HVS

Surface mount type

series

Low ESR, High ripple current
Load life of 10,000h at 105°C
Compliance with AEC-Q200

• Specifications

Items	Characteristics	
Category temperature range	-55 to +105°C	
Rated voltage range	6.3 to 80Vdc	
Capacitance range	10 to 1000μF	
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) 6.3 16 25 35 50 63 80 Tanδ 0.18 0.16 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	105°C, 10,000 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	After storage for 1,000 hrs at 105°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

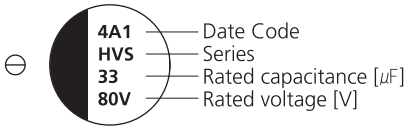
Example: HVS series, 80V / 33μF / Vibration resistant structure

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

• Frequency coefficient for ripple current

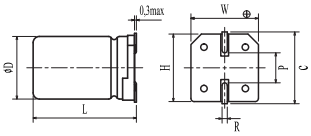
Frequency	120Hz	1kHz	10kHz	100kHz
Coefficient	0.15	0.40	0.75	1.00

• Marking and Dimensions

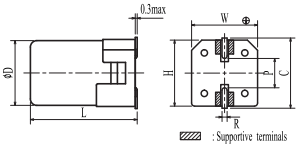


• Dimensions

[Standard]



[Vibration Resistance]



[Standard] (unit: mm)

Size	ØD±0.5	L	W±0.2	H±0.2	C±0.2	R	P±0.2
5.0×5.9	5.0	5.9±0.3	5.3	5.3	6.0	0.6 to 0.8	1.4
6.3×5.9	6.3	5.9±0.3	6.6	6.6	7.3	0.6 to 0.8	2.1
6.3×7.7	6.3	7.7±0.3	6.6	6.6	7.3	0.6 to 0.8	2.1
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
6.3×6.2	6.3	6.2±0.3	6.6	6.6	7.3	0.6 to 0.8	2.1
6.3×8.0	8.0	8.0±0.3	6.6	6.6	7.3	0.6 to 0.8	2.1
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 (105°C, 100kHz) [mArms]	Part Number
6.3	560	8.0 x 9.7	16	3200	6HVS560MD10☐
	1000	10.0 x 10.5	15	3900	6HVS1000ME10☐
16	22	5.0 x 5.9	80	900	16HVS22MB6☐
	100	6.3 x 5.9	38	2900	16HVS100MC6☐
	270	10.0 x 10.5	23	2850	16HVS220ME10☐
25	33	5.0 x 5.9	80	900	25HVS33MB6
	56	6.3 x 5.9	50	1300	25HVS56MC6☐
	100	6.3 x 7.7	30	2000	25HVS100MC8☐
	220	8.0 x 9.7	27	2300	25HVS220MD10☐
	330	10.0 x 10.5	20	2500	25HVS330ME10☐
	470	10.0 x 12.5	20	3200	25HVS470ME12☐
	680	10.0 x 16.5	11	5700	25HVS680ME16☐
35	22	5.0 x 5.9	100	900	35HVS22MB6
	27	6.3 x 5.9	60	1300	35HVS27MC6☐
	47	6.3 x 5.9	60	1300	35HVS47MC6☐
	68	6.3 x 7.7	35	2000	35HVS68MC8☐
	100	8.0 x 9.7	28	2100	35HVS150MD10☐
	150	8.0 x 9.7	27	2300	35HVS150MD10☐
	220	10.0 x 12.5	22	2350	35HVS220MD12☐
	270	10.0 x 10.5	20	2500	35HVS270ME10☐
	390	10.0 x 12.5	18	3500	35HVS390ME12☐
	470	10.0 x 12.5	16	4000	35HVS470ME12☐
50	10	5.0 x 5.9	120	750	50HVS10MB6
	22	6.3 x 5.9	80	1100	50HVS22MC6☐
	33	6.3 x 7.7	40	1600	50HVS33MC8☐
	47	8.0 x 9.7	35	1700	35HVS47MD10☐
	68	8.0 x 9.7	30	1800	50HVS68MD10☐
	100	10.0 x 10.5	28	2000	50HVS100ME10☐
	150	10.0 x 12.5	25	3000	50HVS150ME12☐
	220	10.0 x 16.5	13	5100	50HVS220ME16☐
63	10	6.3 x 5.9	120	1000	63HVS10MC6☐
	22	6.3 x 7.7	80	1500	63HVS22MC8☐
	33	8.0 x 9.7	40	1600	63HVS33MD10☐
	56	10.0 x 10.5	30	1800	63HVS56ME10☐
	68	10.0 x 10.5	30	1800	63HVS68ME10☐
	82	10.0 x 10.5	30	2000	63HVS82ME10☐
	100	10.0 x 12.5	25	2500	63HVS100ME12☐
	120	10.0 x 12.5	30	4100	63HVS120ME12☐
	180	10.0 x 16.5	15	4900	63HVS180ME16☐
80	22	8.0 x 9.7	45	1600	80HVS22MD10☐
	33	10.0 x 10.5	35	1700	80HVS33ME10☐
	47	10.0 x 10.5	35	1700	80HVS47ME10☐
	100	10.0 x 16.5	16	4400	80HVS100ME16☐

*Terminal Code : V(Vibration-proof products)