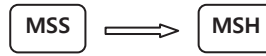




MSH series

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

Standard RoHS Compliant



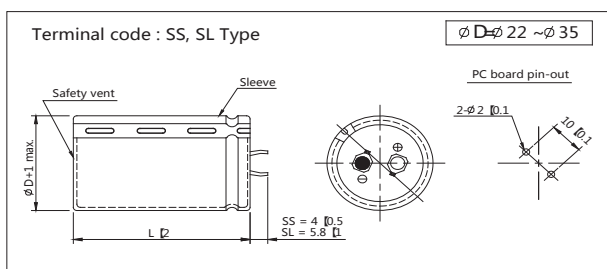
Long life



Specifications

Item	Characteristics																																		
Rated Voltage Range	16 ~ 250 Vdc	315 ~ 450 Vdc																																	
Operating Temperature Range	-40 ~ +105°C	-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)	<table border="1"> <tr> <td>Rated voltage (Vdc)</td> <td>16</td> <td>25</td> <td>35</td> <td>50~63</td> <td>100</td> <td>160~250</td> <td>315~400</td> <td>450</td> </tr> <tr> <td>Tanδ (max.)</td> <td>0.40</td> <td>0.35</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> </tr> </table>								Rated voltage (Vdc)	16	25	35	50~63	100	160~250	315~400	450	Tanδ (max.)	0.40	0.35	0.30	0.25	0.20	0.15	0.15	0.20									
	Rated voltage (Vdc)	16	25	35	50~63	100	160~250	315~400	450																										
Tanδ (max.)	0.40	0.35	0.30	0.25	0.20	0.15	0.15	0.20																											
(at 20°C, 120Hz)																																			
Temperature characteristics (Max,impedance ratio)	<table border="1"> <tr> <td>Rated voltage (Vdc)</td> <td>16</td> <td>25</td> <td>35</td> <td>50~63</td> <td>100</td> <td>160~250</td> <td>315~400</td> <td>450</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>8</td> <td>8</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> <td>5</td> <td>5</td> <td>-</td> <td>-</td> </tr> </table>								Rated voltage (Vdc)	16	25	35	50~63	100	160~250	315~400	450	Z(-25°C)/Z(20°C)	4	3	3	2	2	3	8	8	Z(-40°C)/Z(20°C)	15	10	8	6	5	5	-	-
	Rated voltage (Vdc)	16	25	35	50~63	100	160~250	315~400	450																										
	Z(-25°C)/Z(20°C)	4	3	3	2	2	3	8	8																										
Z(-40°C)/Z(20°C)	15	10	8	6	5	5	-	-																											
(at 120Hz)																																			
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

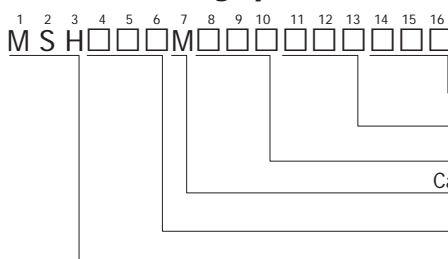


- Printed white color letter on brown sleeve
- The standard design has no bottom plate

Rated ripple current multipliers

Vdc \ Freq. (Hz)	50	60	120	1K	10K	100K
16 ~ 100	0.88	0.90	1.00	1.15	1.15	1.15
160 ~ 250	0.81	0.85	1.00	1.32	1.45	1.50
350 ~ 450	0.77	0.82	1.00	1.30	1.41	1.43

