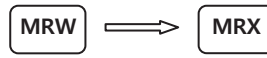




MRX series

- Long Life
- High-Ripple current
- RoHS compliant

- 105°C 20,000Hrs assured.
- Long life, High ripple
- For Ballaster, LED Lighting power
- RoHS compliant
- Halogen-free capacitors are also available.



Long life

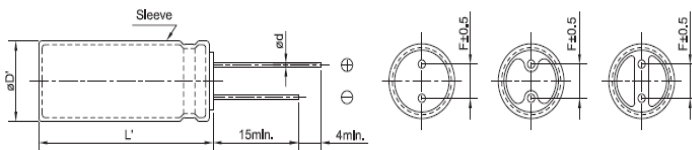


Specifications

Item	Characteristics			
Rated Voltage Range	160 ~ 400 Vdc		450 Vdc	
Operating Temperature Range	-40 ~ +105°C		-25 ~ +105°C	
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)			
Leakage Current	I=0.02CV+10(µA) at 160~400Vdc (at 20°C, 2min) I=0.03CV+10(µA) at 450, 500Vdc (at 20°C, 2min) Where, I:Max. Leakage current(µA), C:Nominal capacitance(µF), V:Rated voltage(Vdc)			
Dissipation Factor(Tanδ)	Rated voltage (Vdc)	160 ~ 400	450	
	Tanδ (max.)	0.08	0.10	
Temperature characteristics (Max,impedance ratio)	Rated voltage (Vdc)	160 ~ 250	350 ~ 400	450 ~ 500
	Z(-25°C)/Z(20°C)	3	5	6
	Z(-40°C)/Z(20°C)	6	6	-
Load life	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for specified life times at 105°C20,000hrs. Capacitance change ≤±20%of the initial value Tan δ ≤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°C after exposing them for 1,000 hours at 105°C without voltage applied. The rated voltage shall be applied to the capacitors for a minimum of 30 minutes at least 24 hours and not more than 48 hours before the measurements. Capacitance change ≤±20% of the initial value Tanδ ≤200% of the initial specified value Leakage current ≤500%The initial specified value			

Dimensions

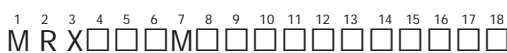
Unit(mm)



ØD	8	10	12.5	16	18
Ød	0.5 0.6	0.6	0.6	0.8	0.8
F	3.5		5.0	5.0	7.5
ØD'	ØD+0.5 max.				
L'	L+2.0 max				

- Printed black color letter on PET red sleeve

Code numbering system



Taping, Cutting

Terminal type

Size (5X11: D11)

Capacitance

Capacitance tolerance(M:±20%, K:±10%, V :-10~20%)

Rated voltage(ex. 160V→160)

