

GVA Series

- Structure of higher vibration by GPA series (acceleration 392m/s², 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 : 430 to 5,100μF
- Solvent resistant type
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

GPA → Vibration resistance → GVA

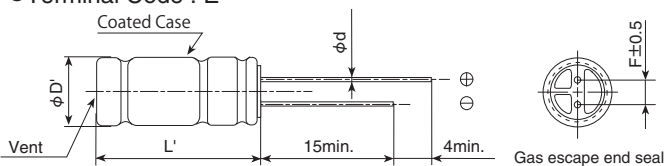


◆ SPECIFICATIONS

Items	Characteristics																					
Category	-40 to +125°C																					
Temperature Range	-40 to +125°C																					
Rated Voltage Range	25 to 100V _{dc}																					
Capacitance Tolerance	±20% (M) (at 20°C, 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°C, 1 minute)																					
Dissipation Factor (tan δ)	<table border="1"> <tr> <td>Rated voltage (V_{dc})</td> <td>25V</td> <td>35V</td> <td>50V</td> <td>63V</td> <td>80V</td> <td>100V</td> </tr> <tr> <td>tan δ (Max.)</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> <td>0.08</td> </tr> </table> <p>When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. (at 20°C, 120Hz)</p>	Rated voltage (V _{dc})	25V	35V	50V	63V	80V	100V	tan δ (Max.)	0.14	0.12	0.10	0.10	0.08	0.08							
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Endurance 1	<p>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 5,000 hours at 125 °C.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±30% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤300% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤The initial specified value</td> </tr> </table>	Capacitance change	≤ ±30% of the initial value	D.F. (tan δ)	≤300% of the initial specified value	Leakage current	≤The initial specified value															
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Endurance 2	<p>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 4,500 hours at 125°C.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±30% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤300% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤The initial specified value</td> </tr> </table>	Capacitance change	≤ ±30% of the initial value	D.F. (tan δ)	≤300% of the initial specified value	Leakage current	≤The initial specified value															
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Shelf Life	<p>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.</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±30% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤300% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤The initial specified value</td> </tr> </table>	Capacitance change	≤ ±30% of the initial value	D.F. (tan δ)	≤300% of the initial specified value	Leakage current	≤The initial specified value															
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Vibration	<p>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).</p> <table border="1"> <tr> <td>Capacitance change</td> <td>≤ ±5% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤The initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤The initial specified value</td> </tr> </table> <p>Vibration profile</p> <table border="1"> <tr> <td>Vibration frequency range</td> <td>10 to 2,000Hz</td> </tr> <tr> <td>Amplitude or Acceleration</td> <td>1.5mm peak to peak or 392m/s²(40G), whichever is the less severe</td> </tr> <tr> <td>Sweep rate</td> <td>10 to 2,000 to 10Hz 0.5 octave/minute</td> </tr> <tr> <td>Direction and period of motion</td> <td>2 hours in each of 3 mutually perpendicular directions (total of 6hours)</td> </tr> <tr> <td>Fixation</td> <td>Fix main body and Lead terminal using a fixture tool, please contact us for detail.</td> </tr> </table>	Capacitance change	≤ ±5% of the initial value	D.F. (tan δ)	≤The initial specified value	Leakage current	≤The initial specified value	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 terminal using a fixture tool, please contact us for detail.					
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◆ DIMENSIONS [mm]

- Terminal Code : E

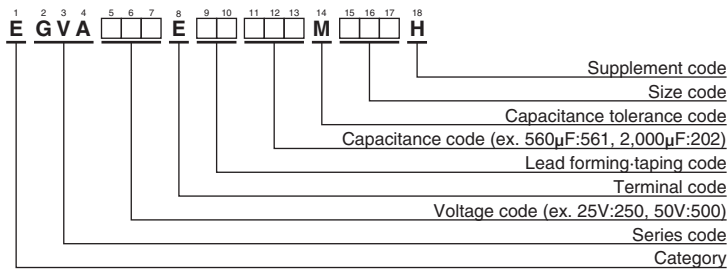


* Please contact us about lead formings and mounting methods.

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

GVA 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 (Ω max./100kHz)		Rated ripple current (mA rms/125°C, 100kHz)	Part No.
				20°C	-40°C		
25	3,900	18×30	0.18	0.023	0.11	3,330	EGVA250E□□392MM30H
	5,100	18×35.5	0.22	0.019	0.086	3,750	EGVA250E□□512MMP1H
35	2,700	18×30	0.14	0.023	0.11	3,330	EGVA350E□□272MM30H
	3,600	18×35.5	0.16	0.019	0.086	3,750	EGVA350E□□362MMP1H
50	1,600	18×30	0.10	0.027	0.14	3,000	EGVA500E□□162MM30H
	2,000	18×35.5	0.12	0.022	0.10	3,450	EGVA500E□□202MMP1H
63	1,200	18×30	0.10	0.045	0.34	2,530	EGVA630E□□122MM30H
	1,500	18×35.5	0.10	0.036	0.26	2,870	EGVA630E□□152MMP1H
80	750	18×30	0.08	0.045	0.34	2,530	EGVA800E□□751MM30H
	910	18×35.5	0.08	0.036	0.26	2,870	EGVA800E□□911MMP1H
100	430	18×30	0.08	0.055	0.41	2,290	EGVA101E□□431MM30H
	560	18×35.5	0.08	0.044	0.32	2,620	EGVA101E□□561MMP1H

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

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(µF)	Frequency(Hz)			
	120	1k	10k	100k
430 to 560	0.50	0.85	0.94	1.00
750 to 2,000	0.60	0.87	0.95	1.00
2,700 to 3,900	0.75	0.90	0.95	1.00
5,100	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.