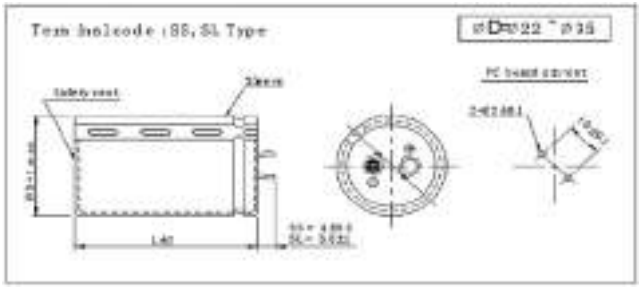
MRD series

- 105℃ 3,000Hrs assured.
- Suited for high frequency regenerative voltage for AC servomotor, general inverter.
- Suited for equipment used at voltage fluctuation area
- Suited for rectifier circuit of voltage doubler
- RoHS compliant

■ Specifications

Item	Characteristics
Rated Voltage Range	350 ~ 450 Vdc
Operating Temperature Range	-25 ~ +105℃
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)
Leakage Current	I≤3√CV whichever is smaller Where, I:Max. Leakage current(μA), C:Nominal capacitance(μF), V:Rated voltage(Vdc) (at 20℃, 5min)
Dissipation Factor(Tanδ)	Rated voltage (Vdc): 350, 400 / 420, 450 Tanδ (max.): 0.15 / 0.20 (at 20℃, 120Hz)
Temperature characteristics (Max,impedance ratio)	Rated voltage (Vdc): 350 ~ 450 Z(-25℃)/Z(20℃): 8 (at 120Hz)
Load life	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for specified life times at 105℃3,000hrs. 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℃ after exposing them for 1,000 hours at 105℃ 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 ≤±15% of the initial value Tanδ ≤ 150% 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

Vdc \ Freq.(Hz)	50	60	120	1K	10K
350~450	0.77	0.82	1.00	1.30	1.41

■ Code numbering system

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

M R D □ □ □ M □ □ □ □ □ □ □ □ □

- Terminal type
- Size (22X25: M25)
- Capacitance
- Capacitance tolerance(M:±20%, K:±10%, V :-10~20%)
- Working voltage(ex. 160V→160)
- Series name

Ø22	M
Ø25	N
Ø30	O
Ø35	P

MRD series

■Standard Ratings

Note1) Ripple current = mArms/105℃,120Hz

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple[1)]	Code No
350	120	22 x 25	0.15	750	MRD350□121M25□□□
	150	22 x 30	0.15	820	MRD350□151M30□□□
	180	22 x 30	0.15	900	MRD350□181M30□□□
		25 x 25	0.15	900	MRD350□181N25□□□
	220	22 x 35	0.15	1,000	MRD350□221M35□□□
		25 x 30	0.15	1,000	MRD350□221N30□□□
	270	22 x 40	0.15	1,100	MRD350□271M40□□□
		25 x 35	0.15	1,100	MRD350□271N35□□□
		30 x 25	0.15	1,100	MRD350□271O25□□□
	330	22 x 45	0.15	1,200	MRD350□331M45□□□
		25 x 40	0.15	1,200	MRD350□331N40□□□
		30 x 30	0.15	1,200	MRD350□331O30□□□
	390	25 x 45	0.15	1,300	MRD350□391N45□□□
		30 x 35	0.15	1,300	MRD350□391O35□□□
	470	25 x 50	0.15	1,400	MRD350□471N50□□□
		30 x 40	0.15	1,400	MRD350□471O40□□□
		35 x 30	0.15	1,400	MRD350□471P30□□□
	560	30 x 45	0.15	1,500	MRD350□561O45□□□
		35 x 35	0.15	1,500	MRD350□561P35□□□
	680	30 x 50	0.15	1,700	MRD350□681O50□□□
		35 x 40	0.15	1,700	MRD350□681P40□□□
	820	35 x 45	0.15	1,900	MRD350□821P45□□□
400	100	22 x 25	0.15	680	MRD400□101M25□□□
	120	22 x 30	0.15	730	MRD400□121M30□□□
	150	22 x 35	0.15	850	MRD400□151M35□□□
	180	22 x 35	0.15	950	MRD400□181M35□□□
		25 x 30	0.15	950	MRD400□181N30□□□
		30 x 25	0.15	950	MRD400□181O25□□□
	220	22 x 45	0.15	1,100	MRD400□221M45□□□
		25 x 35	0.15	1,100	MRD400□221N35□□□
		30 x 25	0.15	1,100	MRD400□221O25□□□
	270	22 x 50	0.15	1,220	MRD400□271M50□□□
		25 x 40	0.15	1,220	MRD400□271N40□□□
		30 x 30	0.15	1,220	MRD400□271O30□□□
		35 x 25	0.15	1,220	MRD400□271P25□□□
	330	25 x 45	0.15	1,440	MRD400□331N45□□□
		30 x 35	0.15	1,440	MRD400□331O35□□□
	390	25 x 50	0.15	1,550	MRD400□391N50□□□
		30 x 40	0.15	1,550	MRD400□391O40□□□
		35 x 30	0.15	1,550	MRD400□391P30□□□
	470	30 x 45	0.15	1,680	MRD400□471O45□□□
		35 x 35	0.15	1,680	MRD400□471P35□□□
	560	30 x 50	0.15	1,900	MRD400□561O50□□□
		35 x 40	0.15	1,900	MRD400□561P40□□□
	680	35 x 45	0.15	2,100	MRD400□681P45□□□

