22×46	0.20	1537	ERH2WM221O46OT