

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°C
- 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.

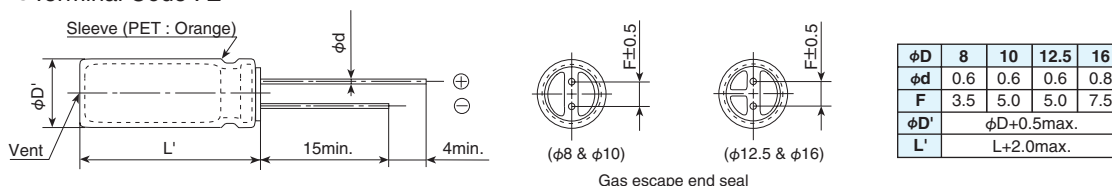


SPECIFICATIONS

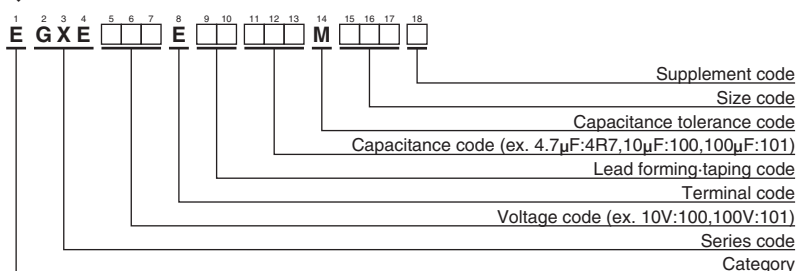
Items	Characteristics												
Category	-40 to +125°C (10 to 250V _{dc}) -25 to +125°C (350 to 450V _{dc})												
Temperature Range													
Rated Voltage Range	10 to 450V _{dc}												
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)												
Leakage Current	10 to 100V _{dc}				160 to 450V _{dc}								
	I=0.03CV or 4μA, whichever is greater.				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°C, 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°C, 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°C)/Z(+20°C)		3	2	2	2	2	2	2	2	3	6	
	Z(-40°C)/Z(+20°C)		6	4	4	4	4	4	4	4	6	—	
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 (the peak voltage shall not exceed the rated voltage) for the specified time at 125°C.												
			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°C after exposing them for 1,000 hours (500 hours for 350 to 450V _{dc}) 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.												
			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



PART NUMBERING SYSTEM



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

◆STANDARD RATINGS

□ is not solvent resistant.

