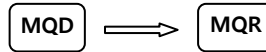




MQR series

- 105°C 3,000Hrs assured.
- High ripple current
- For Industrial power supply, Inverter
- RoHS compliant
- Halogen-free capacitors are also available.

High ripple RoHS Compliant



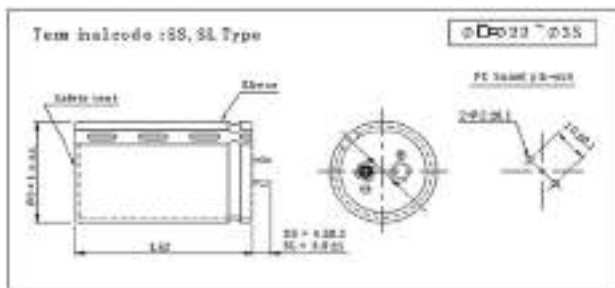
High ripple



Specifications

Item	Characteristics	
Rated Voltage Range	200 ~ 250 Vdc	400 ~ 450 Vdc
Operating Temperature Range	-40 ~ +105 °C	-25 ~ +105 °C
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)	
Leakage Current	I=0.03CV or 3mA whichever is smaller Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(Vdc) (at 20°C, 5min)	
Dissipation Factor(Tanδ)	Rated voltage (Vdc)	200 ~ 400 450
	Tanδ (max.)	0.15 0.20
Temperature characteristics (Max,impedance ratio)	Rated voltage (Vdc)	200 ~ 250 400 ~ 450
	Z(-25°C)/Z(20°C)	3 8
	Z(-40°C)/Z(20°C)	12 -
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°C3,000hrs. 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 ≤The initial specified value	

Dimensions



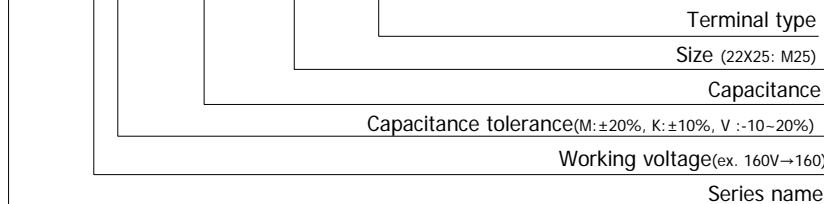
- Printed white color letter on brown sleeve
- The standard design has no bottom plate

Rated ripple current multipliers

Freq.(Hz) Vdc	50	60	120	1K	10K	100K
200, 250	0.81	0.85	1.00	1.32	1.45	1.50
400, 450	0.77	0.82	1.00	1.30	1.41	1.43

Code numbering system

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
M Q R □ □ M □ □ □ □ □ □ □ □ □ □ □ □ □ □



