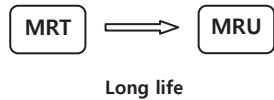


MRU series

- Long Life
- High-Ripple current
- RoHS compliant

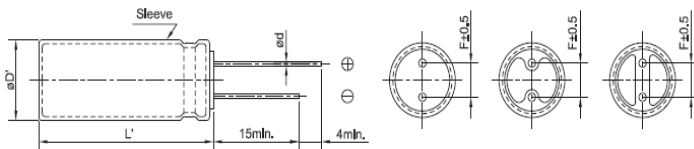
- 105°C 8,000~12,000Hrs assured.
- Long life, High ripple
- For Ballaster, LED power
- RoHS compliant
- Halogen-free capacitors are also available.



Specifications

Item	Characteristics			
Rated Voltage Range	160 ~ 400 Vdc	450 ~ 500 Vdc		
Operating Temperature Range	-40 ~ +105°C	-25 ~ +105°C		
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)			
Leakage Current	I=0.01CV+40(μA) at CV ≤ 1,000, I=0.03CV+15(μA) at CV > 1,000 (at 20°C, 1min) I=0.04CV+100(μA) at CV ≤ 1,000, I=0.02CV+25(μA) at CV > 1,000 (at 20°C, 5min) Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(Vdc)			
Dissipation Factor(Tanδ)	Rated voltage (Vdc)	160 ~ 250	350 ~ 500	
	Tanδ (max.)	0.20	0.24	
Temperature characteristics (Max,impedance ratio)	(at 20°C, 120Hz)			
	Rated voltage (Vdc)	160 ~ 250	350 ~ 400	450 ~ 500
	Z(-25°C)/Z(20°C)	3	5	6
Load life	Z(-40°C)/Z(20°C)	6	6	-
	(at 120Hz)			
Shelf 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°C12,000hrs. (8,000hrs for 8Ø, 10,000hrs for 10Ø)			
	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

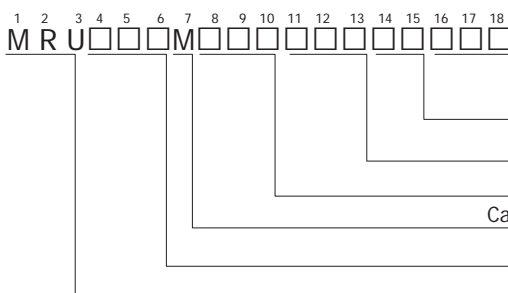


Unit(mm)

	8	10	12.5	16	18	20
ØD	8	10	12.5	16	18	20
Ød	0.6	0.6	0.6	0.8	0.8	0.8
F	3.5	5.0	5.0	7.5	7.5	7.5
ØD'	ØD+0.5 max.					
L'	L+2.0 max					