Code numbering system



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



MSH series

Standard Ratings

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

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No	
16	6,800	22 x 25	0.40	1,750	MSH016□682M25□□□	
	8,200	22 x 30	0.40	2,000	MSH016□822M30□□□	
	10,000	22 x 30	0.40	2,100	MSH016□103M30□□□	
		25 x 25	0.40	2,050	MSH016□103N25□□□	
	12,000	22 x 35	0.40	2,310	MSH016□123M35□□□	
		25 x 30	0.40	2,300	MSH016□123N30□□□	
		30 x 25	0.40	2,380	MSH016□123O25□□□	
	15,000	22 x 40	0.40	2,680	MSH016□153M40□□□	
		25 x 35	0.40	2,680	MSH016□153N35□□□	
	18,000	30 x 30	0.40	2,570	MSH016□153O30□□□	
		22 x 45	0.40	2,980	MSH016□183M45□□□	
		25 x 40	0.40	3,160	MSH016□183N40□□□	
	22,000	30 x 30	0.40	3,000	MSH016□183O30□□□	
		25 x 45	0.40	3,400	MSH016□223N45□□□	
	27,000	30 x 35	0.40	3,390	MSH016□223O35□□□	
		35 x 30	0.40	3,250	MSH016□223P30□□□	
	33,000	25 x 50	0.40	3,850	MSH016□273N50□□□	
		30 x 40	0.40	3,830	MSH016□273O40□□□	
		35 X 30	0.40	3,740	MSH016□273P30□□□	
	39,000	30 x 45	0.40	4,300	MSH016□333O45□□□	
35 x 35		0.40	4,270	MSH016□333P35□□□		
47,000	30 x 50	0.40	4,810	MSH016□393O50□□□		
	35 x 40	0.40	4,800	MSH016□393P40□□□		
25	4,700	22 x 25	0.35	1,610	MSH025□472M25□□□	
	5,600	22 x 30	0.35	1,800	MSH025□562M30□□□	
	6,800	22 x 30	0.35	1,910	MSH025□682M30□□□	
		25 x 25	0.35	1,910	MSH025□682N25□□□	
	8,200	22 x 35	0.35	2,140	MSH025□822M35□□□	
		25 x 30	0.35	2,340	MSH025□822N30□□□	
	10,000	30 x 25	0.35	2,250	MSH025□822O25□□□	
		22 x 40	0.35	2,650	MSH025□103M40□□□	
		25 X 35	0.35	2,610	MSH025□103N35□□□	
	12,000	30 x 30	0.35	2,610	MSH025□103O30□□□	
		22 x 45	0.35	2,690	MSH025□123M45□□□	
	15,000	25 x 40	0.35	2,810	MSH025□123N40□□□	
		30 x 30	0.35	2,740	MSH025□123O30□□□	
	18,000	25 x 45	0.35	3,270	MSH025□153N45□□□	
		30 x 35	0.35	3,130	MSH025□153O35□□□	
		35 x 30	0.35	3,260	MSH025□153P30□□□	
	22,000	25 x 50	0.35	3,540	MSH025□183N50□□□	
		30 x 40	0.35	3,560	MSH025□183O40□□□	
	27,000	35 x 35	0.35	3,840	MSH025□183P35□□□	
		30 x 45	0.35	4,240	MSH025□223O45□□□	
33,000	35 x 35	0.35	3,960	MSH025□223P35□□□		
	35 x 45	0.35	4,750	MSH025□273P45□□□		
35	3,300	22 x 25	0.30	1,450	MSH035□332M25□□□	
	3,900	22 x 30	0.30	1,690	MSH035□392M30□□□	
	4,700	22 x 35	0.30	2,030	MSH035□472M35□□□	
		25 x 25	0.30	1,780	MSH035□472N25□□□	
	5,600	22 x 35	0.30	2,130	MSH035□562M35□□□	
		25 x 30	0.30	2,040	MSH035□562N30□□□	
	6,800	30 x 25	0.30	2,120	MSH035□562O25□□□	
		22 x 40	0.30	2,410	MSH035□682M40□□□	
	8,200	25 x 35	0.30	2,310	MSH035□682N35□□□	
		30 x 25	0.30	2,310	MSH035□682O25□□□	
	8,200	22 x 50	0.30	2,850	MSH035□822M50□□□	
		25 x 40	0.30	2,730	MSH035□822N40□□□	
			30 x 30	0.30	2,750	MSH035□822O30□□□

