

GXH Series

- For automobile modules and other high temperature applications
- Endurance with ripple current : 1,500 to 2,000 hours at 135°C
- Solvent resistant type (see PRECAUTIONS AND GUIDELINES)
- RoHS Compliant

GXE $\xrightarrow{\text{Higher temperature}}$ GXH

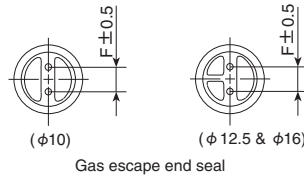
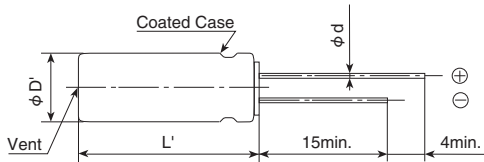


◆ SPECIFICATIONS

Items	Characteristics					
Category	-40 to +135°C					
Temperature Range	-40 to +135°C					
Rated Voltage Range	10 to 50V _{dc}					
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 _{dc})	10V	16V	25V	35V	50V
	tanδ (Max.)	0.20	0.16	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 _{dc})	10V	16V	25V	35V	50V
	Z(-25°C)/Z(+20°C)	3	2	2	2	2
	Z(-40°C)/Z(+20°C)	6	4	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 (the peak voltage shall not exceed the rated voltage) for the specified time at 135°C.					
	Time	φ10 : 1,500hours		φ12.5 & φ16 : 2,000hours		
	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 135°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				

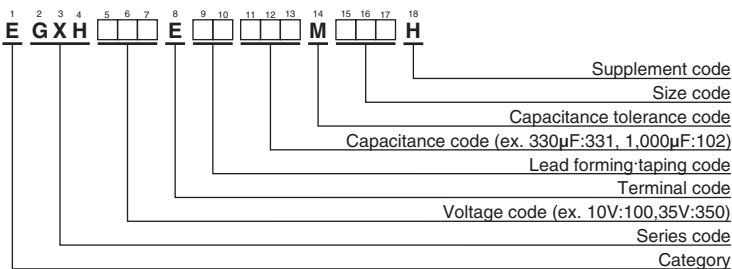
◆ DIMENSIONS [mm]

- Terminal Code : E



φD	10	12.5	16
φd	0.6	0.6	0.8
F	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)"

◆ MARKING

EX) 35V470μF



◆STANDARD RATINGS

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	Impedance (Ω _{max} /20°C, 100kHz)	Rated ripple current (mA _{rms} /135°C, 100kHz)	Part No.
10	330	10 × 12.5	0.15	620	EGXH100E□□331MJC5H
	470	10 × 12.5	0.15	620	EGXH100E□□471MJC5H
	1,000	10 × 20	0.075	950	EGXH100E□□102MJ20H
	2,200	12.5 × 25	0.040	1,350	EGXH100E□□222MK25H
	3,300	16 × 25	0.031	1,620	EGXH100E□□332ML25H
	4,700	16 × 31.5	0.025	1,860	EGXH100E□□472MLN3H
16	220	10 × 12.5	0.15	620	EGXH160E□□221MJC5H
	330	10 × 12.5	0.15	620	EGXH160E□□331MJC5H
	470	10 × 16	0.094	790	EGXH160E□□471MJ16H
	1,000	12.5 × 20	0.058	1,080	EGXH160E□□102MK20H
	2,200	16 × 25	0.031	1,620	EGXH160E□□222ML25H
	3,300	16 × 31.5	0.025	1,860	EGXH160E□□332MLN3H
25	220	10 × 12.5	0.15	620	EGXH250E□□221MJC5H
	330	10 × 16	0.094	790	EGXH250E□□331MJ16H
	470	10 × 20	0.075	950	EGXH250E□□471MJ20H
	1,000	12.5 × 25	0.040	1,350	EGXH250E□□102MK25H
	2,200	16 × 31.5	0.025	1,860	EGXH250E□□222MLN3H
35	100	10 × 12.5	0.15	620	EGXH350E□□101MJC5H
	220	10 × 16	0.094	790	EGXH350E□□221MJ16H
	330	10 × 20	0.075	950	EGXH350E□□331MJ20H
	470	12.5 × 20	0.058	1,080	EGXH350E□□471MK20H
	1,000	16 × 25	0.031	1,620	EGXH350E□□102ML25H
50	100	10 × 12.5	0.20	520	EGXH500E□□101MJC5H
	220	10 × 20	0.098	880	EGXH500E□□221MJ20H
	330	12.5 × 20	0.081	990	EGXH500E□□331MK20H
	470	12.5 × 25	0.059	1,150	EGXH500E□□471MK25H
	1,000	16 × 31.5	0.032	1,590	EGXH500E□□102MLN3H

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

◆RATED RIPPLE CURRENT MULTIPLIERS

●Frequency Multipliers

Capacitance (μF)	Frequency (Hz)			
	120	1k	10k	100k
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

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.