Series name

Ø8	F
Ø10	G
Ø12.5	X
Ø16	J
Ø18	K



MRX series

Standard Ratings

Note1) Ripple current = mArms/105°C, 100kHz

WV (Vdc)	Cap (uF)	Size ØxL (mm)	Tan δ	Ripple ¹⁾	Code No
160	3.3	8 x 12	0.08	70	MRX160□3R3F12CS□□□
	4.7	8 x 12	0.08	78	MRX160□4R7F12CS□□□
	5.6	8 x 16	0.08	82	MRX160□5R6F16CS□□□
	6.8	8 x 16	0.08	88	MRX160□6E8F16CS□□□
	8.2	10 x 16	0.08	183	MRX160□8R2G16CS□□□
	10	10 x 16	0.08	224	MRX160□100G16CS□□□
	15	10 x 16	0.08	336	MRX160□150G16CS□□□
	22	10 x 20	0.08	400	MRX160□220G20CS□□□
	33	12.5 x 20	0.08	480	MRX160□330X20CS□□□
	47	12.5 x 25	0.08	590	MRX160□470X25CS□□□
	68	16 x 25	0.08	750	MRX160□680J25CS□□□
	82	16 x 25	0.08	826	MRX160□820J25CS□□□
	100	16 x 25	0.08	960	MRX160□101J25CS□□□
		18 x 20	0.08	958	MRX160□101K20CS□□□
150	18 x 30	0.08	1,050	MRX160□151K30CS□□□	
220	18 x 35	0.08	1,500	MRX160□221K35CS□□□	
200	2.8	8 x 12	0.08	64	MRX200□2R8F12CS□□□
	3.3	8 x 12	0.08	73	MRX200□3R3F12CS□□□
	4.7	8 x 16	0.08	128	MRX200□4R7F16CS□□□
		10 x 12.5	0.08	128	MRX200□4R7G13CS□□□
	5.6	8 x 16	0.08	148	MRX200□5R6F16CS□□□
	6.8	8 x 16	0.08	180	MRX200□6R8F16CS□□□
		10 x 16	0.08	200	MRX200□6R8G16CS□□□
	8.2	10 x 16	0.08	218	MRX200□8R2G16CS□□□
	10	10 x 16	0.08	230	MRX200□100G16CS□□□
		10 x 20	0.08	245	MRX200□100G20CS□□□
	15	10 x 20	0.08	345	MRX200□150G20CS□□□
	22	12.5 x 20	0.08	506	MRX200□220X20CS□□□
	33	12.5 x 20	0.08	556	MRX200□330X20CS□□□
	47	12.5 x 25	0.08	690	MRX200□470X25CS□□□
		16 x 20	0.08	690	MRX200□470J20CS□□□
	68	16 x 25	0.08	752	MRX200□680J25CS□□□
	82	16 x 30	0.08	900	MRX200□820J30CS□□□
		18 x 25	0.08	900	MRX200□820K25CS□□□
100	16 x 30	0.08	1,100	MRX200□101J30CS□□□	
	18 x 25	0.08	1,100	MRX200□101K25CS□□□	
150	18 x 35	0.08	1,350	MRX200□151K35CS□□□	
250	2.2	8 x 12	0.08	64	MRX250□2R2F12CS□□□
	2.8	8 x 12	0.08	72	MRX250□2R8F12CS□□□
	3.3	8 x 12	0.08	80	MRX250□3R3F12CS□□□
	4.7	8 x 16	0.08	134	MRX250□4R7F16CS□□□
	5.6	10 x 16	0.08	150	MRX250□5R6G16CS□□□
	6.8	10 x 16	0.08	169	MRX250□6R8G16CS□□□
		10 x 16	0.08	203	MRX250□8R2G16CS□□□
	10	10 x 16	0.08	238	MRX250□100G16CS□□□
		10 x 20	0.08	250	MRX250□100G20CS□□□
	15	10 x 20	0.08	327	MRX250□150G20CS□□□
	22	12.5 x 20	0.08	480	MRX250□220X20CS□□□
	33	12.5 x 25	0.08	540	MRX250□330X25CS□□□
		16 x 20	0.08	540	MRX250□330J20CS□□□
	47	16 x 25	0.08	600	MRX250□470J25CS□□□
		18 x 20	0.08	600	MRX250□470K20CS□□□
	68	16 x 30	0.08	750	MRX250□680J30CS□□□
		18 x 25	0.08	750	MRX250□680K25CS□□□
	82	18 x 25	0.08	825	MRX250□820K25CS□□□
100	18 x 30	0.08	970	MRX250□101K30CS□□□	

