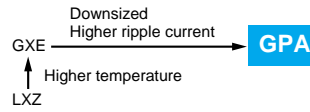


# GPA Series

- Downsized, low impedance and high-ripple current version of GXE series
- For automobile modules and other high temperature applications
- Endurance with ripple current : 3,000 to 5,000 hours at 125°C
- Solvent resistant type
- RoHS Compliant

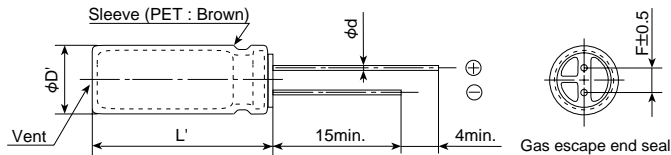


## ◆ SPECIFICATIONS

Items	Characteristics			
Category	-40 to +125°C			
Temperature Range	-40 to +125°C			
Rated Voltage Range	25 to 50V <sub>dc</sub>			
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 (tanδ)	Rated voltage (V <sub>dc</sub> )	25	35	50
	tanδ (Max.)	0.14	0.12	0.10
	When nominal capacitance exceeds 1,000μF, add 0.02 to the above value for each 1,000μF increase. (at 20°C, 120Hz)			
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	25	35	50
	Z(-25°C)/Z(+20°C)	2	2	2
	Z(-40°C)/Z(+20°C)	4	4	4
(at 120Hz)				
Endurance	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 for 5,000 hours (3,000 hours for 25L and less) at 125°C.			
	Capacitance change	≤±30% of the initial value		
	D.F. (tanδ)	≤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. (tanδ)	≤300% of the initial specified value		
	Leakage current	≤The initial specified value		

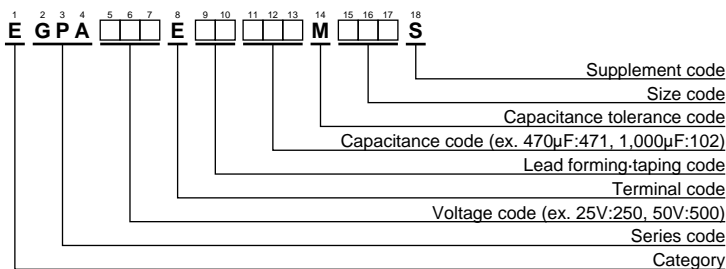
## ◆ DIMENSIONS [mm]

- Terminal Code : E



φD	12.5	14.5	16	18
φd	0.6	0.8	0.8	0.8
F	5.0	7.5	7.5	7.5
φD'	φD+0.5max.			
L'	L+1.5max.			