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./ 20°C, 100kHz)	Rated ripple current (mA rms/ 125°C, Note1)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Impedance (Ω max./ 20°C, 100kHz)	Rated ripple current (mA rms/ 125°C, Note1)	Part No.
10	220	8×12	0.32	340	EGXE100E□□221MH12D	80	47	10×12.5	0.80	480	EGXE800E□□470MJC5S
	330	10×12.5	0.15	620	EGXE100E□□331MJC5S		100	10×20	0.39	790	EGXE800E□□101MJ20S
	470	10×12.5	0.15	620	EGXE100E□□471MJC5S		220	12.5×25	0.18	1,240	EGXE800E□□221MK25S
	1,000	10×20	0.075	950	EGXE100E□□102MJ20S		330	12.5×30	0.16	1,390	EGXE800E□□331MK30S
	2,200	12.5×25	0.040	1,350	EGXE100E□□222MK25S		470	16×25	0.11	1,500	EGXE800E□□471ML25S
	3,300	16×25	0.031	1,620	EGXE100E□□332ML25S	100	4.7	8×12	2.0	130	EGXE101E□□4R7MH12D
	4,700	16×31.5	0.025	1,860	EGXE100E□□472MLN3S		10	8×12	1.5	150	EGXE101E□□100MH12D
16	100	8×12	0.32	340	EGXE160E□□101MH12D		22	10×12.5	0.80	480	EGXE101E□□220MJC5S
	220	10×12.5	0.15	620	EGXE160E□□221MJC5S		33	10×12.5	0.80	480	EGXE101E□□330MJC5S
	330	10×12.5	0.15	620	EGXE160E□□331MJC5S		47	10×16	0.55	630	EGXE101E□□470MJ16S
	470	10×16	0.094	790	EGXE160E□□471MJ16S		100	12.5×20	0.25	990	EGXE101E□□100MK20S
	1,000	12.5×20	0.058	1,080	EGXE160E□□102MK20S		220	16×25	0.11	1,500	EGXE101E□□221ML25S
	2,200	16×25	0.031	1,620	EGXE160E□□222ML25S		330	16×31.5	0.079	1,790	EGXE101E□□331MLN3S
	3,300	16×31.5	0.025	1,860	EGXE160E□□332MLN3S	160	22	10×20	—	115	EGXE161E□□220MJ20S
25	100	8×12	0.32	340	EGXE250E□□101MH12D		33	10×25	—	154	EGXE161E□□330MH12S
	220	10×12.5	0.15	620	EGXE250E□□221MJC5S		47	12.5×20	—	187	EGXE161E□□470MK20S
	330	10×16	0.094	790	EGXE250E□□331MJ16S		68	12.5×25	—	245	EGXE161E□□680MK25S
	470	10×20	0.075	950	EGXE250E□□471MJ20S		100	16×25	—	329	EGXE161E□□101ML25S
	1,000	12.5×25	0.040	1,350	EGXE250E□□102MK25S		150	16×31.5	—	434	EGXE161E□□151MLN3S
	2,200	16×31.5	0.025	1,860	EGXE250E□□222MLN3S	200	10	10×20	—	78	EGXE201E□□100MJ20S
	100	8×12	0.32	340	EGXE350E□□101MH12D		22	10×25	—	126	EGXE201E□□220MJ25S
35	100	10×12.5	0.15	620	EGXE350E□□101MJC5S		33	12.5×20	—	157	EGXE201E□□330MK20S
	220	10×16	0.094	790	EGXE350E□□221MJ16S		47	12.5×25	—	204	EGXE201E□□470MK25S
	330	10×20	0.075	950	EGXE350E□□331MJ20S		68	16×20	—	250	EGXE201E□□680ML20S
	470	12.5×20	0.058	1,080	EGXE350E□□471MK20S		100	16×25	—	329	EGXE201E□□101ML25S
	1,000	16×25	0.031	1,620	EGXE350E□□102ML25S	250	10	10×20	—	78	EGXE251E□□100MJ20S
50	10	8×12	0.75	180	EGXE500E□□100MH12D		22	12.5×20	—	128	EGXE251E□□220MK20S
	22	8×12	0.50	250	EGXE500E□□220MH12D		33	12.5×25	—	171	EGXE251E□□330MK25S
	33	8×12	0.50	280	EGXE500E□□330MH12D		47	16×25	—	225	EGXE251E□□470ML25S
	47	8×12	0.50	280	EGXE500E□□470MH12D		68	16×31.5	—	292	EGXE251E□□680MLN3S
	100	10×12.5	0.20	520	EGXE500E□□101MJC5S	350	4.7	10×20	—	53	EGXE351E□□4R7MJ20S
	220	10×20	0.098	880	EGXE500E□□221MJ20S		10	10×25	—	85	EGXE351E□□100MJ25S
	330	12.5×20	0.081	990	EGXE500E□□331MK20S		22	12.5×25	—	139	EGXE351E□□220MK25S
	470	12.5×25	0.059	1,150	EGXE500E□□471MK25S		33	16×25	—	189	EGXE351E□□330ML25S
	1,000	16×31.5	0.032	1,590	EGXE500E□□102MLN3S		47	16×31.5	—	243	EGXE351E□□470MLN3S
63	33	8×12	1.5	150	EGXE630E□□330MH12D	400	4.7	10×20	—	53	EGXE401E□□4R7MJ20S
	47	10×12.5	0.59	530	EGXE630E□□470MJC5S		10	10×25	—	86	EGXE401E□□100MJ25S
	100	10×16	0.41	690	EGXE630E□□101MJ16S		22	12.5×30	—	142	EGXE401E□□220MK30S
	220	12.5×20	0.16	1,050	EGXE630E□□221MK20S		33	16×25	—	189	EGXE401E□□330ML25S
	330	12.5×25	0.12	1,290	EGXE630E□□331MK25S		47	16×31.5	—	243	EGXE401E□□470MLN3S
	470	12.5×30	0.097	1,460	EGXE630E□□471MK30S	450	4.7	10×25	—	58	EGXE451E□□4R7MJ25S
	1,000	16×31.5	0.059	1,850	EGXE630E□□102MLN3S		10	12.5×20	—	86	EGXE451E□□100MK20S
80	22	8×12	1.5	150	EGXE800E□□220MH12D		22	16×25	—	154	EGXE451E□□220ML25S
	33	10×12.5	0.80	480	EGXE800E□□330MJC5S		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

● Frequency 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°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced.

