

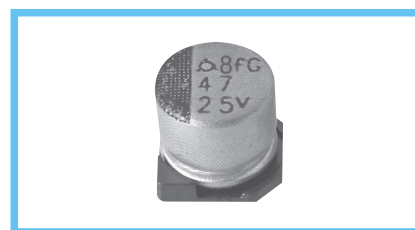
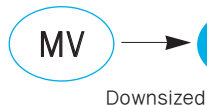
## MVG Series

• 85°C 1,000~2,000Hrs assured.

- Vertical SMD Type.
- For CD/DVD-ROM, Navigation, LED MT/TV.
- RoHS compliant.
- Halogen-free capacitors are also available.

Solvent-proof

WV ≤ 63V<sub>DC</sub>



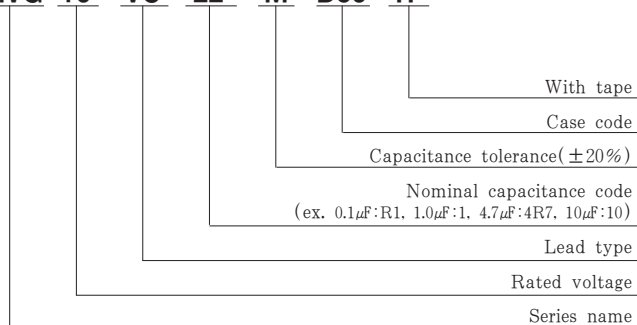
### SPECIFICATIONS

Item	Characteristics										
Rated Voltage Range	4 ~ 450 V <sub>DC</sub>										
Operating Temperature Range	-40 ~ +85°C										
Capacitance Tolerance	±20% (M) <span style="float: right;">(at 20°C, 120Hz)</span>										
Leakage Current	Rated Volatag(V <sub>DC</sub> )	4~100			160~450						
	Max. leakage current(μA)	0.01CV (μA) or 3μA, whichever is greater. (at 20°C, 2 minutes)						0.04CV + 100(μA) (at 20°C, 1 minute)			
Where, C:Nominal capacitance(μF), V:Rated voltage(V <sub>DC</sub> )											
Dissipation Factor(Tanδ)	Rated Voltage(V <sub>DC</sub> )	4	6.3	10	16	25~50	63~100	160~250	400~450		
	Tanδ(Max.)	0.42	0.40	0.30	0.20	0.15	0.12	0.20	0.25		
(at 20°C, 120Hz)											
Temperature Characteristics (Max. Impedance ratio)	Rated Voltage(V <sub>DC</sub> )	4	6.3	10	16	25	35~50	63~100	160~250	400~450	
	Z(-25°C)/Z(+20°C)	7	4	3	2	2	2	3	3	6	
	Z(-40°C)/Z(+20°C)	15	10	8	6	4	3	4	6	10	
(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 2,000 hours at 85°C. (where, 1,000 hours for ø 3)										
	Rated Voltage(V <sub>DC</sub> )	4 ~ 6.3			10 ~ 100			160~450			
	Capacitance change	≤ ±30% of the initial value			≤ ±25% of the initial value			≤ ±20% of the initial value			
	Tanδ	≤ 300% of the initial specified value						≤ 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 85°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. (where, 500 hours for ø 3)										
	Rated Voltage(V <sub>DC</sub> )	4 ~ 6.3			10 ~ 100			160~450			
	Capacitance change	≤ ±30% of the initial value			≤ ±25% of the initial value			≤ ±20% of the initial value			
	Tanδ	≤ 300% of the initial specified value						≤ 200% of the initial specified value			
	Leakage Current	≤ The initial specified value									
Others	Satisfied characteristics KS C IEC 60384-4										

MVG Series

### PART NUMBERING SYSTEM

**MVG 16 VC 22 M D56 TP**



### RATED RIPPLE CURRENT MULTIPLIERS

Frequency Multipliers

Size code	Freq.(Hz)		120	1K	10K	100K
	Cap.(μF)					
D56~J10	0.1 ~ 1.0		1.00	1.50	1.75	1.80
	2.2 ~ 10		1.00	1.30	1.40	1.50
	22 ~ 1,500		1.00	1.05	1.08	1.08
K14~M22	4.7		1.00	1.75	2.30	2.50
	10 ~ 68		1.00	1.50	1.75	1.80
	100 ~ 1,000		1.00	1.30	1.40	1.50
	1,500 ~ 10,000		1.00	1.05	1.08	1.08

## DIMENSIONS OF MVG Series

Unit(mm)

### DIMENSIONS

● Vibration Resistance

<Size code: B55~M22>    <Size code: H10~M22>

: Dummy terminals  
 : Solder land on PC board

Recommended Solder land on PC board

### MARKING

<D56 ~ J10>                      <K14 ~ M22>

Note 1 : L±0.5 for 8×6.3(H63) ~ 18×21.5(M22)  
 Note 2 : 4×5.3(D56), 5×5.3(E56) is excluded symbol mark.  
 Note 3 : 6.3WV is marked by 6V.