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
35	10,000	25 x 45	0.30	3,050	MSH035□103N45□□□
		30 x 35	0.30	3,050	MSH035□103O35□□□
	12,000	25 x 50	0.30	3,370	MSH035□123N50□□□
		30 x 40	0.30	3,280	MSH035□123O40□□□
		35 x 30	0.30	3,200	MSH035□123P30□□□
	15,000	30 x 45	0.30	3,740	MSH035□153O45□□□
		35 x 35	0.30	3,690	MSH035□153P35□□□
	18,000	35 x 40	0.30	4,370	MSH035□183P40□□□
		22,000	35 x 50	0.30	4,920
	50	1,800	22 x 25	0.25	1,340
2,700		22 x 30	0.25	1,700	MSH050□272M30□□□
		25 x 25	0.25	1,700	MSH050□272N25□□□
3,300		22 x 35	0.25	1,980	MSH050□332M35□□□
		25 x 30	0.25	2,000	MSH050□332N30□□□
3,900		22 x 40	0.25	2,250	MSH050□392M40□□□
		25 x 30	0.25	2,280	MSH050□392N30□□□
4,700		30 x 25	0.25	2,220	MSH050□392O25□□□
		22 x 45	0.25	2,560	MSH050□472M45□□□
5,600		25 x 35	0.25	2,610	MSH050□472N35□□□
	30 x 30	0.25	2,580	MSH050□472O30□□□	
63	6,800	22 x 50	0.25	2,890	MSH050□562M50□□□
		25 x 40	0.25	2,810	MSH050□562N40□□□
	8,200	30 x 30	0.25	2,950	MSH050□562O30□□□
		25 x 45	0.25	3,370	MSH050□682N45□□□
	10,000	30 x 35	0.25	3,390	MSH050□682O35□□□
		35 x 30	0.25	3,310	MSH050□682P30□□□
	12,000	30 x 40	0.25	3,710	MSH050□822O40□□□
		35 x 35	0.25	3,660	MSH050□822P35□□□
	15,000	30 x 50	0.25	4,090	MSH050□103O50□□□
		35 x 40	0.25	4,070	MSH050□103P40□□□
80	1,200	22 x 25	0.20	1,250	MSH063□122M25□□□
	1,500	22 x 30	0.20	1,470	MSH063□152M30□□□
		25 x 25	0.20	1,440	MSH063□152N25□□□
	1,800	22 x 30	0.20	1,580	MSH063□182M30□□□
		25 x 25	0.20	1,520	MSH063□182N25□□□
	2,200	22 x 35	0.20	1,820	MSH063□222M35□□□
		25 x 30	0.20	1,750	MSH063□222N30□□□
	2,700	22 x 40	0.20	2,070	MSH063□272M40□□□
		25 x 35	0.20	2,110	MSH063□272N35□□□
	3,300	30 x 25	0.20	1,930	MSH063□272O25□□□
22 x 45		0.20	2,330	MSH063□332M45□□□	
3,900	25 x 35	0.20	2,270	MSH063□332N35□□□	
	30 x 30	0.20	2,240	MSH063□332O30□□□	
4,700	25 x 40	0.20	2,540	MSH063□392N40□□□	
	30 x 35	0.20	2,550	MSH063□392O35□□□	
5,600	25 x 50	0.20	2,970	MSH063□472N50□□□	
	30 x 40	0.20	2,900	MSH063□472O40□□□	
6,800	35 x 30	0.20	2,830	MSH063□472P30□□□	
	30 x 40	0.20	3,280	MSH063□562O40□□□	
8,200	35 x 35	0.20	3,240	MSH063□562P35□□□	
	30 x 50	0.20	3,730	MSH063□682O50□□□	
10,000	35 x 40	0.20	3,710	MSH063□682P40□□□	
	35 x 45	0.20	4,160	MSH063□822P45□□□	
820	35 x 50	0.20	4,690	MSH063□103P50□□□	
	22 x 25	0.20	1,110	MSH080□821M25□□□	
1,000	22 x 25	0.20	1,290	MSH080□102M25□□□	
	22 x 30	0.20	1,440	MSH080□122M30□□□	
1,200	22 x 30	0.20	1,390	MSH080□122N25□□□	
	25 x 25	0.20	1,390	MSH080□122N25□□□	

