

# GXF Series

- Downsizing and high-ripple current version of GXE series
- For automobile modules and networking equipment and other high temperature applications
- Endurance with ripple current : 3,000 hours at 125°C
- Solvent resistant type except 160 to 400V<sub>dc</sub>
- RoHS2 Compliant
- AEC-Q200 compliant : Please contact Chemi-Con for more details, test data, information.



## SPECIFICATIONS

Items	Characteristics								
Category	-40 to +125°C								
Temperature Range									
Rated Voltage Range	25 to 400V <sub>dc</sub>								
Capacitance Tolerance	±20%(M) (20°C, 120Hz)								
Leakage Current	25 to 100V <sub>dc</sub>				160 to 400V <sub>dc</sub>				
	I=0.03CV or 4 µA, 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 after 1 minute)									
Dissipation Factor (tan δ)	Rated voltage (V <sub>dc</sub> )	25V	35V	50V	63V	80V	100V	160 to 250V	350 to 400V
	tan δ (Max.)	0.14	0.12	0.10	0.10	0.08	0.08	0.15	0.20
	When nominal capacitance exceeds 1,000 µF, add 0.02 to the value above for each 1,000 µF increase. (at 20°C, 120Hz)								
Low Temperature Characteristics (Max. Impedance Ratio)	Rated voltage (V <sub>dc</sub> )	25V	35V	50V	63V	80V	100V	160 to 250V	350 to 400V
	Z(-25°C)/Z(+20°C)	2	2	2	2	2	2	3	6
	Z(-40°C)/Z(+20°C)	4	4	4	4	4	4	6	12
(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 (the peak voltage shall not exceed the rated voltage) for the 3,000 hours at 125°C.								
	Rated Voltage	25 to 100V <sub>dc</sub>				160 to 400V <sub>dc</sub>			
	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 (500hours for 160 to 400V <sub>dc</sub> ) 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.								
	Rated Voltage	25 to 100V <sub>dc</sub>				160 to 400V <sub>dc</sub>			
	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	10	12.5	14.5	16	18
Φd	0.6	0.6	0.8	0.8	0.8
F	5.0	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

□ □ : is not solvent resistant.

