



## MDV series

- 105 °C 2,000Hrs assured.
- Permissible Spike test
- For SMPS, Inverter
- RoHS compliant
- Halogen-free capacitors are also available.

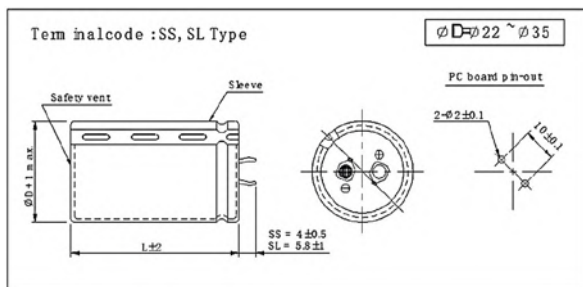
Permissible Spike test    RoHS Compliant



### Specifications

Item	Characteristics	
Rated Voltage Range	450 ~ 500 Vdc	
Operating Temperature Range	-25 ~ +105 °C	
Capacitance Tolerance	±20% (M)	(at 20 °C, 120Hz)
Leakage Current	I=0.02CV 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)	450 ~ 500
	Tanδ (max.)	0.24
Temperature characteristics (Max,impedance ratio)	Rated voltage (Vdc)	450 ~ 500
	Z(-25°C)/Z(20°C)	8
	Z(-40°C)/Z(20°C)	-
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°C2,000hrs. 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



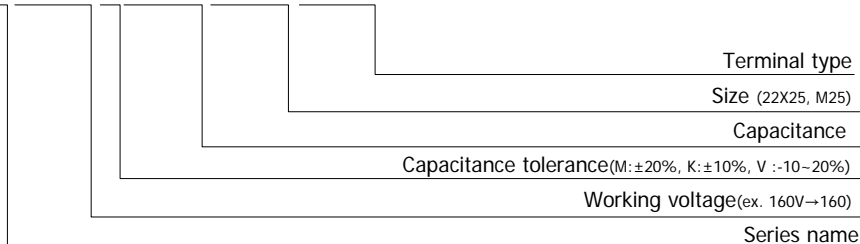
- Printed white color letter on brown sleeve
- The standard design has no bottom plate

### Rated ripple current multipliers

Freq. (Hz)	60	120	300	1K	10K ~
Vdc					
450~500	0.77	1.00	1.16	1.30	1.41

### Code numbering system

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



Ø22	M
Ø25	N
Ø30	O
Ø35	P

MDV series

Standard Ratings

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

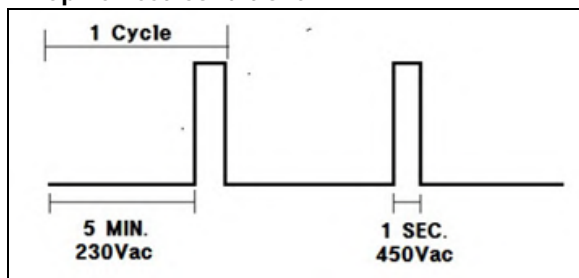
WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple <sup>1)</sup>	Code No
450	56	22 x 45	0.20	0.41	MDV450□560M45□□□
	68	22 x 30	0.20	0.54	MDV450□680M30□□□
		25 x 25	0.20	0.51	MDV450□680N25□□□
		25 x 30	0.20	0.65	MDV450□820N30□□□
	82	25 x 25	0.20	0.65	MDV450□820M25□□□
		22 x 35	0.20	0.70	MDV450□101M35□□□
	100	25 x 30	0.20	0.70	MDV450□101N30□□□
		30 x 25	0.20	0.65	MDV450□101O25□□□
	120	22 x 40	0.20	0.81	MDV450□121M40□□□
		25 x 30	0.20	0.81	MDV450□121N30□□□
		30 x 25	0.20	0.81	MDV450□121O25□□□
		35 x 25	0.20	0.74	MDV450□121P25□□□
	150	22 x 45	0.20	0.89	MDV450□151M45□□□
		25 x 35	0.20	0.89	MDV450□151N35□□□
		30 x 30	0.20	0.89	MDV450□151O30□□□
		35 x 25	0.20	0.76	MDV450□151P25□□□
	180	22 x 50	0.20	1.01	MDV450□181M50□□□
		25 x 40	0.20	1.01	MDV450□181N40□□□
		30 x 30	0.20	1.01	MDV450□181O30□□□
	220	25 x 45	0.20	1.13	MDV450□221N45□□□
		30 x 35	0.20	1.13	MDV450□221O35□□□
		35 x 30	0.20	1.13	MDV450□221P30□□□
	270	25 x 50	0.20	1.19	MDV450□271N50□□□
		30 x 40	0.20	1.29	MDV450□271O40□□□
		35 x 35	0.20	1.29	MDV450□271P35□□□
	330	30 x 50	0.20	1.46	MDV450□331O50□□□
		35 x 40	0.20	1.46	MDV450□331P40□□□
	390	30 x 60	0.20	1.52	MDV450□391O60□□□
35 x 40		0.20	1.56	MDV450□391P40□□□	
470	35 x 50	0.20	1.86	MDV450□471P50□□□	

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple <sup>1)</sup>	Code No
500	56	22 x 35	0.20	0.47	MDV500□560M35□□□
		25 x 30	0.20	0.47	MDV500□560N30□□□
		30 x 30	0.20	0.49	MDV500□560O30□□□
	68	22 x 40	0.20	0.46	MDV500□680M40□□□
		25 x 35	0.20	0.54	MDV500□680N35□□□
		30 x 30	0.20	0.56	MDV500□680O230□□□
	82	22 x 45	0.20	0.57	MDV500□820M45□□□
		25 x 35	0.20	0.59	MDV500□820N35□□□
		30 x 35	0.20	0.59	MDV500□820O35□□□
	100	25 x 40	0.20	0.66	MDV500□101N40□□□
		30 x 35	0.20	0.67	MDV500□101O35□□□
	120	25 x 45	0.20	0.76	MDV500□121N45□□□
		30 x 40	0.20	0.77	MDV500□121O40□□□
		35 x 30	0.20	0.79	MDV500□121P30□□□
	150	30 x 45	0.20	0.81	MDV500□151O45□□□
		35 x 35	0.20	0.82	MDV500□151P35□□□
	180	30 x 50	0.20	0.91	MDV500□181O50□□□
		35 x 40	0.20	0.94	MDV500□181P40□□□
	220	30 x 60	0.20	1.11	MDV500□221O60□□□
		35 x 45	0.20	1.12	MDV500□221P45□□□
	270	35 x 50	0.20	1.29	MDV500□271P50□□□
	330	35 x 60	0.20	1.51	MDV500□331P60□□□

Spike Test Method

- Avoid abnormal feature's change by applying abnormal voltage to following conditions.

Spike Test conditions



Applied Voltage	Times	Cycles
230Vac	5 Minutes	216 cycle
450Vac	1 seconds	