GXE Series

- For automobile modules and other high temperature applications
- Downsize, long life, low impedance and better low temperature characteristics
- Endurance with ripple current : 2,000 to 5,000 hours at 125℃
- Solvent resistant type except 63 to 450V (see PRECAUTIONS AND GUIDELINES)
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.

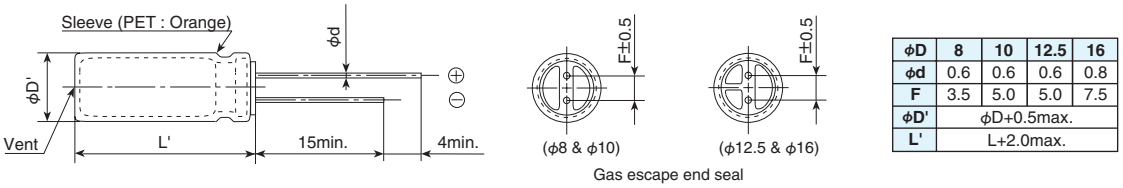
GXE → Downsized, Higher ripple current → GPA

◆SPECIFICATIONS

Items	Characteristics										
Category Temperature Range	-40 to +125℃ (10 to 250V_{dc}) -25 to +125℃ (350 to 450V_{dc})										
Rated Voltage Range	10 to 450V_{dc}										
Capacitance Tolerance	±20% (M) (at 20℃, 120Hz)										
Leakage Current	10 to 100V_{dc}: I=0.03CV or 4μA, whichever is greater. 160 to 450V_{dc}: CV≦1,000 I=0.1CV+40; CV>1,000 I=0.04CV+100										
	Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20℃, 1 minute)										
Dissipation Factor (tan δ)	Rated voltage (V_{dc})	10V	16V	25V	35V	50V	63V	80V	100V	160 to 250V	350 to 450V
	tan δ (Max.)	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.08	0.20	0.24
	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 (V_{dc})	10V	16V	25V	35V	50V	63V	80V	100V	160 to 250V	350 to 450V
	Z(-25℃)/Z(+20℃)	3	2	2	2	2	2	2	2	3	6
	Z(-40℃)/Z(+20℃)	6	4	4	4	4	4	4	4	6	— (at 120Hz)
Endurance	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 the specified time at 125℃.										
		10 to 100V_{dc}								160 to 450V_{dc}	
	Time	φ8 : 2,000hours φ10 : 3,000hours φ12.5 & φ16 : 5,000hours								2,000hours	
	Capacitance change	≦±30% of the initial value								≦±20% of the initial value	
	D.F. (tan δ)	≦300% of the initial specified value								≦200% of the initial specified value	
	Leakage current	≦The initial specified value								≦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 (500 hours for 350 to 450V_{dc}) 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.										
		10 to 100V_{dc}								160 to 450V_{dc}	
	Capacitance change	≦±30% of the initial value								≦±20% of the initial value	
	D.F. (tan δ)	≦300% of the initial specified value								≦200% of the initial specified value	
	Leakage current	≦The initial specified value								≦500% of the initial specified value	

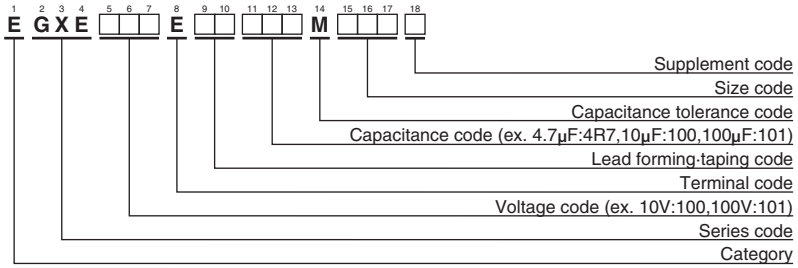
◆DIMENSIONS [mm]

●Terminal Code : E



φD	8	10	12.5	16
φd	0.6	0.6	0.6	0.8
F	3.5	5.0	5.0	7.5
φD'	φD+0.5max.			
L'	L+2.0max.			