VV (V <sub>dc</sub> )	Cap (μF)	Case size φDxL(mm)	ESR (Ωmax./100kHz)		Rated ripple current (mA <sub>rms</sub> /125°C, 100kHz)	Part No.	VV (V <sub>dc</sub> )	Cap (μF)	Case size φDxL(mm)	ESR (Ωmax./100kHz)		Rated ripple current (mA <sub>rms</sub> /125°C, 100kHz)	Part No.
			20°C	-40°C						20°C	-40°C		
100	330	16×25	0.057	0.39	2,190	EGXF101E□□331ML25S	250	39	10×30	—	—	1,410	EGXF251E□□390MJ30S
	330	18×20	0.069	0.39	1,690	EGXF101E□□331MM20S		47	10×35	—	—	1,600	EGXF251E□□470MJ35S
	360	14.5×30	0.050	0.40	2,620	EGXF101E□□361MJ30S		51	12.5×25	—	—	1,510	EGXF251E□□510MK25S
	390	12.5×40	0.044	0.33	2,970	EGXF101E□□391MK40S		51	14.5×20	—	—	1,340	EGXF251E□□510MU20S
	390	14.5×35	0.044	0.33	2,850	EGXF101E□□391MU35S		56	10×40	—	—	1,790	EGXF251E□□560MJ40S
	390	16×30	0.044	0.33	2,770	EGXF101E□□391ML30S		62	16×20	—	—	1,500	EGXF251E□□620ML20S
	430	18×25	0.054	0.32	2,310	EGXF101E□□431MM25S		68	12.5×30	—	—	1,770	EGXF251E□□680MK30S
	510	14.5×40	0.038	0.26	3,230	EGXF101E□□511MU40S		68	14.5×25	—	—	1,610	EGXF251E□□680MU25S
	510	16×35	0.037	0.26	3,010	EGXF101E□□511ML35S		82	12.5×35	—	—	1,970	EGXF251E□□820MK35S
	560	18×30	0.043	0.26	2,830	EGXF101E□□561MM30S		82	18×20	—	—	1,730	EGXF251E□□820MM20S
	620	16×40	0.032	0.21	3,320	EGXF101E□□621ML40S		91	14.5×30	—	—	1,880	EGXF251E□□910MJ30S
	680	18×35	0.034	0.19	3,210	EGXF101E□□681MM35S		91	16×25	—	—	1,850	EGXF251E□□910ML25S
820	18×40	0.029	0.16	3,410	EGXF101E□□821MM40S	100	12.5×40	—	—	2,150	EGXF251E□□101MK40S		
160	51	10×20	—	—	900	EGXF161E□□510MJ20S	100	14.5×35	—	—	2,030	EGXF251E□□101MU35S	
	62	10×25	—	—	1,200	EGXF161E□□620MJ25S	120	18×25	—	—	2,050	EGXF251E□□121MM25S	
	75	12.5×20	—	—	1,220	EGXF161E□□750MK20S	130	14.5×40	—	—	2,250	EGXF251E□□131MU40S	
	82	10×30	—	—	1,410	EGXF161E□□820MJ30S	16	10×20	—	—	460	EGXF351E□□160MJ20S	
	100	10×35	—	—	1,600	EGXF161E□□101MJ35S	20	10×25	—	—	610	EGXF351E□□200MJ25S	
	100	14.5×20	—	—	1,340	EGXF161E□□101MU20S	24	12.5×20	—	—	680	EGXF351E□□240MK20S	
	110	12.5×25	—	—	1,510	EGXF161E□□111MK25S	27	10×30	—	—	720	EGXF351E□□270MJ30S	
	120	10×40	—	—	1,790	EGXF161E□□121MJ40S	33	10×35	—	—	820	EGXF351E□□330MJ35S	
	130	16×20	—	—	1,500	EGXF161E□□131ML20S	33	14.5×20	—	—	870	EGXF351E□□330MJ20S	
	150	12.5×30	—	—	1,770	EGXF161E□□151MK30S	36	10×40	—	—	940	EGXF351E□□360MJ40S	
	150	14.5×25	—	—	1,610	EGXF161E□□151MU25S	36	12.5×25	—	—	980	EGXF351E□□360MK25S	
	180	12.5×35	—	—	1,970	EGXF161E□□181MK35S	43	16×20	—	—	970	EGXF351E□□430ML20S	
	180	14.5×30	—	—	1,880	EGXF161E□□181MU30S	47	12.5×30	—	—	1,210	EGXF351E□□470MK30S	
	180	18×20	—	—	1,730	EGXF161E□□181MM20S	47	14.5×25	—	—	1,210	EGXF351E□□470MU25S	
	200	12.5×40	—	—	2,150	EGXF161E□□201MK40S	56	12.5×35	—	—	1,330	EGXF351E□□560MK35S	