## ◆ PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	ESR (Ωmax/100kHz)		Rated ripple current (mA <sub>rms</sub> /125°C, 100kHz)	Part No.	WV (Vdc)	Cap (μF)	Case size φD×L(mm)	ESR (Ωmax/100kHz)		Rated ripple current (mA <sub>rms</sub> /125°C, 100kHz)	Part No.	
			20°C	-40°C						20°C	-40°C			
25	1,200	12.5×20	0.044	0.22	1,820	EGPA250E□□122MK20S	35	1,800	16×25	0.026	0.13	2,860	EGPA350E□□182ML25S	
	1,500	14.5×20	0.037	0.19	2,100	EGPA250E□□152MU20S		2,200	14.5×35	0.021	0.095	3,380	EGPA350E□□222MU35S	
	1,800	12.5×25	0.033	0.17	2,280	EGPA250E□□182MK25S		2,200	16×30	0.023	0.10	3,160	EGPA350E□□222ML30S	
	1,800	16×20	0.034	0.17	2,280	EGPA250E□□182ML20S		2,200	18×25	0.024	0.12	3,010	EGPA350E□□222MM25S	
	2,200	12.5×30	0.029	0.13	2,560	EGPA250E□□222MK30S		2,700	14.5×40	0.018	0.081	3,730	EGPA350E□□272MU40S	
	2,200	14.5×25	0.028	0.14	2,620	EGPA250E□□222MU25S		2,700	16×35	0.020	0.090	3,590	EGPA350E□□272ML35S	
	2,700	12.5×35	0.024	0.11	2,970	EGPA250E□□272MK35S		2,700	18×30	0.022	0.099	3,390	EGPA350E□□272MM30S	
	2,700	14.5×30	0.023	0.10	3,060	EGPA250E□□272MU30S		3,300	16×40	0.017	0.077	3,970	EGPA350E□□332ML40S	
	2,700	16×25	0.026	0.13	2,860	EGPA250E□□272ML25S		3,300	18×35	0.019	0.086	3,840	EGPA350E□□332MM35S	
	2,700	18×20	0.032	0.16	2,490	EGPA250E□□272MM20S		4,700	18×40	0.016	0.072	4,230	EGPA350E□□472MM40S	
	3,300	12.5×40	0.021	0.095	3,340	EGPA250E□□332MK40S		50	470	12.5×20	0.065	0.33	1,500	EGPA500E□□471MK20S
	3,300	14.5×35	0.021	0.095	3,380	EGPA250E□□332MU35S			560	14.5×20	0.055	0.28	1,740	EGPA500E□□561MU20S
	3,300	16×30	0.023	0.10	3,160	EGPA250E□□332ML30S			680	12.5×25	0.048	0.24	1,900	EGPA500E□□681MK25S
	3,900	16×35	0.020	0.090	3,590	EGPA250E□□392ML35S			680	16×20	0.043	0.22	2,040	EGPA500E□□681ML20S
	3,900	18×25	0.024	0.12	3,010	EGPA250E□□392MM25S			820	12.5×30	0.041	0.18	2,150	EGPA500E□□821MK30S
	4,700	14.5×40	0.018	0.081	3,730	EGPA250E□□472MU40S			820	14.5×25	0.040	0.20	2,190	EGPA500E□□821MU25S
	4,700	18×30	0.022	0.099	3,390	EGPA250E□□472MM30S			1,000	12.5×35	0.034	0.15	2,510	EGPA500E□□102MK35S
	5,600	16×40	0.017	0.077	3,970	EGPA250E□□562ML40S			1,000	14.5×30	0.036	0.16	2,470	EGPA500E□□102MU30S
5,600	18×35	0.019	0.086	3,840	EGPA250E□□562MM35S	1,000	16×25		0.031	0.16	2,620	EGPA500E□□102ML25S		
6,800	18×40	0.016	0.072	4,230	EGPA250E□□682MM40S	1,000	18×20		0.039	0.20	2,240	EGPA500E□□102MM20S		
35	680	12.5×20	0.044	0.22	1,820	EGPA350E□□681MK20S	1,200		12.5×40	0.028	0.13	2,870	EGPA500E□□122MK40S	
	1,000	12.5×25	0.033	0.17	2,280	EGPA350E□□102MK25S	1,200		14.5×35	0.029	0.13	2,840	EGPA500E□□122MU35S	
	1,000	14.5×20	0.037	0.19	2,100	EGPA350E□□102MU20S	1,200		16×30	0.027	0.13	2,940	EGPA500E□□122ML30S	
	1,200	12.5×30	0.029	0.13	2,560	EGPA350E□□122MK30S	1,200		18×25	0.029	0.15	2,750	EGPA500E□□122MM25S	
	1,200	16×20	0.034	0.17	2,280	EGPA350E□□122ML20S	1,500		16×35	0.023	0.10	3,300	EGPA500E□□152ML35S	
	1,200	14.5×25	0.028	0.14	2,620	EGPA350E□□122MU25S	1,800		14.5×40	0.024	0.11	3,230	EGPA500E□□182MU40S	
	1,500	12.5×35	0.024	0.11	2,970	EGPA350E□□152MK35S	1,800		18×30	0.026	0.12	3,140	EGPA500E□□182MM30S	
	1,500	14.5×30	0.023	0.10	3,060	EGPA350E□□152MU30S	2,200		16×40	0.020	0.090	3,720	EGPA500E□□222ML40S	
	1,500	18×20	0.032	0.16	2,490	EGPA350E□□152MM20S	2,200	18×35	0.022	0.10	3,510	EGPA500E□□222MM35S		
	1,800	12.5×40	0.021	0.095	3,340	EGPA350E□□182MK40S	2,700	18×40	0.018	0.080	3,940	EGPA500E□□272MM40S		

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

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance(μF)	Frequency(Hz)			
	120	1k	10k	100k
470 to 560	0.50	0.85	0.94	1.00
680 to 1,800	0.60	0.87	0.95	1.00
2,200 to 3,900	0.75	0.90	0.95	1.00
4,700 to 6,800	0.85	0.95	0.98	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.