

# GVD Series

- Structure of higher vibration resistance by GPD series (acceleration 392m/s<sup>2</sup>, 40G)
- Guaranteed short time at 150°C
- 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
- RoHS Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

GPD  
P219

Vibration resistance

GVD

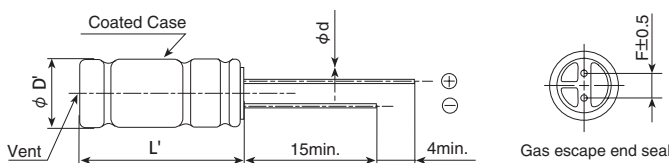


## SPECIFICATIONS

Items	Characteristics	
<b>Category</b>		
<b>Temperature Range</b>	-40 to +135°C	
<b>Rated Voltage Range</b>	25 to 100V <sub>dc</sub>	
<b>Capacitance Tolerance</b>	±20% (M) (at 20°C, 120Hz)	
<b>Leakage Current</b>	I=0.03CV or 4μA, whichever is greater. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C, 1 minute)	
<b>Dissipation Factor (tan δ)</b>	Rated voltage (V <sub>dc</sub> )	
	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°C, 120Hz)	
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Rated voltage (V <sub>dc</sub> )	
	25V 35V 50V 63V 80V 100V	
	Z(-25°C)/Z(+20°C) 2 2 2 2 2 2	
	Z(-40°C)/Z(+20°C) 4 4 4 4 4 4 (at 120Hz)	
<b>Endurance 1</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C 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°C or 135°C.	
	Time	125°C 25 to 100V <sub>dc</sub> : 3,000hours 135°C 25 to 50V <sub>dc</sub> : 3,000hours 63 to 100V <sub>dc</sub> : 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
<b>Endurance 2</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after the test condition that the rated voltage is applied for 100 hours at 150°C 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°C or 135°C.	
	Time	125°C 25 to 100V <sub>dc</sub> : 2,500hours 135°C 25 to 50V <sub>dc</sub> : 2,500hours 63 to 100V <sub>dc</sub> : 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
<b>Shelf Life</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C 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
<b>Vibration</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to vibration test (vibration profile shown below) at room temperature (15 to 35°C).	
	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 <sup>2</sup> (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 terminal using a fixture tool, please contact us for detail.

## DIMENSIONS [mm]

- Terminal Code : E

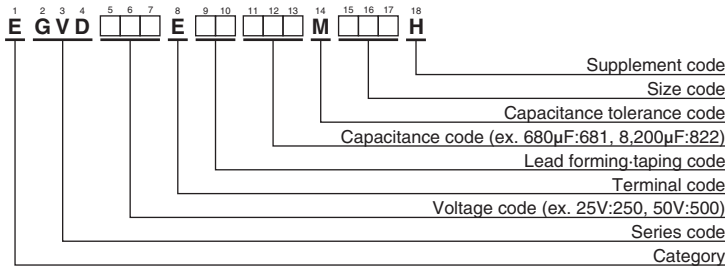


φD	18
φd	0.8
F	7.5
φD'	φD+0.5max.
L'	L+1.5max.

\* Please contact us about lead formings and mounting methods.

**GVD**Series

◆PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (μF)	Case size φ D×L(mm)	ESR (Ω <sub>max</sub> /100kHz)		Rated ripple current (mA <sub>rms</sub> /100kHz)		Part No.
			20°C	-40°C	125°C	135°C	
25	6,200	18×30	0.023	0.19	5,380	3,330	EGVD250E□□622MM30H
	8,200	18×35.5	0.019	0.13	6,110	3,750	EGVD250E□□822MMP1H
35	3,600	18×30	0.023	0.19	5,380	3,330	EGVD350E□□362MM30H
	4,700	18×35.5	0.019	0.13	6,110	3,750	EGVD350E□□472MMP1H
50	2,000	18×30	0.029	0.26	5,050	2,910	EGVD500E□□202MM30H
	2,400	18×35.5	0.024	0.20	5,760	3,330	EGVD500E□□242MMP1H
63	1,300	18×30	0.029	0.18	3,930	3,100	EGVD630E□□132MM30H
	1,800	18×35.5	0.024	0.14	4,920	3,520	EGVD630E□□182MMP1H
80	820	18×30	0.029	0.18	3,930	3,100	EGVD800E□□821MM30H
	1,200	18×35.5	0.024	0.14	4,920	3,520	EGVD800E□□122MMP1H
100	510	18×30	0.038	0.25	3,800	2,830	EGVD101E□□511MM30H
	680	18×35.5	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

Please contact us for lifetime estimation.