GVD

Vibration resistance

GPD

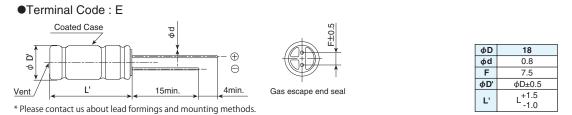
# **GVD**<sub>Series</sub>

- Structure of higher vibration resistance by GPD series (acceleration 392m/s<sup>2</sup>, 40G)
- Output 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.

### **\$**SPECIFICATIONS

Category Temperature Response         40 to +135°C           Rated Voltage Rang         25 to 100 Va.           Category Care         Labs/200 or 4,4,4 whichever is preserver         (at 20°C, 120Hz)           Leakage Current         L0.03CV or 4,4,4 whichever is preserver         Some is preserver         (at 20°C, 120Hz)           Dissipation Factory Characteristics (Max. Inseduce Value 2,400         25V         35V         50V         63V         80V         100V           Characteristics (Max. Inseduce Value 2,400         24V         35V         50V         63V         80V         100V           Characteristics (Max. Inseduce Value 2,400         24V         32V         20V         24         2 <th2< th="">         2         2</th2<>	Items	Characteristics										
Capacitance Tokenne         ± 20% (M)         (at 20°C, 120Hz)           Leakage Current         L=0.30°C v1 4µA, whichever is greater. Where, 1: Max. leakage current (µA), C: Nominal capacitance (µF), V: Rated voltage (V)         (at 20°C, 1 minute).           Dissipation Factor (un 0)         Rated voltage (V)         22V         32V         50V         60V         100V           Construction         Rated voltage (V)         22V         32V         50V         60V         100V           Characteristics (Max. Impediance Ratio (Max. Impediance Ratio Characteristics (Max. Impediance Ratio Characteristics (Max. Impediance Ratio Classical current is applied (the peak voltage shall not exceed the rated voltage) for the specified period of time at 125°C or 135°C.         (at 120Hz)           Endurance 1         Time         125°C 25 to 100V: : 3000hours 62 to 100V : : 3000hours 62 to 100V : : 2000hours 63 to 100V : : : 2000hours 63 to 100V : : : 2000hours 63 to 100V : : : : : : : : : : : : : : : : : :												
Leakage Current         E=0.03C/V or 4,4A, whichever is greater.           Where, 1: Max. leakage current (µA), C: Nominal capacitance (µF), V: Fated voltage (V)         (at 20°C, 1 minute)           Dissipation Factor (an d)         Pated voltage (Va)         25V         35V         60V         60V         100V           Can d(Max)         0.14         0.12         0.10         0.010         0.08         0.00           Command capacitance exceeds 1.000µF, add 0.02 to the value above for each 1.000µF increase.         (at 20°C, 1 minute)         (at 20°C, 120H2)           Low Temperature (Max. Impedance Ratio)         Zet 5C 2/C/2(2+0°C)         2	Rated Voltage Range	25 to 100V <sub>dc</sub>										
Umbre 1: Max: leakage current [uk]). C: Nominal capacitance (µF). V: Fated voltage (V) (at 20°C, 1 minute)           Dissipation Factor (tan 6)         Reated voltage (Va)         25V         35V         65V	Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
(tan $\delta$ )       Interference       0.14       0.12       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)         Low Temperature Characteristics (Max. Impedance Rato)       Rated voltage (Va.)       25V       32V       60V       60V       100V         Z(42°C)(Z(42°C)       2	Leakage Current											
With Informatic capacitance accerded 1,000µF, add 0,020 to the value above for each 1,000µF increase. (at 20°C, 120Hz)         Low Temperature Characteristics (Max. Impedance Ratio)       Rated voltage (V=)       25 V       35 V       60V       65V       80V       100V         Low Temperature Characteristics       Zc;45C;2(z+20°C)       4	Dissipation Factor	Rated voltage (Vdc)	25V	35V	50V	63V	80V	100V				
Low Temperature (Anarcteristic)       Rated voltage (V_m)       25V       35V       60V       60V       100V         Characteristics       Rated voltage (V_m)       25V       35V       60V       60V       100V         Characteristics       Rated voltage (V_m)       2	(tan δ)	tanδ (Max.)	0.14	0.12	0.10	0.10	0.08	0.08				
Characteristics (Max. Impedance Ratio)       Z(25C)/Z( $\times 20C$ )       2		When nominal capacitand	ce exce	eds 1,	000µF,	add 0	.02 to t	he valu	ie above for each 1,000μF increase. (at 20℃, 120⊢	lz)		
Max. Impedance Ratio $2(205)/2(205)$ $2$		Rated voltage (Vdc)	25V	35V	50V	63V	80V	100V				
Image: control (2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(2)(		Z(-25°C)/Z(+20°C)	2	2	2	2	2	2				
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 50Vs: 3.000hours 63 to 100Vs: 2.000hours 63 to 100Vs: 2.000hours         Capacitance change       ≤ ±30°S of the initial value         D.F. (tan ð)       ≤300% of the initial value         Endurance 2       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 100Vs: 2.500hours 135°C 25 to 50Vs: 2.500hours 63 to 100Vs: 1.500hours 63 to 100Vs: 1.500hours 64 to 100Vs: 1.500hours 70 the shown below at room temperature (15 to 35°C). 70 capacitance change         Vibration       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). 70 capacitance change         Vibration profile       The finitial specified	(Max. Impedance Ratio)	Z(-40°C)/Z(+20°C)	4	4	4	4	4	4	(at 120F	łz)		