MSH series

Standard Ratings

Note1) Ripple current = mArms/85°C, 120Hz

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No	
80	1,500	22 x 30	0.20	1,610	MSH080□152M30□□□	
		25 x 25	0.20	1,620	MSH080□152N25□□□	
		22 x 35	0.20	1,830	MSH080□182M35□□□	
	1,800	25 x 30	0.20	1,860	MSH080□182N30□□□	
		30 x 25	0.20	1,810	MSH080□182O25□□□	
		22 x 40	0.20	2,090	MSH080□222M40□□□	
	2,200	25 x 35	0.20	2,010	MSH080□222N35□□□	
		30 x 25	0.20	2,100	MSH080□222O25□□□	
	2,700	25 x 40	0.20	2,430	MSH080□272N40□□□	
		30 x 30	0.20	2,430	MSH080□272O30□□□	
	3,300	25 x 45	0.20	2,760	MSH080□332N45□□□	
		30 x 35	0.20	2,780	MSH080□332O35□□□	
		35 x 30	0.20	2,710	MSH080□332P30□□□	
	3,900	25 x 50	0.20	2,920	MSH080□392N50□□□	
		30 x 40	0.20	3,120	MSH080□392O40□□□	
	4,700	35 x 30	0.20	3,070	MSH080□392P30□□□	
		30 x 45	0.20	3,520	MSH080□472O45□□□	
	5,600	35 x 35	0.20	3,500	MSH080□472P35□□□	
		30 x 50	0.20	3,800	MSH080□562O50□□□	
	6,800	35 x 40	0.20	3,870	MSH080□562P40□□□	
		35 x 45	0.20	4,190	MSH080□682P45□□□	
	100	560	22 x 25	0.18	1,070	MSH100□561M25□□□
			22 x 30	0.18	1,350	MSH100□821M30□□□
		820	25 x 25	0.18	1,350	MSH100□821N25□□□
22 x 30			0.18	1,540	MSH100□102M30□□□	
1,000		25 x 30	0.18	1,560	MSH100□102N30□□□	
		22 x 40	0.18	1,740	MSH100□122M40□□□	
1,200		25 x 30	0.18	1,760	MSH100□122N30□□□	
		30 x 25	0.18	1,710	MSH100□122O25□□□	
1,500		22 x 45	0.18	1,990	MSH100□152M45□□□	
		25 x 35	0.18	2,030	MSH100□152N35□□□	
		30 x 30	0.18	2,000	MSH100□152O30□□□	
1,800		25 x 40	0.18	2,280	MSH100□182N40□□□	
		30 x 35	0.18	2,270	MSH100□182O35□□□	
2,200		25 x 50	0.18	2,570	MSH100□222N50□□□	
		30 x 35	0.18	2,590	MSH100□222O35□□□	
		35 x 30	0.18	2,520	MSH100□222P30□□□	
2,700		30 x 45	0.18	2,940	MSH100□272O45□□□	
		35 x 35	0.18	2,900	MSH100□272P35□□□	
3,300		30 x 50	0.18	3,320	MSH100□332O50□□□	
		35 x 40	0.18	3,310	MSH100□332P40□□□	
3,900		35 x 45	0.18	3,690	MSH100□392P45□□□	
		35 x 50	0.18	4,140	MSH100□472P50□□□	
160		270	20 x 25	0.15	1,100	MSH160□271L25□□□
			20 x 30	0.15	1,200	MSH160□331L25□□□
	330	20 x 30	0.15	1,300	MSH160□391L30□□□	
		22 x 25	0.15	1,300	MSH160□391M25□□□	
	390	20 x 35	0.15	1,340	MSH160□471L35□□□	
		22 x 30	0.15	1,550	MSH160□471M30□□□	
	470	25 x 25	0.15	1,550	MSH160□471N25□□□	
		20 x 40	0.15	1,500	MSH160□561L40□□□	
		22 x 35	0.15	1,670	MSH160□561M35□□□	
	560	25 x 30	0.15	1,670	MSH160□561N30□□□	
		30 x 25	0.15	1,670	MSH160□561O25□□□	
		20 x 45	0.15	1,700	MSH160□681L45□□□	
	680	22 x 40	0.15	1,820	MSH160□681M40□□□	
		25 x 30	0.15	1,820	MSH160□681N30□□□	
		30 x 25	0.15	1,820	MSH160□681O25□□□	
	820	22 x 45	0.15	2,040	MSH160□821M45□□□	
		25 x 40	0.15	2,040	MSH160□821N40□□□	