WV (Vdc)	Cap (uF)	Size ØxL (mm)	Tan δ	Ripple ¹⁾	Code No
350	1.0	8 x 12	0.08	50	MRX350□1R0F12CS□□□
	1.5	8 x 16	0.08	75	MRX350□1R5F16CS□□□
	1.8	8 x 16	0.08	76	MRX350□1R8F16CS□□□
	2.2	10 x 16	0.08	90	MRX350□2R2G16CS□□□
	2.8	10 x 16	0.08	95	MRX350□2R8G16CS□□□
		10 x 16	0.08	100	MRX350□3R3G16CS□□□
	4.7	10 x 20	0.08	120	MRX350□4R7G20CS□□□
		10 x 20	0.08	142	MRX350□5R6G20CS□□□
	5.6	12.5 x 20	0.08	150	MRX350□5R6X20CS□□□
		10 x 20	0.08	190	MRX350□6R8G20CS□□□
	6.8	12.5 x 20	0.08	200	MRX350□6R8X20CS□□□
		12.5 x 20	0.08	205	MRX350□8R2X20CS□□□
	10	12.5 x 20	0.08	214	MRX350□100X20CS□□□
		12.5 x 25	0.08	226	MRX350□100X25CS□□□
15	12.5 x 25	0.08	305	MRX350□150X25CS□□□	
	16 x 20	0.08	305	MRX350□150J20CS□□□	
22	16 x 25	0.08	450	MRX350□220J25CS□□□	
33	16 x 30	0.08	520	MRX350□330J30CS□□□	
	16 x 35	0.08	546	MRX350□330J35CS□□□	
	18 x 30	0.08	600	MRX350□470K30CS□□□	
	18 x 35	0.08	630	MRX350□470K35CS□□□	
68	18 x 40	0.08	910	MRX350□680K40CS□□□	
400	1.0	8 x 12	0.08	54	MRX400□1R0F12CS□□□
		8 x 16	0.08	60	MRX400□1R0F12CS□□□
	1.5	8 x 16	0.08	72	MRX400□1R5F16CS□□□
	1.8	8 x 16	0.08	75	MRX400□1R8F16CS□□□
	2.2	10 x 16	0.08	92	MRX400□2R2G16CS□□□
	2.8	10 x 16	0.08	100	MRX400□2R8G16CS□□□
	3.3	10 x 16	0.08	105	MRX400□3R3G16CS□□□
		10 x 20	0.08	120	MRX400□3R3G20CS□□□
	4.7	10 x 20	0.08	144	MRX400□4R7G20CS□□□
		12.5 x 20	0.08	150	MRX400□4R7X20CS□□□
	5.6	12.5 x 20	0.08	166	MRX400□5R6X20CS□□□
	6.8	12.5 x 20	0.08	226	MRX400□6R8X20CS□□□
	8.2	12.5 x 20	0.08	230	MRX400□8R2X20CS□□□
	10	12.5 x 25	0.08	280	MRX400□100X25CS□□□
15	12.5 x 25	0.08	294	MRX400□150X25CS□□□	
	16 x 20	0.08	310	MRX400□150J20CS□□□	
22	16 x 25	0.08	380	MRX400□220J25CS□□□	
	16 x 30	0.08	400	MRX400□220J30CS□□□	
33	18 x 30	0.08	636	MRX400□330K30CS□□□	
47	18 x 35	0.08	750	MRX400□470K35CS□□□	
56	18 x 35	0.08	770	MRX400□560K35CS□□□	
68	18 x 40	0.08	830	MRX400□680K40CS□□□	
100	18 x 50	0.08	1,030	MRX400□101K50CS□□□	
450	1.5	8 x 16	0.10	70	MRX450□1R5F16CS□□□
	1.8	8 x 16	0.10	74	MRX450□1R8F16CS□□□
	2.2	10 x 16	0.10	78	MRX450□2R2G16CS□□□
	2.8	10 x 16	0.10	80	MRX450□2R8G16CS□□□
	3.3	10 x 16	0.10	88	MRX450□3R3G16CS□□□
		10 x 20	0.10	92	MRX450□3R3G20CS□□□
	4.7	10 x 20	0.10	104	MRX450□4R7G20CS□□□
	5.6	12.5 x 20	0.10	144	MRX450□5R6X20CS□□□
	6.8	12.5 x 20	0.10	176	MRX450□6R8X20CS□□□
	8.2	12.5 x 20	0.10	184	MRX450□8R2X20CS□□□
	10	12.5 x 20	0.10	225	MRX450□100X20CS□□□
	15	12.5 x 25	0.10	294	MRX450□150X25CS□□□
		16 x 25	0.10	395	MRX450□220J25CS□□□
	22	16 x 30	0.10	420	MRX450□220J30CS□□□



MRX series

Standard Ratings Note1) Ripple current = mArms/105°C,100kHz

WV (Vdc)	Cap (µF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
450	33	18 x 30	0.10	500	MRX450□330K30CS□□□
	47	18 x 35	0.10	615	MRX450□470K35CS□□□
	68	18 x 40	0.10	710	MRX450□680K40CS□□□
	100	18 x 50	0.10	840	MRX450□101K50CS□□□

Rated ripple current multipliers

Freq. (Hz) Cap. (µF)	120	1K	10K	50K	100K
1 ~ 5.6	0.20	0.40	0.80	0.90	1.00
6.8 ~ 15	0.30	0.60	0.90	0.95	1.00
22 ~ 82	0.40	0.70	0.90	0.95	1.00
100 ~	0.45	0.75	0.90	0.95	1.00