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple[1)]	Code No
420	100	22 x 25	0.15	660	MRD420□101M25□□□
	120	22 x 30	0.15	810	MRD420□121M30□□□
		25 x 25	0.15	810	MRD420□121N25□□□
	150	22 x 35	0.15	840	MRD420□151M35□□□
		25 x 30	0.15	840	MRD420□151N30□□□
	180	22 x 40	0.15	910	MRD420□181M40□□□
		25 x 30	0.15	910	MRD420□181N30□□□
		30 x 25	0.15	910	MRD420□181O25□□□
	220	22 x 45	0.15	1,050	MRD420□221M45□□□
		25 x 35	0.15	1,050	MRD420□221N35□□□
		30 x 30	0.15	1,050	MRD420□221O30□□□
	270	25 x 40	0.15	1,250	MRD420□271N40□□□
		30 x 30	0.15	1,250	MRD420□271O30□□□
		35 x 25	0.15	1,250	MRD420□271P25□□□
	330	25 x 50	0.15	1,420	MRD420□331N50□□□
		30 x 35	0.15	1,420	MRD420□331O35□□□
		35 x 30	0.15	1,420	MRD420□331P30□□□
	390	30 x 40	0.15	1,610	MRD420□391O40□□□
		35 x 35	0.15	1,610	MRD420□391P35□□□
	470	30 x 45	0.15	1,860	MRD420□471O45□□□
		35 x 40	0.15	1,860	MRD420□471P40□□□
	560	35 x 45	0.15	2,100	MRD420□561P45□□□
	680	35 x 50	0.15	2,200	MRD420□681P50□□□
450	82	22 x 25	0.20	640	MRD450□820M25□□□
	100	22 x 30	0.20	690	MRD450□101M30□□□
		25 x 25	0.20	690	MRD450□101N25□□□
	120	22 x 35	0.20	720	MRD450□121M35□□□
		25 x 30	0.20	720	MRD450□121N30□□□
	150	22 x 40	0.20	790	MRD450□151M40□□□
		25 x 30	0.20	790	MRD450□151N30□□□
		30 x 25	0.20	790	MRD450□151O25□□□
	180	22 x 45	0.20	870	MRD450□181M45□□□
		25 x 35	0.20	870	MRD450□181N35□□□
		30 x 30	0.20	870	MRD450□181O30□□□
	220	25 x 40	0.20	1,050	MRD450□221N40□□□
		30 x 30	0.20	1,050	MRD450□221O30□□□
		35 x 25	0.20	1,050	MRD450□221P25□□□
	270	25 x 50	0.20	1,230	MRD450□271N50□□□
		30 x 35	0.20	1,230	MRD450□271O35□□□
		35 x 30	0.20	1,230	MRD450□271P30□□□
	330	30 x 40	0.20	1,380	MRD450□331O40□□□
		35 x 35	0.20	1,380	MRD450□331P35□□□
	390	30 x 50	0.20	1,610	MRD450□391O50□□□
		35 x 40	0.20	1,610	MRD450□391P40□□□
	470	35 x 45	0.20	1,780	MRD450□471P45□□□
	560	35 x 50	0.20	1,950	MRD450□561P50□□□