◆PART NUMBERING SYSTEM



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

GXE Series

◆STANDARD RATINGS

is not solvent resistant.

WV (V_{dc})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./ 20℃, 100kHz)	Rated ripple current (mArms/ 125℃, Note1)	Part No.
10	220	8×12	0.32	340	EGXE100E□□221MH12D
	330	10×12.5	0.15	620	EGXE100E□□331MJC5S
	470	10×12.5	0.15	620	EGXE100E□□471MJC5S
	1,000	10×20	0.075	950	EGXE100E□□102MJ20S
	2,200	12.5×25	0.040	1,350	EGXE100E□□222MK25S
	3,300	16×25	0.031	1,620	EGXE100E□□332ML25S
	4,700	16×31.5	0.025	1,860	EGXE100E□□472MLN3S
16	100	8×12	0.32	340	EGXE160E□□101MH12D
	220	10×12.5	0.15	620	EGXE160E□□221MJC5S
	330	10×12.5	0.15	620	EGXE160E□□331MJC5S
	470	10×16	0.094	790	EGXE160E□□471MJ16S
	1,000	12.5×20	0.058	1,080	EGXE160E□□102MK20S
	2,200	16×25	0.031	1,620	EGXE160E□□222ML25S
	3,300	16×31.5	0.025	1,860	EGXE160E□□332MLN3S
25	100	8×12	0.32	340	EGXE250E□□101MH12D
	220	10×12.5	0.15	620	EGXE250E□□221MJC5S
	330	10×16	0.094	790	EGXE250E□□331MJ16S
	470	10×20	0.075	950	EGXE250E□□471MJ20S
	1,000	12.5×25	0.040	1,350	EGXE250E□□102MK25S
	2,200	16×31.5	0.025	1,860	EGXE250E□□222MLN3S
35	100	8×12	0.32	340	EGXE350E□□101MH12D
	100	10×12.5	0.15	620	EGXE350E□□101MJC5S
	220	10×16	0.094	790	EGXE350E□□221MJ16S
	330	10×20	0.075	950	EGXE350E□□331MJ20S
	470	12.5×20	0.058	1,080	EGXE350E□□471MK20S
	1,000	16×25	0.031	1,620	EGXE350E□□102ML25S
50	10	8×12	0.75	180	EGXE500E□□100MH12D
	22	8×12	0.50	250	EGXE500E□□220MH12D
	33	8×12	0.50	280	EGXE500E□□330MH12D
	47	8×12	0.50	280	EGXE500E□□470MH12D
	100	10×12.5	0.20	520	EGXE500E□□101MJC5S
	220	10×20	0.098	880	EGXE500E□□221MJ20S
	330	12.5×20	0.081	990	EGXE500E□□331MK20S
	470	12.5×25	0.059	1,150	EGXE500E□□471MK25S
	1,000	16×31.5	0.032	1,590	EGXE500E□□102MLN3S
63	33	8×12	1.5	150	EGXE630E□□330MH12D
	47	10×12.5	0.59	530	EGXE630E□□470MJC5S
	100	10×16	0.41	690	EGXE630E□□101MJ16S
	220	12.5×20	0.16	1,050	EGXE630E□□221MK20S
	330	12.5×25	0.12	1,290	EGXE630E□□331MK25S
	470	12.5×30	0.097	1,460	EGXE630E□□471MK30S
	1,000	16×31.5	0.059	1,850	EGXE630E□□102MLN3S
80	22	8×12	1.5	150	EGXE800E□□220MH12D
	33	10×12.5	0.80	480	EGXE800E□□330MJC5S
80	47	10×12.5	0.80	480	EGXE800E□□470MJC5S
	100	10×20	0.39	790	EGXE800E□□101MJ20S