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
160	820	30 x 30	0.15	2,040	MSH160□821O30□□□
		35 x 25	0.15	2,040	MSH160□821P25□□□
		22 x 50	0.15	2,250	MSH160□102M50□□□
	1,000	25 x 40	0.15	2,250	MSH160□102N40□□□
		30 x 30	0.15	2,250	MSH160□102O30□□□
		35 x 25	0.15	2,250	MSH160□102P25□□□
	1,200	25 x 45	0.15	2,490	MSH160□122N45□□□
		30 x 35	0.15	2,490	MSH160□122O35□□□
	1,500	35 x 30	0.15	2,490	MSH160□122P30□□□
		30 x 40	0.15	2,840	MSH160□152O40□□□
	1,800	35 x 30	0.15	2,840	MSH160□152P30□□□
		30 x 45	0.15	3,320	MSH160□182O45□□□
	2,200	35 x 35	0.15	3,000	MSH160□182P35□□□
		35 x 45	0.15	3,500	MSH160□222P45□□□
	2,700	35 x 50	0.15	4,000	MSH160□272P50□□□
		20 x 25	0.15	1,000	MSH180□221L25□□□
	270	20 x 30	0.15	1,100	MSH180□271L30□□□
		20 x 30	0.15	1,200	MSH180□331L30□□□
	330	22 x 25	0.15	1,200	MSH180□331M25□□□
		20 x 35	0.15	1,300	MSH180□391L35□□□
	390	22 x 30	0.15	1,350	MSH180□391M30□□□
		25 x 25	0.15	1,350	MSH180□391N25□□□
		20 x 40	0.15	1,400	MSH180□471L40□□□
	470	22 x 35	0.15	1,500	MSH180□471M35□□□
25 x 30		0.15	1,500	MSH180□471N30□□□	
30 x 25		0.15	1,500	MSH180□471O25□□□	
560	20 x 45	0.15	1,550	MSH180□561L45□□□	
	22 x 40	0.15	1,670	MSH180□561M40□□□	
	25 x 30	0.15	1,670	MSH180□561N30□□□	
680	30 x 25	0.15	1,670	MSH180□561O25□□□	
	22 x 45	0.15	1,780	MSH180□681M45□□□	
	25 x 35	0.15	1,780	MSH180□681N35□□□	
820	30 x 30	0.15	1,780	MSH180□681O30□□□	
	35 x 25	0.15	1,780	MSH180□681P25□□□	
	22 x 50	0.15	2,040	MSH180□821M50□□□	
1,000	25 x 40	0.15	2,040	MSH180□821N40□□□	
	30 x 30	0.15	2,040	MSH180□821O30□□□	
	35 x 25	0.15	2,040	MSH180□821P25□□□	
1,200	25 x 45	0.15	2,300	MSH180□102N45□□□	
	30 x 35	0.15	2,300	MSH180□102O35□□□	
	35 x 30	0.15	2,300	MSH180□102P30□□□	
1,500	25 x 50	0.15	2,550	MSH180□122N50□□□	
	30 x 40	0.15	2,550	MSH180□122O40□□□	
	35 x 30	0.15	2,550	MSH180□122P30□□□	
1,800	30 x 45	0.15	2,900	MSH180□152O45□□□	
	35 x 35	0.15	2,900	MSH180□152P35□□□	
2,200	35 x 45	0.15	3,300	MSH180□182P45□□□	
	35 x 50	0.15	3,650	MSH180□222P50□□□	
200	220	20 x 25	0.15	1,000	MSH200□221L25□□□
		20 x 30	0.15	1,100	MSH200□271L30□□□
	270	22 x 25	0.15	1,100	MSH200□271M25□□□
		20 x 35	0.15	1,200	MSH200□331L35□□□
	330	22 x 30	0.15	1,250	MSH200□331M30□□□
		25 x 25	0.15	1,250	MSH200□331N25□□□
	390	20 x 40	0.15	1,310	MSH200□391L40□□□
		22 x 30	0.15	1,350	MSH200□391M30□□□
	470	25 x 25	0.15	1,350	MSH200□391N25□□□
		20 x 45	0.15	1,450	MSH200□471L45□□□
	560	22 x 35	0.15	1,500	MSH200□471M35□□□
		25 x 30	0.15	1,500	MSH200□471N30□□□