Image: Status       135°C 25 to 50%:: 3.000hours         Capacitance change       ≤ ±30% of the initial value         D.F. (tan 0)       ≤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°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 100%: : 2,500hours         135°C 25 to 50%: : 2,500hours       135°C 25 to 50%: : 2,500hours         135°C 25 to 50%: : 1,500hours       135°C 25 to 100%: : 1,500hours         135°C 25 to 100%: : 1,500hours       135°C 25 to 100%: : 1,500hours         135°C 25 to 100%: : 1,500hours       135°C 25 to 100%: : 1,500hours         135°C 25 to 100%: : 1,500hours       135°C 25 to 100%: : 1,500hours         126°C 400 current       ≤130% of the initial specified value         Leakage current       ≤The initial specified value         Leakage current       ≤130% of the initial value         D.F. (tan 3)       ≤300% of the ini	Endurance 1	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.										
D.F. (tan ð)         ≤ 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°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 peiced of time at 125°C or 135°C.           Time         125°C 25 to 100V <sub>x</sub> : 2,500hours           135°C 25 to 50V <sub>x</sub> : 2,500hours         53 to 100V <sub>x</sub> : 1,500hours           Capacitance change         ≤ ±30% of the initial specified value           D.F. (tan ð)         ≤ 300% of the initial specified value           Leakage current         ≤ The initial specified value           D.F. (tan ð)         ≤ 300% of the initial specified value           Leakage current         ≤ The initial specified value           D.F. (tan ð)         ≤ 300% of the initial value           D.F. (tan ð)         ≤ 300% of the initial specified value           Leakage current         ≤ The initial specified value           Leakage current         ≤ ±30% of the initial value           D.F. (tan ð)         ≤ 300% of the initial value           D.F. (tan ð)         ≤ ±30% of the initial specified value           Leakage current         ≤ The initial specified value           Leakage curren		lime	135°C 25 to 50V <sub>dc</sub> : 3,000hours									
Leakage current         ≤ The initial specified value           Endurance 2         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 15°C can 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>8</sub> : 2,500hours           135°C 25 to 500V <sub>8</sub> : 2,500hours         63 to 100V <sub>8</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           Shelf Life         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 tem 4.1 of JIS C 5101-4.           Capacitance change         ≤ ±30% of the initial specified value           Leakage current         ≤ The initial specified value           D.F. (tan δ)         ≤300% of the initial value           D.F. (tan δ)         ≤100 K°C.           Capacitance change         ≤±5% of the initial specified value           Leakage current         ≤The initial specified value           D.F. (tan δ)         ≤10 K°C. (ta 5% of the initial specified value												
Endurance 2       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 peid of time at 125°C or 135°C.         Time       125°C 25 to 100%: 2.500hours 2.500hours 135°C.         Capacitance change       ≤ ±30% of the initial value         D.F. (tan δ)       ≤300% of 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 125°C 700% or voltage applied. Before the measurement, the capacitors are restored to 20°C after exposing them for 1,000 hours at 125°C 15°C intol.4.         Capacitance change       ≤ ±30% of the initial value         D.F. (tan δ)       ≤300% of the initial specified value         Leakage current       ≤ The initial specified value         D.F. (tan δ)       ≤300% of the initial value         D.F. (tan δ)       ≤300% of the initial value         D.F. (tan δ)       ≤300% of the initial value         D.F. (tan δ)       ≤100% to the initial value         D.F. (tan δ)       ≤100% of the initial value         D.F. (tan δ)       ≤15% of the initial value         D.F. (tan δ)       ≤15% of the initial value         D.F. (tan δ)       ≤15% of the initial value <tr< th=""><th></th><th colspan="8"></th><th></th></tr<>												