	220	12.5×25	0.18	1,240	EGXE800E□□221MK25S
	330	12.5×30	0.16	1,390	EGXE800E□□331MK30S
	470	16×25	0.11	1,500	EGXE800E□□471ML25S
100	4.7	8×12	2.0	130	EGXE101E□□4R7MH12D
	10	8×12	1.5	150	EGXE101E□□100MH12D
	22	10×12.5	0.80	480	EGXE101E□□220MJC5S
	33	10×12.5	0.80	480	EGXE101E□□330MJC5S
	47	10×16	0.55	630	EGXE101E□□470MJ16S
	100	12.5×20	0.25	990	EGXE101E□□101MK20S
	220	16×25	0.11	1,500	EGXE101E□□221ML25S
	330	16×31.5	0.079	1,790	EGXE101E□□331MLN3S
160	22	10×20	—	115	EGXE161E□□220MJ20S
	33	10×25	—	154	EGXE161E□□330MJ25S
	47	12.5×20	—	187	EGXE161E□□470MK20S
	68	12.5×25	—	245	EGXE161E□□680MK25S
	100	16×25	—	329	EGXE161E□□101ML25S
	150	16×31.5	—	434	EGXE161E□□151MLN3S
200	10	10×20	—	78	EGXE201E□□100MJ20S
	22	10×25	—	126	EGXE201E□□220MJ25S
	33	12.5×20	—	157	EGXE201E□□330MK20S
	47	12.5×25	—	204	EGXE201E□□470MK25S
	68	16×20	—	250	EGXE201E□□680ML20S
	100	16×25	—	329	EGXE201E□□101ML25S
250	10	10×20	—	78	EGXE251E□□100MJ20S
	22	12.5×20	—	128	EGXE251E□□220MK20S
	33	12.5×25	—	171	EGXE251E□□330MK25S
	47	16×25	—	225	EGXE251E□□470ML25S
	68	16×31.5	—	292	EGXE251E□□680MLN3S
350	4.7	10×20	—	53	EGXE351E□□4R7MJ20S
	10	10×25	—	85	EGXE351E□□100MJ25S
	22	12.5×25	—	139	EGXE351E□□220MK25S
	33	16×25	—	189	EGXE351E□□330ML25S
	47	16×31.5	—	243	EGXE351E□□470MLN3S
400	4.7	10×20	—	53	EGXE401E□□4R7MJ20S
	10	10×25	—	86	EGXE401E□□100MJ25S
	22	12.5×30	—	142	EGXE401E□□220MK30S
	33	16×25	—	189	EGXE401E□□330ML25S
	47	16×31.5	—	243	EGXE401E□□470MLN3S
450	4.7	10×25	—	58	EGXE451E□□4R7MJ25S
	10	12.5×20	—	86	EGXE451E□□100MK20S
	22	16×25	—	154	EGXE451E□□220ML25S
	33	16×31.5	—	203	EGXE451E□□330MLN3S

□□ : Enter the appropriate lead forming or taping code.
(Note1) Ripple current frequency
10 to 100V = 100kHz
160 to 450V = 120Hz

◆RATED RIPPLE CURRENT MULTIPLIERS

❶Frequency Multipliers

(10 to 100V_{dc})

Capacitance(μF) \ Frequency(Hz)	120	1k	10k	100k
4.7 to 100	0.40	0.75	0.90	1.00
220 to 470	0.50	0.85	0.94	1.00
1,000	0.60	0.87	0.95	1.00
2,200 to 3,300	0.75	0.90	0.95	1.00
4,700	0.85	0.95	0.98	1.00

(160 to 450V_{dc})

Capacitance(μF) \ Frequency(Hz)	50	120	300	1k	10k	100k
4.7 to 33	0.75	1.00	1.25	1.50	1.75	1.80
47 to 150	0.80	1.00	1.15	1.30	1.40	1.50

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