MSH series

Standard Ratings

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

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
200	470	30 x 25	0.15	1,500	MSH200□471O25□□□
		20 x 50	0.15	1,580	MSH200□561L25□□□
	560	22 x 40	0.15	1,670	MSH200□561M40□□□
		25 x 30	0.15	1,670	MSH200□561N30□□□
		30 x 25	0.15	1,670	MSH200□561O25□□□
	680	22 x 45	0.15	1,780	MSH200□681M45□□□
		25 x 35	0.15	1,780	MSH200□681N35□□□
		30 x 30	0.15	1,780	MSH200□681O30□□□
	820	35 x 25	0.15	1,780	MSH200□681P25□□□
		25 x 45	0.15	2,040	MSH200□821N45□□□
		30 x 30	0.15	2,040	MSH200□821O30□□□
	1,000	35 x 25	0.15	2,040	MSH200□821P25□□□
		25 x 50	0.15	2,300	MSH200□102N50□□□
		30 x 35	0.15	2,300	MSH200□102O35□□□
	1,200	35 x 30	0.15	2,300	MSH200□102P30□□□
		30 x 40	0.15	2,650	MSH200□122O40□□□
	1,500	35 x 35	0.15	2,650	MSH200□122P35□□□
		30 x 50	0.15	3,080	MSH200□152O50□□□
	1,800	35 x 40	0.15	3,080	MSH200□152P40□□□
		35 x 45	0.15	3,480	MSH200□182P45□□□
2,200	35 x 50	0.15	3,780	MSH200□222P50□□□	
250	150	20 x 25	0.15	790	MSH250□151L25□□□
		20 x 30	0.15	900	MSH250□181L30□□□
	220	20 x 30	0.15	1,000	MSH250□221L30□□□
		22 x 25	0.15	1,000	MSH250□221M25□□□
	270	20 x 35	0.15	1,100	MSH250□271L35□□□
		22 x 35	0.15	1,180	MSH250□271M35□□□
	330	25 x 25	0.15	1,180	MSH250□271N25□□□
		20 x 40	0.15	1,200	MSH250□331L40□□□
		22 x 40	0.15	1,300	MSH250□331M40□□□
	390	25 x 30	0.15	1,300	MSH250□331N30□□□
		30 x 25	0.15	1,300	MSH250□331O25□□□
		20 x 50	0.15	1,450	MSH250□391L50□□□
	470	22 x 45	0.15	1,490	MSH250□391M45□□□
		25 x 35	0.15	1,490	MSH250□391N35□□□
		30 x 25	0.15	1,490	MSH250□391O25□□□
	560	22 x 50	0.15	1,650	MSH250□471M50□□□
		25 x 40	0.15	1,650	MSH250□471N40□□□
		30 x 30	0.15	1,650	MSH250□471O30□□□
	680	35 x 25	0.15	1,650	MSH250□471P25□□□
		25 x 45	0.15	1,800	MSH250□561N45□□□
30 x 35		0.15	1,800	MSH250□561O35□□□	
820	35 x 25	0.15	1,800	MSH250□561P25□□□	
	25 x 50	0.15	2,000	MSH250□681N50□□□	
	30 x 40	0.15	2,000	MSH250□681O40□□□	
1,000	35 x 30	0.15	2,000	MSH250□681P30□□□	
	30 x 45	0.15	2,300	MSH250□821O45□□□	
	35 x 35	0.15	2,300	MSH250□821P35□□□	
1,200	30 x 50	0.15	2,470	MSH250□102O50□□□	
	35 x 40	0.15	2,470	MSH250□102P40□□□	
1,500	35 x 45	0.15	2,600	MSH250□122P45□□□	
1,500	35 x 50	0.15	3,000	MSH250□152P50□□□	
350	120	22 x 25	0.15	750	MSH350□121M25□□□
		20 x 35	0.15	790	MSH350□151L35□□□
		22 x 30	0.15	820	MSH350□151M30□□□
	150	25 x 25	0.15	820	MSH350□151N25□□□
		20 x 40	0.15	890	MSH350□181L40□□□
	180	22 x 35	0.15	920	MSH350□181M35□□□
920	25 x 30	0.15	920	MSH350□181N30□□□	