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 50V <sub>6</sub> : 2,500hours         35°C 25 to 50V <sub>6</sub> : 2,500hours         63 to 100V <sub>6</sub> : 1,500hours         Capacitance change       ≤ ±30% of the initial value         D.F. (tan ð)       ≤300% of the initial specified value         Leakage current       ≤ The initial specified value         Zapacitance change       ≤ ±30% of the initial value         D.F. (tan ð)       ≤300% of the initial value         D.F. (tan ð)       ≤300% of the initial specified value         Leakage current       ≤ The initial specified value         D.F. (tan ð)       ≤300% of the initial specified value         Leakage current       ≤ The initial specified value         D.F. (tan ð)       ≤300% of the initial specified value         Leakage current       ≤The initial specified value         D.F. (tan ð)       ≤300% of the initial specified value         D.F. (tan ð)       ≤The initial specified value         D.F. (tan ð)       ≤The initial specified value         D.F. (tan ð)       ≤The initial specified value         Uibration profile       Vibration profile         Vibration profile       10 to 2,000Hz												
Image: state of the initial state of the initial specified value         Image: state of 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 125°C without voltage applied. Before the measurement, the capacitors shall be preconditioned by applying voltage according to item 4.1 of JIS C 5101-4.         Capacitance change $\leq \pm 30\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Leakage current $\leq 10\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Leakage current $\leq 10\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Leakage current $\leq 10\%$ of the initial specified value         Ubration       The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to vibration test (vibration profile bown below) at room temperature (15 to 35°C).         Capacitance change $\leq \pm 5\%$ of the initial specified value         D.F. (tan $\delta$ ) $\leq 1$ The initial specified value         U.F. (tan $\delta$ ) $\leq 1$ The initial specified value         Vibration profile $\forall $	Endurance 2	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.										
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°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 value         D.F. (tan δ)       ≤The initial specified value         Leakage current       ≤The initial specified value         Leakage current       ≤The initial specified value         Vibration profile       Vibration frequency range         Vibration frequency range       10 to 2,000Hz         Amplitude or Acceleration       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe Acceleration         Sweep rate       10 to 2,000 to 10Hz       0.5 octave/minute         Direc		lime	135°C 25 to 50V <sub>dc</sub> : 2,500hours 63 to 100V <sub>dc</sub> : 1,500hours									
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 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 ð)         ≤300% of the initial specified value           Vibration         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 ð)         ≤The initial specified value           Ueakage current         ≤The initial specified value           D.F. (tan ð)         ≤The initial specified value           Ueakage current         ≤The initial specified value           Ueakage current         ≤The initial specified value           Vibration profile         Vibration frequency range           Vibration frequency range         10 to 2,000Hz           Acceleration         1.5mm peak to peak or 392m/s²(40G), whichever is the less severe Acceleration           Sweep rate         10 to 2,000 to 10Hz         0.5 octave/minute           Direction and period of motion         2 hours in each of 3 mutually perpendicula												
Shelf Life       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 $\leq \pm 30\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Leakage current $\leq$ The initial specified value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Vibration       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 $\leq \pm 5\%$ of the initial specified value         D.F. (tan $\delta$ ) $\leq$ The initial specified value         Leakage current $\leq$ The initial specified value         Leakage current $\leq$ The initial specified value         Ubration profile       Vibration profile         Vibration profile       10 to 2,000Hz         Mange       1.5mm peak to peak or 392m/s <sup>2</sup> (40G), whichever is the less severe         Acceleration       Sweep rate       10 to 2,000 to 10Hz         Sweep rate       10 to 2,000 to 10Hz       0.5 octave/minute         Direction and       2 hours in each of 3 mutually perpendicular directions (total of 6hours)		D.F. (tan δ )										