- Printed gold color letter on PET dark green sleeve

Code numbering system



Ø8	F
Ø10	G
Ø12.5	X
Ø16	J
Ø18	K
Ø20	L



MRU series

Standard Ratings

Note1) Ripple current = mAmps/105°C, 120Hz

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
160	39	10 x 16	0.20	237	MRU160□390G16CS□□□
	47	10 x 20	0.20	280	MRU160□470G20CS□□□
	56	10 x 25	0.20	335	MRU160□560G25CS□□□
	68	12.5 x 20	0.20	375	MRU160□680X20CS□□□
	100	10 x 45	0.20	562	MRU160□101G45CS□□□
		12.5 x 25	0.20	498	MRU160□101X25CS□□□
	150	16 x 31.5	0.20	726	MRU160□151J32CS□□□
	220	12.5 x 50	0.20	950	MRU160□221X50CS□□□
		16 x 31.5	0.20	876	MRU160□221J32CS□□□
	270	16 x 35.5	0.20	990	MRU160□271J36CS□□□
330	16 x 40	0.20	1,132	MRU160□331K40CS□□□	
	18 x 31.5	0.20	1,109	MRU160□331K32CS□□□	
390	18 x 35.5	0.20	1,246	MRU160□391K36CS□□□	
470	18 x 40	0.20	1,389	MRU160□471K40CS□□□	
200	27	10 x 16	0.20	200	MRU200□270G16CS□□□
	39	10 x 20	0.20	256	MRU200□390G20CS□□□
	47	12.5 x 20	0.20	312	MRU200□470X20CS□□□
	56	12.5 x 25	0.20	371	MRU200□560X25CS□□□
	68	12.5 x 25	0.20	409	MRU200□680X25CS□□□
	100	10 x 50	0.20	591	MRU200□101G50CS□□□
		16 x 25	0.20	550	MRU200□101J25CS□□□
	150	12.5 x 50	0.20	786	MRU200□151X50CS□□□
		16 x 25	0.20	671	MRU200□151J25CS□□□
	220	18 x 31.5	0.20	906	MRU200□221K32CS□□□
270	18 x 35.5	0.20	1,038	MRU200□271K36CS□□□	
330	18 x 40	0.20	1,164	MRU200□331K40CS□□□	
250	10	10 x 16	0.20	120	MRU250□100G16CS□□□
	22	10 x 20	0.20	192	MRU250□220G20CS□□□
	33	10 x 25	0.20	257	MRU250□330G25CS□□□
	39	10 x 30	0.20	290	MRU250□390G30CS□□□
	47	8 x 50	0.20	250	MRU250□470F50CS□□□
		12.5 x 20	0.20	311	MRU250□470X20CS□□□
	68	10 x 40	0.20	452	MRU250□680G40CS□□□
		12.5 x 30	0.20	441	MRU250□680X30CS□□□
	82	10 x 50	0.20	536	MRU250□820G50CS□□□
	100	10 x 50	0.20	585	MRU250□101G50CS□□□
16 x 25		0.20	548	MRU250□101J25CS□□□	
150	18 x 25	0.20	748	MRU250□151K25CS□□□	
180	12.5 x 50	0.20	800	MRU250□181X50CS□□□	
220	18 x 31.5	0.20	905	MRU250□221K32CS□□□	
350	10	10 x 16	0.20	110	MRU350□100G16CS□□□
	22	12.5 x 20	0.20	213	MRU350□220X20CS□□□
	33	8 x 50	0.20	246	MRU350□330F50CS□□□
		12.5 x 25	0.20	286	MRU350□330X25CS□□□
	39	10 x 40	0.20	340	MRU350□390G40CS□□□
	47	10 x 50	0.20	405	MRU350□470G50CS□□□
		16 x 25	0.20	374	MRU350□470J25CS□□□
	68	16 x 31.5	0.20	503	MRU350□680J32CS□□□
		18 x 25	0.20	488	MRU350□680K25CS□□□
	82	12.5 x 45	0.20	572	MRU350□820X45CS□□□
100	18 x 31.5	0.20	610	MRU350□101K32CS□□□	
400	3.3	8 x 11.5	0.20	34	MRU400□3R3F12CS□□□
	4.7	8 x 15	0.20	42	MRU400□4R7F15CS□□□
	6.8	8 x 20	0.20	59	MRU400□6R8F20CS□□□
	10	10 x 20	0.20	110	MRU400□100G20CS□□□
	22	12.5 x 20	0.20	208	MRU400□220X20CS□□□
	27	8 x 50	0.20	155	MRU400□270F50CS□□□
	33	16 x 20	0.20	262	MRU400□330J20CS□□□
	39	10 x 45	0.20	341	MRU400□390G45CS□□□
47	16 x 25	0.20	334	MRU400□470J25CS□□□	

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
400	68	12.5 x 45	0.20	482	MRU400□680X45CS□□□
		16 x 31.5	0.20	460	MRU400□680J32CS□□□
	82	12.5 x 50	0.20	528	MRU400□820X50CS□□□
		18 x 31.5	0.20	520	MRU400□820K32CS□□□
	100	18 x 35.5	0.20	630	MRU400□101K36CS□□□
120	18 x 40	0.20	700	MRU400□121K40CS□□□	
450	4.7	10 x 16	0.24	70	MRU450□4R7G16CS□□□
	6.8	10 x 20	0.24	90	MRU450□6R8G20CS□□□
	10	12.5 x 20	0.24	120	MRU450□100X20CS□□□
	22	8 x 50	0.24	232	MRU450□220F50CS□□□
		16 x 25	0.24	228	MRU450□220J25CS□□□
	33	16 x 31.5	0.24	270	MRU450□330J32CS□□□
	39	10 x 50	0.24	305	MRU450□390G50CS□□□
	47	18 x 31.5	0.24	360	MRU450□470G16CS□□□
	68	12.5 x 50	0.24	474	MRU450□680X50CS□□□
		18 x 35.5	0.24	500	MRU450□680K36CS□□□
82	18 x 35.5	0.24	550	MRU450□820K36CS□□□	
100	12.5 x 60	0.24	626	MRU450□101X60CS□□□	
	18 x 35.5	0.24	660	MRU450□101K36CS□□□	
120	18 x 40	0.24	670	MRU450□101K40CS□□□	
	20 x 40	0.24	720	MRU450□121L40CS□□□	
500	10	12.5 x 20	0.24	150	MRU500□100X20CS□□□
	22	16 x 25	0.24	228	MRU500□220J25CS□□□
	27	10 x 50	0.24	253	MRU500□270G50CS□□□
	33	16 x 31.5	0.24	270	MRU500□330J32CS□□□
		18 x 25	0.24	260	MRU500□330K25CS□□□
	39	12.5 x 50	0.24	358	MRU500□390X50CS□□□
	47	18 x 31.5	0.24	360	MRU500□470K32CS□□□
	60	12.5 x 60	0.24	467	MRU500□600X60CS□□□
	68	18 x 35.5	0.24	500	MRU500□680K36CS□□□
	82	18 x 40	0.24	606	MRU500□820K40CS□□□
100	20 x 40	0.24	658	MRU500□101L40CS□□□	

Rated ripple current multipliers

Frequency(Hz)	120	1K	10K	50K	100K
Factor	1.00	1.25	1.50	1.60	1.75