GVA Series

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

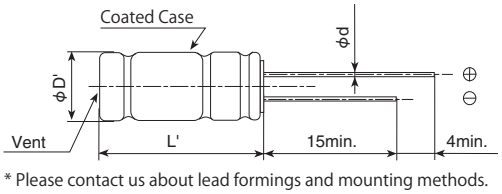
GPA → Vibration resistance → **GVA**

◆SPECIFICATIONS

Items	Characteristics							
Category Temperature Range	-40 to +125℃							
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 5,000 hours at 125 ℃.							
	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 4,500 hours at 125℃.							
	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



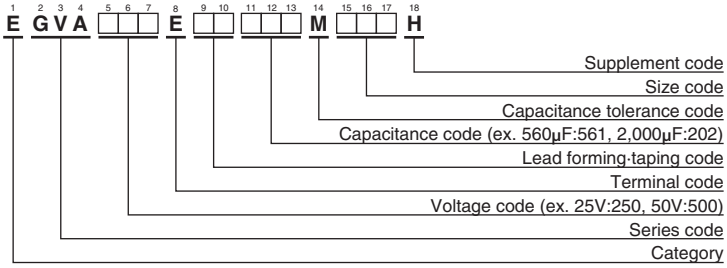
Gas escape end seal

* Please contact us about lead formings and mounting methods.

ϕD	18
ϕd	0.8
F	7.5
ϕD'	ϕD±0.5
L'	L +1.5 -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 (mArms/125℃, 100kHz)	Part No.
				20℃	-40℃		
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.

■ 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.

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