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 $\leq \pm 30\%$ of the initial value         D.F. (tan $\delta$ ) $\leq 300\%$ of the initial specified value         Leakage current $\leq$ The initial specified value         Vibration       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 $\leq \pm 5\%$ of the initial value         D.F. (tan $\delta$ ) $\leq$ The initial specified value         Leakage current $\leq$ The initial specified value         D.F. (tan $\delta$ ) $\leq$ The initial specified value         Leakage current $\leq$ The initial specified value         Leakage current $\leq$ The initial specified value         Vibration profile       Vibration frequency         vibration frequency       10 to 2,000Hz         range       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe         Acceleration       Sweep rate       10 to 2,000 to 10Hz       0.5 octave/minute         Direction and       2 hours in each of 3 mutually perpendicular directions (total of 6hours)       period of motion		Leakage current										
D.F. (tan $\delta$ ) $\leq$ 300% of the initial specified value         Leakage current $\leq$ The initial specified value         Vibration       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 $\leq \pm \pm 5\%$ of the initial value         D.F. (tan $\delta$ ) $\leq$ The initial specified value         Leakage current $\leq \pm 15\%$ of the initial specified value         Leakage current $\leq The initial specified value$ Leakage current $\leq The initial specified value$ Vibration profile       Vibration profile         Vibration frequency range       10 to 2,000Hz         Amplitude or       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe         Acceleration       Sweep rate       10 to 2,000 to 10Hz         Direction and period of motion       2 hours in each of 3 mutually perpendicular directions (total of 6hours)	Shelf Life											
Leakage current       ≦ The initial specified value         Vibration       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 profile         Vibration profile       10 to 2,000Hz         range       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe         Amplitude or       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe         Sweep rate       10 to 2,000 to 10Hz       0.5 octave/minute         Direction and       2 hours in each of 3 mutually perpendicular directions (total of 6hours)			$\leq \pm 30\%$ of the initial value									
Vibration       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         Amplitude or Acceleration       1.5mm peak to peak or 392m/s²(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)		D.F. (tan $\delta$ )	≦30	0% of t	he initi	al spec	ified v	alue				
profile shown below) at room temperature (15 to $35^{\circ}$ C).Capacitance change $\leq \pm 5\%$ of the initial valueD.F. (tan $\delta$ ) $\leq$ The initial specified valueLeakage current $\leq$ The initial specified valueVibration profile10 to 2,000HzVibration frequency range10 to 2,000HzAmplitude or Acceleration1.5mm peak to peak or $392m/s^2(40G)$ , whichever is the less severeSweep rate10 to 2,000 to 10HzDirection and period of motion2 hours in each of 3 mutually perpendicular directions (total of 6hours)												
D.F. (tan $\delta$ ) $\leq$ The initial specified valueLeakage current $\leq$ The initial specified valueVibration profileVibration frequency range10 to 2,000HzAmplitude or Acceleration1.5mm peak to peak or $392m/s^2(40G)$ , whichever is the less severeSweep rate10 to 2,000 to $10Hz$ Direction and period of motion2 hours in each of 3 mutually perpendicular directions (total of 6hours)	Vibration											
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/s²(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)		Capacitance change	≦±≋	5% of t	he initi	al valu	е					
Vibration profile         Vibration frequency range       10 to 2,000Hz         Amplitude or Acceleration       1.5mm peak to peak or 392m/s²(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)		D.F. (tan $\delta$ )	≦Th	e initia	specif	ied val	ue					
Vibration frequency range       10 to 2,000Hz         Amplitude or Acceleration       1.5mm peak to peak or 392m/s²(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)		Leakage current	≦Th	e initia	specif	ied val	ue					
range       Amplitude or         Amplitude or       1.5mm peak to peak or 392m/s²(40G), whichever is the less severe         Acceleration       10 to 2,000 to 10Hz         Sweep rate       10 to 2,000 to 10Hz         Direction and       2 hours in each of 3 mutually perpendicular directions (total of 6hours)         period of motion       2		Vibration profile										
Acceleration         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)												
Direction and period of motion       2 hours in each of 3 mutually perpendicular directions (total of 6hours)												
period of motion		Sweep rate 10 to 2,000 to 10Hz 0.5 octave/minute										
The main of the main body and body and body a main a shire tool, please contact as for detail.		Fixation Fix main body and Lead teminal using a fixture tool, please contact us for detail.										