Ø22	M
Ø25	N
Ø30	O
Ø35	P

MQR series

■ **Standard Ratings** Note1) Ripple current = mArms/105°C, 120Hz

VV (Vdc)	Cap (µF)	Size ØxL (mm)	Tan δ	Ripple ¹⁾	Code No
200	330	22 x 25	0.15	1,900	MQR200□331M25□□□
		22 x 30	0.15	2,120	MQR200□471M30□□□
	470	25 x 25	0.15	2,120	MQR200□471N25□□□
		22 x 35	0.15	2,200	MQR200□561M35□□□
	560	25 x 30	0.15	2,200	MQR200□561N30□□□
		22 x 40	0.15	2,300	MQR200□681M40□□□
	680	25 x 35	0.15	2,600	MQR200□681N35□□□
		30 x 25	0.15	3,000	MQR200□681O25□□□
	820	22 x 45	0.15	2,600	MQR200□821M45□□□
		25 x 40	0.15	3,000	MQR200□821N40□□□
		30 x 30	0.15	3,400	MQR200□821O30□□□
		35 x 25	0.15	3,400	MQR200□821P25□□□
	1,000	22 x 45	0.15	3,400	MQR200□102M45□□□
		30 x 35	0.15	3,900	MQR200□102O35□□□
	1,200	25 x 50	0.15	3,900	MQR200□122M50□□□
		30 x 40	0.15	4,200	MQR200□122O40□□□
		35 x 30	0.15	4,200	MQR200□122P30□□□
	1,500	30 x 45	0.15	4,600	MQR200□152O45□□□
		35 x 35	0.15	4,200	MQR200□152P35□□□
	1,800	30 x 50	0.15	5,200	MQR200□182O50□□□
35 x 40		0.15	4,600	MQR200□182P40□□□	
2,200	35 x 45	0.15	5,150	MQR200□222P45□□□	
250	270	22 x 25	0.15	1,600	MQR250□271M25□□□
		22 x 30	0.15	1,800	MQR250□331M30□□□
	330	25 x 25	0.15	1,800	MQR250□331N25□□□
		22 x 35	0.15	1,900	MQR250□391M35□□□
	390	25 x 30	0.15	1,900	MQR250□391N30□□□
		22 x 40	0.15	2,100	MQR250□471M40□□□
	470	30 x 25	0.15	2,200	MQR250□471O25□□□
		22 x 45	0.15	2,250	MQR250□561M45□□□
	560	25 x 35	0.15	2,250	MQR250□561N35□□□
		22 x 50	0.15	2,500	MQR250□681M50□□□
	680	25 x 40	0.15	2,500	MQR250□681N40□□□
		30 x 30	0.15	2,500	MQR250□681O30□□□
		35 x 25	0.15	2,500	MQR250□681P25□□□
	820	25 x 50	0.15	3,000	MQR250□821N50□□□
		30 x 35	0.15	3,000	MQR250□821O35□□□
		35 x 30	0.15	3,000	MQR250□821P30□□□
	1,000	30 x 40	0.15	3,300	MQR250□102O40□□□
		35 x 35	0.15	3,300	MQR250□102P35□□□
	1,200	30 x 50	0.15	3,400	MQR250□122O50□□□
		35 x 40	0.15	3,400	MQR250□122P40□□□
1,500	35 x 45	0.15	3,700	MQR250□152P45□□□	
1,800	35 x 50	0.15	4,000	MQR250□182P50□□□	
400	100	22 x 25	0.15	1,000	MQR400□101M25□□□
		22 x 30	0.15	1,200	MQR400□121M30□□□
	120	25 x 25	0.15	1,200	MQR400□121N25□□□
		22 x 35	0.15	1,300	MQR400□151M35□□□
	150	22 x 40	0.15	1,400	MQR400□181M40□□□
		25 x 30	0.15	1,400	MQR400□181N30□□□
	180	30 x 25	0.15	1,400	MQR400□181O25□□□
		22 x 45	0.15	1,500	MQR400□221M45□□□
		25 x 35	0.15	1,600	MQR400□221N35□□□
	220	30 x 30	0.15	1,730	MQR400□221O30□□□
		22 x 50	0.15	1,620	MQR400□271M50□□□
		25 x 40	0.15	1,800	MQR400□271O40□□□
	270	30 x 35	0.15	2,050	MQR400□271O35□□□
		25 x 50	0.15	2,050	MQR400□331N50□□□
		30 x 40	0.15	2,300	MQR400□331O40□□□
	330	35 x 30	0.15	2,300	MQR400□331P30□□□

VV (Vdc)	Cap (µF)	Size ØxL (mm)	Tan δ	Ripple ¹⁾	Code No
400	390	30 x 45	0.15	2,500	MQR400□391O45□□□
		35 x 35	0.15	2,500	MQR400□391P35□□□
	470	30 x 50	0.15	2,800	MQR400□471O50□□□
		35 x 40	0.15	2,800	MQR400□471P40□□□
	560	35 x 45	0.15	3,100	MQR400□561P45□□□
680	35 x 50	0.15	3,200	MQR400□681P50□□□	
450	82	22 x 25	0.20	930	MQR450□820M25□□□
		22 x 30	0.20	1,000	MQR450□101M30□□□
	100	25 x 25	0.20	1,000	MQR450□101N25□□□
		22 x 35	0.20	1,100	MQR450□121M35□□□
	120	25 x 30	0.20	1,180	MQR450□121N30□□□
		22 x 40	0.20	1,180	MQR450□151M40□□□
	150	25 x 35	0.20	1,260	MQR450□151N35□□□
		30 x 25	0.20	1,260	MQR450□151O25□□□
	180	22 x 45	0.20	1,300	MQR450□181M45□□□
		25 x 40	0.20	1,300	MQR450□181N40□□□
		30 x 30	0.20	1,550	MQR450□181O30□□□
		35 x 25	0.20	1,550	MQR450□181P25□□□
	220	25 x 45	0.20	1,500	MQR450□221M45□□□
		30 x 35	0.20	1,650	MQR450□221O35□□□
	270	25 x 50	0.20	1,700	MQR450□271N50□□□
		30 x 40	0.20	1,820	MQR450□271O40□□□
		35 x 30	0.20	1,820	MQR450□271P30□□□
	330	30 x 45	0.20	2,100	MQR450□331O45□□□
		35 x 35	0.20	2,100	MQR450□331P35□□□
	390	30 x 50	0.20	2,300	MQR450□391O50□□□
35 x 40		0.20	2,310	MQR450□391P40□□□	
470	35 x 45	0.20	2,600	MQR450□471P45□□□	
560	35 x 50	0.20	2,750	MQR450□561P50□□□	