Case code	∅D	L	A	B	C	W	P	a	b	c	a	b	c
D56	4	5.3	4.3	4.3	5.1	0.5~0.8	1.0	1.0	2.6	1.6			
E56	5	5.3	5.3	5.3	5.9	0.5~0.8	1.4	1.4	3.0	1.6			
F56	6.3	5.3	6.6	6.6	7.2	0.5~0.8	1.9	1.9	3.5	1.6			
F60	6.3	5.7	6.6	6.6	7.2	0.5~0.8	1.9	1.9	3.5	1.6			
F80	6.3	7.7	6.6	6.6	7.2	0.5~0.8	1.9	1.9	3.5	1.6			
H63	8	6.3	8.3	8.3	9.0	0.5~0.8	2.3	2.3	4.5	1.6			
H10	8	10	8.3	8.3	9.0	0.7~1.1	3.1	3.1	4.2	2.2	3.1	4.2	3.5
J10	10	10	10.3	10.3	11.0	0.7~1.1	4.5	4.5	4.4	2.2	4.5	4.4	3.5
K14	12.5	13.5	13.0	13.0	13.7	1.0~1.3	4.2	4.0	5.7	2.5	3.4	6.3	9.3
L17	16	16.5	17.0	17.0	18.0	1.0~1.3	6.5	6.0	6.9	2.5	4.7	7.8	9.6
L22	16	21.5	17.0	17.0	18.0	1.0~1.3	6.5	6.0	6.9	2.5			
M17	18	16.5	19.0	19.0	20.0	1.0~1.3	6.5	6.0	7.9	2.5	4.7	8.8	9.6
M22	18	21.5	19.0	19.0	20.0	1.0~1.3	6.5	6.0	7.9	2.5			

※Please inquire beforehand for 16, 18∅ size

● Vibration Resistance

## RATINGS OF MVG Series

Vdc / μF	4	6.3	10	16	25	35	50	63	100
0.1							D56	1.1 1.3	D56 1.3
0.22							D56	2.0 2.9	D56 3.0
0.33							D56	3.0 3.5	D56 4.0
0.47							D56	3.8 4.2	D56 5.0
1							D56	5.6 6.2	D56 8.0
2.2						D56	7.7	D56 8.3 10	D56 12
3.3						D56	9.4	D56 14	E56 17
4.7					D56	10.5	D56	15	D56 20
10			D56	12.8	D56	14 17	D56	20	D56 25
22	D56	14	D56	23	D56	27	E56	28	F56 33
33	D56	23	D56	30	D56	30	E56	40	F56 40
47	D56	27	D56	33	E56	45	E56	45	F56 60
68	E56	38	E56	49	F56	54	F56	78	F60 90
100	E56	46	E56	55	F56	65	F60	85	F80/H63 145
220	F56	74	F60	75	F80/H63	130	F80	130	H10 260
330			F80/H63	135	H10	270	H10	270	H10 300
470			H10	280	H10	280	H10	280	J10 400
1,000			J10	430	J10	430	K14	710	K14 820
1,500			J10	480	K14	850			L17 1,100
2,200			K14	890	K14	960	L17	1,150	M17 1,400
3,300			L17	1,200	L17	1,300	M17	1,450	M22 1,800
4,700			L17	1,400	M17	1,600	M22	1,750	
6,800			M17	1,700	M22	1,850			
10,000			M22	2,000					

Vdc / μF	160	200	250	400	450
4.7				K14 120	K14 120
10	J10 55	K14 150	K14 150	L17 140	L17 140
22	K14 240	K14 240	L17 300	M17 280	L22 280
33	K14 260	L17 350	L17 340	M22 350	M22 350
47	L17 400	L17 420	M17 420		
68	L17 500	M17 510	M22 490		
100	M17 590	M22 590			

↑ Rated Ripple Current(mArms/85°C, 120Hz)  
 ↑ Case code