GVD Series

- Structure of higher vibration resistance by GPD series (acceleration 392m/s^2, 40G)
- Guaranteed short time at 150℃
- Designed for electric power steering and ECU (include engine control, direct fuel injection) etc.
- Rated voltage range : 25 to 100V, Capacitance range : 510 to 8,200µF
- Solvent resistant type
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

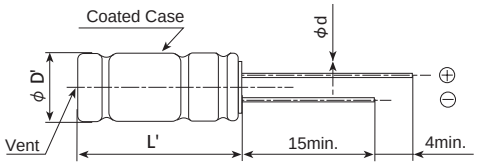
GPD → Vibration resistance → GVD

◆SPECIFICATIONS

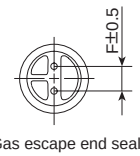
Items	Characteristics							
Category Temperature Range	-40 to +135℃							
Rated Voltage Range	25 to 100Vdc							
Capacitance Tolerance	±20% (M)							(at 20℃, 120Hz)
Leakage Current	I=0.03CV or 4µA, whichever is greater. Where, I : Max. leakage current (µA), C : Nominal capacitance (µF), V : Rated voltage (V)							(at 20℃, 1 minute)
Dissipation Factor (tan δ)	Rated voltage (Vdc)	25V	35V	50V	63V	80V	100V	
	tan δ (Max.)	0.14	0.12	0.10	0.10	0.08	0.08	
	When nominal capacitance exceeds 1,000µF, add 0.02 to the value above for each 1,000µF increase.							(at 20℃, 120Hz)
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (Vdc)	25V	35V	50V	63V	80V	100V	
	Z(-25℃)/Z(+20℃)	2	2	2	2	2	2	
	Z(-40℃)/Z(+20℃)	4	4	4	4	4	4	(at 120Hz)
Endurance 1	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at 125℃ or 135℃.							
	Time	125℃ 25 to 100Vdc : 3,000hours 135℃ 25 to 50Vdc : 3,000hours 63 to 100Vdc : 2,000hours						
	Capacitance change	≦±30% of the initial value						
	D.F. (tan δ)	≦300% of the initial specified value						
	Leakage current	≦The initial specified value						
Endurance 2	The following specifications shall be satisfied when the capacitors are restored to 20℃ after the test condition that the rated voltage is applied for 100 hours at 150℃ and DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at 125℃ or 135℃.							
	Time	125℃ 25 to 100Vdc : 2,500hours 135℃ 25 to 50Vdc : 2,500hours 63 to 100Vdc : 1,500hours						
	Capacitance change	≦±30% of the initial value						
	D.F. (tan δ)	≦300% 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℃ after exposing them for 1,000 hours at 125℃without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4.							
	Capacitance change	≦±30% of the initial value						
	D.F. (tan δ)	≦300% of the initial specified value						
	Leakage current	≦The initial specified value						
Vibration	The following specifications shall be satisfied when the capacitors are restored to 20℃ after subjected to vibration test (vibration profile shown below) at room temperature (15 to 35℃).							
	Capacitance change	≦±5% of the initial value						
	D.F. (tan δ)	≦The initial specified value						
	Leakage current	≦The initial specified value						
	Vibration profile							
	Vibration frequency range	10 to 2,000Hz						
	Amplitude or Acceleration	1.5mm peak to peak or 392m/s^2(40G), whichever is the less severe						
	Sweep rate	10 to 2,000 to 10Hz 0.5 octave/minute						
	Direction and period of motion	2 hours in each of 3 mutually perpendicular directions (total of 6hours)						
	Fixation	Fix main body and Lead teminal using a fixture tool, please contact us for detail.						

◆DIMENSIONS [mm]

●Terminal Code : E



* Please contact us about lead formings and mounting methods.

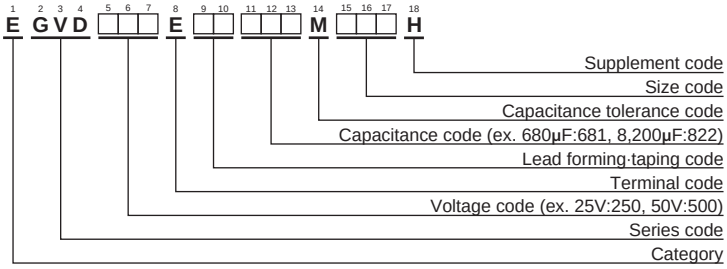


Gas escape end seal

ϕD	18
ϕd	0.8
F	7.5
ϕD'	ϕD±0.5
L'	L +1.5 -1.0

GVD Series

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (radial lead type)"

◆STANDARD RATINGS

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	tan δ	ESR (Ωmax/100kHz)		Rated ripple current (mArms/100kHz)		Part No.
				20℃	-40℃	125℃	135℃	
25	6,200	18×30	0.24	0.023	0.19	5,380	3,330	EGVD250E□□622MM30H
	8,200	18×35.5	0.28	0.019	0.13	6,110	3,750	EGVD250E□□822MMP1H
35	3,600	18×30	0.16	0.023	0.19	5,380	3,330	EGVD350E□□362MM30H
	4,700	18×35.5	0.18	0.019	0.13	6,110	3,750	EGVD350E□□472MMP1H
50	2,000	18×30	0.12	0.029	0.26	5,050	2,910	EGVD500E□□202MM30H
	2,400	18×35.5	0.12	0.024	0.20	5,760	3,330	EGVD500E□□242MMP1H
63	1,300	18×30	0.10	0.029	0.18	3,930	3,100	EGVD630E□□132MM30H
	1,800	18×35.5	0.10	0.024	0.14	4,920	3,520	EGVD630E□□182MMP1H
80	820	18×30	0.08	0.029	0.18	3,930	3,100	EGVD800E□□821MM30H
	1,200	18×35.5	0.08	0.024	0.14	4,920	3,520	EGVD800E□□122MMP1H
100	510	18×30	0.08	0.038	0.25	3,800	2,830	EGVD101E□□511MM30H
	680	18×35.5	0.08	0.030	0.19	4,550	3,210	EGVD101E□□681MMP1H

□□ : Enter the appropriate lead forming or taping code.

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
510	0.50	0.85	0.94	1.00
680 to 2,000	0.60	0.87	0.95	1.00
2,400 to 3,600	0.75	0.90	0.95	1.00
4,700 to 8,200	0.85	0.95	0.98	1.00

The deterioration of aluminum electrolytic capacitors accelerates their life due to the internal heating produced by ripple current. For details, refer to Section "5-3 Ripple Current Effect on Lifetime" in the catalog, Technical Note.

Please contact us for lifetime estimation.