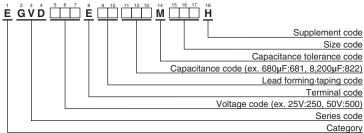
#### DIMENSIONS [mm]



Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

## GVD<sub>Series</sub>

### PART NUMBERING SYSTEM 1 2 3 4 5 5 7 8 9 10 11 12 14 15 16 17 16



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

#### STANDARD RATINGS

WV (V <sub>dc</sub> )	Cap (µF)	Case size ¢D×L(mm)	tan δ	Es (Ωmax/			ole current s/100kHz)	Part No.
				20°C	-40°C	125℃	135℃	
25	6,200	18×30	0.24	0.023	0.19	5,380	3,330	EGVD250E C622MM30H
25	8,200	18×35.5	0.28	0.019	0.13	6,110	3,750	EGVD250E B22MMP1H
35	3,600	18×30	0.16	0.023	0.19	5,380	3,330	EGVD350E 362MM30H
35	4,700	18×35.5	0.18	0.019	0.13	6,110	3,750	EGVD350E 472MMP1H
50	2,000 18×30 0.12	0.12	0.029	0.26	5,050	2,910	EGVD500E 202MM30H	
50	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
03	1,800 18×35.5 0.10 0.02		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 B21MM30H		
00	1,200 18×35.5 0.08 0.02		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
100	680	18×35.5	0.08	0.030	0.19	4,550	3,210	EGVD101E 681MMP1H

 $\Box\,\Box$  : 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.

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

Please contact us for lifetime estimation.

### CHEMI-CON ALUMINUM ELECTROLYTIC CAPACITORS

- Always read "Notes on Use" before using the product in order to enable you to use the product correctly and prevent any faults and accidents from occurring.
- Request the Product Specification on the product of NIPPON CHEMI-CON CORPORATION to refer to it as well as this brochure prior to the order of the products. Some specific notes on use of the ordered product may be described in the specifications.
- The products listed in this catalog are designed and manufactured for general electronics equipment use and are not intended for use in applications that can adversely affect human life; where the malfunction of equipment may cause damage to life or property. In addition, our products are not intended to be used in specific applications that may cause a major social impact. Please consult with us in advance of usage of our products in the following listed applications. ① Aerospace equipment ② Power generation equipment such as thermal power, nuclear power etc. ③ Medical equipment ④ Transport equipment (automobiles, trains, ships, etc.) ⑤ Transportation control equipment ⑥ Disaster prevention / crime prevention equipment ⑦ Highly publicized information processing equipment ⑧ Submarine equipment ⑨ Other applications that are not considered general-purpose applications.
- The circuits described as examples in this catalog and the "delivery specifications" are featured in order to show the operations and usage of our products, however, this fact does not guarantee that the circuits are available to function in your equipment systems. We are not in any case responsible for any failures or damage caused by the use of information contained herein. You should examine our products, of which the characteristics are described in the "delivery specifications" and other documents, and determine whether or not our products suit your requirements according to the specifications of your equipment systems. Therefore, you bear final responsibility regarding the use of our products.

Please make sure that you take appropriate safety measures such as use of redundant design and malfunction prevention measures in order to prevent fatal accidents and/or fires in the event any of our products malfunction.

- We strongly recommend our customers to purchase Nippon Chemi-Con products only through our official sales channels. We assume no responsibility for any defects or damages caused by using products purchased from outside our official sales channel or of counterfeit goods. In addition, we will ask the customer to pay the investigation cost for products purchased outside our official sales channel.
- We reserve the right to discontinue production and delivery of products. We do not guarantee that all the products included in this catalog will be available in the future. The aforementioned does not apply in the case of individual agreements deviating from the foregoing for customer-specific products
- We continually strive to improve the quality and reliability of our products, but in any case that our product does not meet our published specifications, please stop using it promptly and contact us immediately. As for compensation for non-conforming goods delivered by Chemi-Con, we will limit it only to goods found in non-compliance of our published specifications. This may be accomplished by a no cost replacement of non-conforming individual products, a credit of the piece price paid per each individual non-conforming product, or in other ways deemed necessary.

In addition, we have an established system with enhanced traceability, therefore we will limit the applicable lot items for any potential compensation.

Product specifications in this catalog are subject to change without notice. Request our product specifications before purchase and/or use. Please use our products based on the information contained in this catalog and product specifications.

Part Numbering System Part Numbering System (Appendix) Standardization Available Items by Manufacturing Locations Environmental Measures Technical Note Precautions and Guidelines Recommended Soldering Conditions Taping, Lead-preforming and Packaging Available Terminals for Snap-in and Screw Mount Type