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
350	270	22 x 45	0.15	1,150	MSH350□271M45□□□
		25 x 40	0.15	1,150	MSH350□271N40□□□
		30 x 30	0.15	1,150	MSH350□271O30□□□
	330	22 x 50	0.15	1,250	MSH350□331M50□□□
		25 x 45	0.15	1,250	MSH350□331N45□□□
		30 x 35	0.15	1,250	MSH350□331O35□□□
	390	25 x 50	0.15	1,360	MSH350□391N50□□□
		30 x 40	0.15	1,360	MSH350□391O40□□□
		35 x 30	0.15	1,360	MSH350□391P30□□□
	470	30 x 45	0.15	1,480	MSH350□471O45□□□
		35 x 35	0.15	1,480	MSH350□471P35□□□
	560	30 x 50	0.15	1,560	MSH350□561O50□□□
		35 x 40	0.15	1,560	MSH350□561P40□□□
	680	35 x 45	0.15	1,750	MSH350□681P45□□□
	820	35 x 50	0.15	1,980	MSH350□821P50□□□
	400	56	20 x 25	0.15	510
20 x 30			0.15	560	MSH400□680L30□□□
82		20 x 30	0.15	640	MSH400□820L30□□□
		22 x 25	0.15	640	MSH400□820M25□□□
100		20 x 35	0.15	700	MSH400□101L35□□□
		22 x 30	0.15	700	MSH400□101M30□□□
120		25 x 25	0.15	700	MSH400□101N25□□□
		20 x 40	0.15	750	MSH400□121L40□□□
		22 x 35	0.15	750	MSH400□121M35□□□
150		25 x 25	0.15	750	MSH400□121N25□□□
		20 x 45	0.15	830	MSH400□151L45□□□
		22 x 40	0.15	880	MSH400□151M40□□□
180		25 x 30	0.15	880	MSH400□151N30□□□
		30 x 25	0.15	880	MSH400□151O25□□□
		22 x 45	0.15	980	MSH400□181M45□□□
220		25 x 35	0.15	980	MSH400□181N35□□□
		30 x 30	0.15	980	MSH400□181O30□□□
		35 x 25	0.15	980	MSH400□181P25□□□
270		22 x 50	0.15	1,100	MSH400□221M50□□□
		25 x 40	0.15	1,100	MSH400□221N40□□□
	30 x 30	0.15	1,100	MSH400□221O30□□□	
330	35 x 25	0.15	1,100	MSH400□221P25□□□	
	25 x 45	0.15	1,200	MSH400□271M45□□□	
	30 x 35	0.15	1,200	MSH400□271O35□□□	
390	35 x 30	0.15	1,200	MSH400□271P30□□□	
	25 x 50	0.15	1,440	MSH400□331M50□□□	
	30 x 40	0.15	1,440	MSH400□331O40□□□	
470	35 x 30	0.15	1,440	MSH400□331P30□□□	
	30 x 45	0.15	1,600	MSH400□391O45□□□	
	35 x 35	0.15	1,600	MSH400□391P35□□□	
560	30 x 50	0.15	1,900	MSH400□471O50□□□	
	35 x 40	0.15	1,900	MSH400□471P40□□□	
2,120	35 x 45	0.15	2,120	MSH400□561P45□□□	
420	56	20 x 25	0.20	510	MSH420□560L25□□□
		20 x 30	0.20	560	MSH420□680L30□□□
	82	20 x 35	0.20	640	MSH420□820L35□□□
		22 x 25	0.20	640	MSH420□820M25□□□
	100	20 x 35	0.20	700	MSH420□101L35□□□
		22 x 30	0.20	700	MSH420□101M30□□□
	120	25 x 25	0.20	700	MSH420□101N25□□□
		20 x 40	0.20	750	MSH420□121L40□□□
		22 x 35	0.20	750	MSH420□121M35□□□
	750	25 x 30	0.20	750	MSH420□121N30□□□