	200	16×25	—	—	1,850	EGXF161E□□201ML25S	56	16×25	—	—	1,130	EGXF351E□□560ML25S	
	220	14.5×35	—	—	2,030	EGXF161E□□221MU35S	56	18×20	—	—	1,060	EGXF351E□□560MM20S	
240	18×25	—	—	2,050	EGXF161E□□241MM25S	62	14.5×30	—	—	1,410	EGXF351E□□620MU30S		
270	14.5×40	—	—	2,250	EGXF161E□□271MU40S	68	12.5×40	—	—	1,450	EGXF351E□□680MK40S		
200	36	10×20	—	—	900	EGXF201E□□360MJ20S	68	14.5×35	—	—	1,590	EGXF351E□□680MU35S	
	43	10×25	—	—	1,200	EGXF201E□□430MJ25S	75	18×25	—	—	1,200	EGXF351E□□750MM25S	
	56	12.5×20	—	—	1,220	EGXF201E□□560MK20S	91	14.5×40	—	—	1,820	EGXF351E□□910MU40S	
	62	10×30	—	—	1,410	EGXF201E□□620MJ30S	12	10×20	—	—	460	EGXF401E□□120MJ20S	
	75	10×35	—	—	1,600	EGXF201E□□750MJ35S	16	10×25	—	—	610	EGXF401E□□160MJ25S	
	75	14.5×20	—	—	1,340	EGXF201E□□750MU20S	20	10×30	—	—	720	EGXF401E□□200MJ30S	
	82	10×40	—	—	1,790	EGXF201E□□820MJ40S	20	12.5×20	—	—	680	EGXF401E□□200MK20S	
	82	12.5×25	—	—	1,510	EGXF201E□□820MK25S	24	10×35	—	—	820	EGXF401E□□240MJ35S	
	100	12.5×30	—	—	1,770	EGXF201E□□101MK30S	24	14.5×20	—	—	870	EGXF401E□□240MU20S	
	100	16×20	—	—	1,500	EGXF201E□□101ML20S	27	12.5×25	—	—	980	EGXF401E□□270MK25S	
	110	14.5×25	—	—	1,610	EGXF201E□□111MU25S	30	10×40	—	—	940	EGXF401E□□300MJ40S	
	130	12.5×35	—	—	1,970	EGXF201E□□131MK35S	33	16×20	—	—	970	EGXF401E□□330ML20S	
	130	14.5×30	—	—	1,880	EGXF201E□□131MU30S	36	12.5×30	—	—	1,210	EGXF401E□□360MK30S	
	130	18×20	—	—	1,730	EGXF201E□□131MM20S	36	14.5×25	—	—	1,210	EGXF401E□□360MU25S	
	150	12.5×40	—	—	2,150	EGXF201E□□151MK40S	43	12.5×35	—	—	1,330	EGXF401E□□430MK35S	
	150	16×25	—	—	1,850	EGXF201E□□151ML25S	43	18×20	—	—	1,060	EGXF401E□□430MM20S	
	160	14.5×35	—	—	2,030	EGXF201E□□161MU35S	47	14.5×30	—	—	1,410	EGXF401E□□470MU30S	
	180	18×25	—	—	2,050	EGXF201E□□181MM25S	47	16×25	—	—	1,130	EGXF401E□□470ML25S	
200	14.5×40	—	—	2,250	EGXF201E□□201MU40S	51	12.5×40	—	—	1,450	EGXF401E□□510MK40S		
250	24	10×20	—	—	900	EGXF251E□□240MJ20S	56	14.5×35	—	—	1,590	EGXF401E□□560MU35S	
	30	10×25	—	—	1,200	EGXF251E□□300MJ25S	62	18×25	—	—	1,200	EGXF401E□□620MM25S	
	36	12.5×20	—	—	1,220	EGXF251E□□360MK20S	68	14.5×40	—	—	1,820	EGXF401E□□680MU40S	

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

### ◆RATED RIPPLE CURRENT MULTIPLIERS

#### ● Frequency Multipliers

(25 to 100V<sub>dc</sub>)

Capacitance(μF)	Frequency(Hz)	120	1k	10k	100k
130 to 240		0.40	0.82	0.93	1.00
270 to 560		0.50	0.85	0.94	1.00
620 to 2,000		0.60	0.87	0.95	1.00
2,200 to 4,300		0.75	0.90	0.95	1.00
4,700 to 11,000		0.85	0.95	0.98	1.00

(160 to 400V<sub>dc</sub>)

Capacitance(μF)	Frequency(Hz)	50	120	300	1k	10k	100k
12 to 33		0.15	0.30	0.45	0.65	0.95	1.00
36 to 270		0.25	0.35	0.50	0.70	0.96	1.00

Please contact us for lifetime estimation.