Mouser Electronics

Authorized Distributor

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[United Chemi-Con \(UCC\):](#)

EGXE101ELL101MK20S	EGXE101ELL470MJ16S	EGXE350ETC101MH12D	EGXE350ELL471MK20S
EGXE500ETD101MJC5S	EGXE500ETD221MJ20S	EGXE500ELL102MLN3S	EGXE630ELL101MJ16S
EGXE500ELL471MK25S	EGXE630ELL471MLN3S	EGXE630ELL471MM25S	EGXE350ELL101MH12D
EGXE500ELL101MJC5S	EGXE500ELL221MJ20S	EGXE100ELL102MJ20S	EGXE100ELL221MH12D
EGXE100ELL222MK25S	EGXE100ELL331MJC5S	EGXE100ELL332ML25S	EGXE100ELL472MLN3S
EGXE101ELL330MJC5S	EGXE101ELL4R7MH12D	EGXE160ELL101MH12D	EGXE160ELL102MK20S
EGXE160ELL221MJC5S	EGXE160ELL331MJC5S	EGXE160ELL471MJ16S	EGXE161ELL101ML25S
EGXE161ELL151MLN3S	EGXE161ELL220MJ20S	EGXE161ELL330MJ25S	EGXE161ELL470MK20S
EGXE161ELL680MK25S	EGXE201ELL100MJ20S	EGXE201ELL101ML25S	EGXE201ELL680ML20S
EGXE250ELL101MH12D	EGXE250ELL102MK25S	EGXE250ELL221MJC5S	EGXE250ELL222MLN3S
EGXE250ELL271MJC5S	EGXE250ELL471MJ20S	EGXE251ELL100MJ20S	EGXE251ELL220MK20S
EGXE251ELL330MK25S	EGXE251ELL680MLN3S	EGXE350ELL100MH12D	EGXE350ELL220MH12D
EGXE350ELL221MJ16S	EGXE350ELL330MH12D	EGXE350ELL331MJ20S	EGXE350ELL470MH12D
EGXE351ELL100MJ25S	EGXE351ELL220MK25S	EGXE351ELL330ML25S	EGXE351ELL470MLN3S
EGXE351ELL4R7MJ20S	EGXE401ELL100MJ25S	EGXE401ELL220MK30S	EGXE401ELL330ML25S
EGXE401ELL4R7MJ20S	EGXE451ELL100MK20S	EGXE451ELL220ML25S	EGXE451ELL330MLN3S
EGXE451ELL4R7MJ25S	EGXE500ELL330MH12D	EGXE500ELL470MH12D	EGXE500ELL4R7MH12D
EGXE630ELL331MK25S	EGXE630ELL470MJC5S	EGXE630ELL471MK30S	EGXE800ELL101MJ20S
EGXE800ELL220MH12D	EGXE800ELL221MK25S	EGXE800ELL331MK30S	EGXE800ELL470MJC5S
EGXE630ETE331MK25S	EGXE201ELL470MK25S	EGXE401ELL470MLN3S	EGXE160ELL332MLN3S
EGXE630ELL330MH12D	EGXE630ELL221MK20S	EGXE101ELL100MH12D	EGXE101ELL220MJC5S
EGXE100ELL471MJC5S	EGXE160ELL222ML25S	EGXE251ELL470ML25S	EGXE250ELL331MJ16S
EGXE350ELL101MJC5S	EGXE350ELL102ML25S	EGXE500ELL100MH12D	EGXE500ELL220MH12D
EGXE500ELL331MK20S	EGXE800ELL330MJC5S	EGXE800ELL471ML25S	EGXE101ELL221ML25S
EGXE101ELL331MLN3S	EGXE201ELL220MJ25S	EGXE201ELL330MK20S	EGXE630ETD101MJ16S