MSH series

Standard Ratings

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

WV (Vdc)	Cap (uF)	Size ØxL(mm)	Tan δ	Ripple ¹⁾	Code No
420	150	20 x 40	0.20	880	MSH420□151L40□□□
		22 x 40	0.20	880	MSH420□151M40□□□
		25 x 35	0.20	880	MSH420□151N35□□□
		30 x 25	0.20	880	MSH420□151O25□□□
	180	22 x 45	0.20	950	MSH420□181M45□□□
		25 x 35	0.20	950	MSH420□181N35□□□
		30 x 30	0.20	950	MSH420□181O30□□□
	220	22 x 50	0.20	1,100	MSH420□221M50□□□
		25 x 45	0.20	1,100	MSH420□221N45□□□
		30 x 35	0.20	1,100	MSH420□221O35□□□
	270	35 x 25	0.20	1,100	MSH420□221P25□□□
		25 x 50	0.20	1,220	MSH420□271N50□□□
		30 x 35	0.20	1,220	MSH420□271O35□□□
	330	35 x 30	0.20	1,220	MSH420□271P30□□□
		30 x 45	0.20	1,450	MSH420□331O45□□□
		35 x 35	0.20	1,450	MSH420□331P35□□□
390	30 x 50	0.20	1,550	MSH420□391O50□□□	
	35 x 40	0.20	1,550	MSH420□391P40□□□	
470	35 x 45	0.20	1,900	MSH420□471P45□□□	
560	35 x 50	0.20	2,150	MSH420□561P50□□□	
450	47	20 x 25	0.20	390	MSH450□470L25□□□
	56	20 x 30	0.20	510	MSH450□560L30□□□
	68	20 x 35	0.20	560	MSH450□680L35□□□
	82	20 x 35	0.20	640	MSH450□820L35□□□
		22 x 30	0.20	640	MSH450□820M30□□□
		25 x 25	0.20	640	MSH450□820N25□□□
	100	20 x 45	0.20	690	MSH450□101L45□□□
		22 x 35	0.20	690	MSH450□101M35□□□
		25 x 30	0.20	690	MSH450□101N30□□□
	120	20 x 50	0.20	750	MSH450□121L50□□□
		22 x 40	0.20	800	MSH450□121M40□□□
		25 x 30	0.20	800	MSH450□121N30□□□
		30 x 25	0.20	800	MSH450□121O25□□□
	150	22 x 45	0.20	880	MSH450□151M45□□□
		25 x 35	0.20	880	MSH450□151N35□□□
		30 x 30	0.20	880	MSH450□151O30□□□
	180	22 x 50	0.20	1,000	MSH450□181M50□□□
		25 x 40	0.20	1,000	MSH450□181N40□□□
		30 x 30	0.20	1,000	MSH450□181O30□□□
	220	25 x 45	0.20	1,120	MSH450□221N45□□□
		30 x 35	0.20	1,120	MSH450□221O35□□□
		35 x 30	0.20	1,120	MSH450□221P30□□□
	270	30 x 40	0.20	1,280	MSH450□271O40□□□
		35 x 35	0.20	1,280	MSH450□271P35□□□
	330	30 x 50	0.20	1,450	MSH450□331O50□□□
		35 x 40	0.20	1,450	MSH450□331P40□□□
390	35 x 40	0.20	1,500	MSH450□391P40□□□	
470	35 x 50	0.20	1,800	MSH450□471P50□□□	