HVG

Surface mount type

series

Low ESR, High ripple current
Load life of 2,000h at 145°C
Compliance with AEC-Q200

• Specifications

Items	Characteristics	
Category temperature range	-55 to +145°C	
Rated voltage range	25 to 80Vdc	
Capacitance range	33 to 680μF	
Capacitance tolerance	±20% [M] (at 20°C, 120Hz)	
Leakage current	I=0.01CV or 3μA whichever is greater (at 20°C, after 2 minutes)	
Tangent of loss angle(tanδ)	Rated voltage(V) 25 35 50 63 80 Tanδ 0.14 0.12 0.10 0.08 0.08 (at 20°C, 120Hz)	
ESR	Less than or equal to the value of Standard Ratings (at 20°C, 100kHz)	
Low temperature characteristics (Impedance ratio at 100kHz)	Z (-25 ℃) / Z (+20 ℃) ≤ 1.5 Z (-55 ℃) / Z (+20 ℃) ≤ 2.0	
Endurance	145°C,2,000 hrs, apply the rated ripple current without exceeding the rated voltage	
	Capacitance change	Within±30% of the initial value
	Tangent of loss angle (tanδ)	≤200% of the initial specified value
	ESR(mΩ)	≤200% of the initial specified value
	Leakage current	≤The initial specified value
Shelf life	135°C,4,000 hrs, apply the rated ripple current without exceeding the rated voltage	
Damp Heat (Steady State)	Capacitance change	Within±30% of the initial value
	Tangent of loss angle (tanδ)	≤200% of the initial specified value
	ESR(mΩ)	≤200% of the initial specified value
	Leakage current	≤The initial specified value
	After storage for 1,000 hrs at 145°C with no voltage applied and then being stabilized at 20°C, capacitors shall meet the specified values for the endurance characteristics listed above.(with voltage treatment)	
Damp Heat (Steady State)	85°C, 85% RH, 2,000 hrs, rated voltage applied	
	Capacitance change	Within±30% of the initial value
	Tangent of loss angle (tanδ)	≤200% of the initial specified value
	ESR(mΩ)	≤200% of the initial specified value
	Leakage current	≤The initial specified value

• Part numbering system

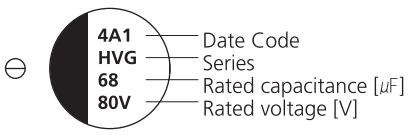
Example: HVG series, 80V / 33μF / Vibration resistant structure

80	HVG	33	M	E	10	V
Voltage	Series	Capacitance	Tolerance	Diameter	Length	Vibration resistant structure

• Frequency coefficient for ripple current

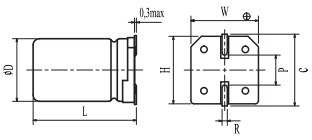
Frequency	120Hz	1kHz	10kHz	100kHz
Coefficient	0.15	0.40	0.75	1.00

• Marking and Dimensions

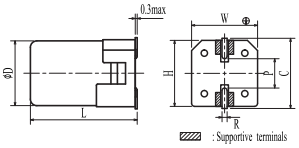


• Dimensions

[Standard]



[Vibration Resistance]



[Standard] (unit: mm)

Size	ØD±0.5	L	W±0.2	H±0.2	C±0.2	R	P±0.2
8.0×9.7	8.0	9.7±0.5	8.3	8.3	9.0	0.8 to 1.1	3.2
10.0×10.5	10.0	10.5±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6
10.0×12.5	10.0	12.5±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6
10.0×16.5	10.0	16.5±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6

[Vibration Resistance] (unit: mm)

Size	ØD±0.5	L	W±0.2	H±0.2	C±0.2	R	P±0.2
8.0×9.9	8.0	9.9±0.5	8.3	8.3	9.0	0.8 to 1.1	3.2
10.0×10.7	10.0	10.7±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6
10.0×12.7	10.0	12.7±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6
10.0×16.7	10.0	16.7±0.5	10.3	10.3	11.0	0.8 to 1.1	4.6

• Standard Ratings

Rated Voltage [Vdc]	Rated Capacitance [μF]	Size ØD x L [mm]	ESR (20°C, 100kHz) [mΩ] [max.]	Rated Ripple Current (100kHz) [mArms]		Part Number
				135°C	145°C	
25	220	8.0 x 9.7	27	1600	700	25HVG220MD10□
	330	10.0 x 10.5	20	2000	900	25HVG330ME10□
	680	10.0 x 16.5	11	4100	2000	25HVG680ME16□
35	150	8.0 x 9.7	27	1600	700	35HVG150MD10□
	270	10.0 x 10.5	20	2000	900	35HVG270ME10□
	470	10.0 x 16.5	11	4100	2400	35HVG770ME16□
50	68	8.0 x 9.7	30	1250	600	50HVG68MD10□
	100	10.0 x 10.5	28	1600	800	50HVG100ME10□
	220	10.0 x 16.5	13	3700	2200	50HVG220ME16□
63	33	8.0 x 9.7	40	1100	600	63HVG33MD10□
	56	10.0 x 10.5	30	1400	800	63HVG56ME10□
	82	10.0 x 10.5	30	1400	800	63HVG82ME10□
	150	10.0 x 16.5	15	3500	2200	63HVG150ME16□
	180	10.0 x 16.5	15	3500	2200	63HVG180ME16□
80	68	10.0 x 12.5	32	2400	1400	80HVG68ME12□
	100	10.0 x 16.5	16	3200	2000	80HVG100ME16□

*Terminal Code : V(Vibration-proof products)