

## Overview

The KEMET GF compact metal box filters cover single-phase requirements with a wide variety of characteristics. These filters are optimized for conduction noise. Their input/output terminals are screw type or Faston® type.

## Applications

- Industrial equipment
- Electronic equipment

## Benefits

- Single-phase 250 VAC
- Current range from 5 to 20 A
- Operating temperature range from -20°C to +60°C (except GF-205E at -20°C to +55°C)
- UL or CSA approved versions available
- RoHS compliant

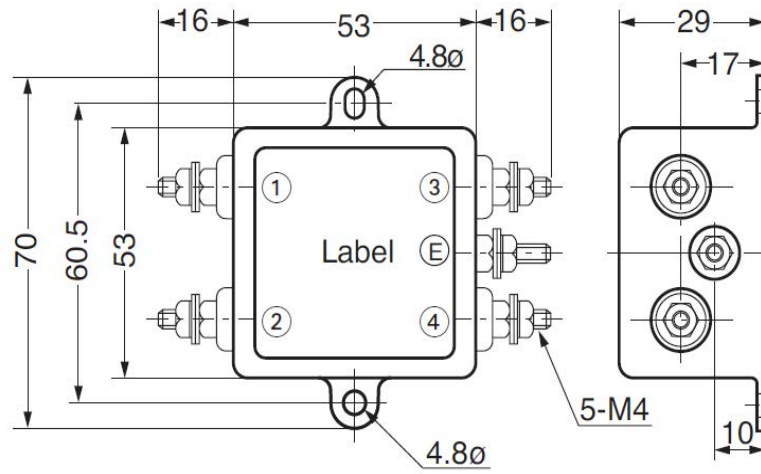


## Part Number System

GF-	2	20	U
Series	Phase	Rated Current (A)	Specification
GF	2 = Single-phase	0x = 0x A xx = xx A	E = Faston® terminal, CSA approved U = Screw terminal, UL approved  Note: Faston® is a registered trademark of Tyco Electronics AMP

## Dimensions – Millimeters

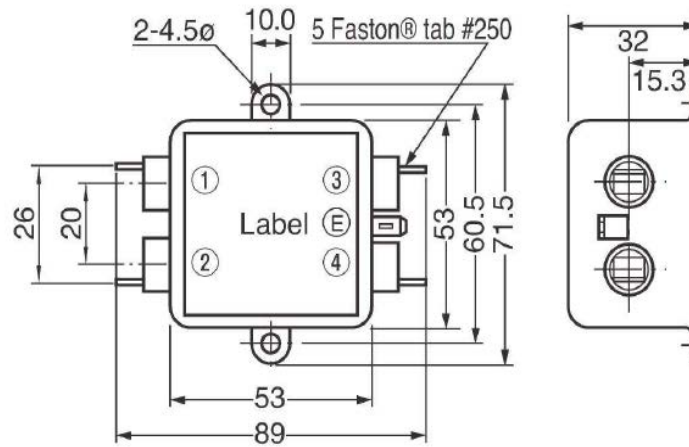
### GF-2\*\*U



Recommended torque (N-m) maximum

- Line terminal (M4: 0.78)
- Earth terminal (M4: 1.18)

### GF-2\*\*E



Recommended torque (N-m) maximum

- Line terminal (M4: 0.78)
- Earth terminal (M4: 1.18)

Faston® is a registered trademark of Tyco Electronics AMP.

## Environmental Compliance

KEMET GF EMI-RFI Filters comply with EU RoHS Directive 2011/65/EU and (EU) 2015/863. Products that fall under the exemptions listed in below table are also included.



Part Number	RoHS Compliant	RoHS Exemption Code
GF-205U	Yes	6(c) and 7(c)-I
GF-210U	Yes	6(c) and 7(c)-I
GF-220U	Yes	6(c) and 7(c)-I
GF-205E	Yes	7(c)-I

Code	Exemption
6(c)	Copper alloy containing up to 4% lead by weight
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound

## Approvals

Certification Body	File Number	Part Number
UL	E59551	GF-205U, GF-210U and GF-220U
CSA	LR50413	GF-205E

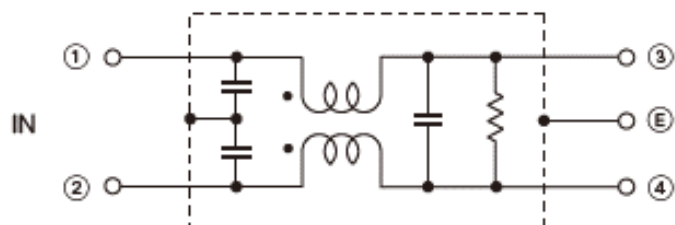
## Performance Characteristics

Item	Performance Characteristics
Rated Voltage	250 V
Rated Current Range	5 – 20 A
Withstanding Voltage	1,500 VAC (1 minute, line to ground)
Insulation Resistance	300 MΩ minimum at 500 VDC (1 minute, line to ground)
Leakage Current	1 mA maximum at 250 V/60 Hz
Input/Output Terminal Type	Screw and Faston®
Operating Temperature Range	-20°C to +60°C, except GF-205E at -20°C to +55°C (not including self temperature rise)

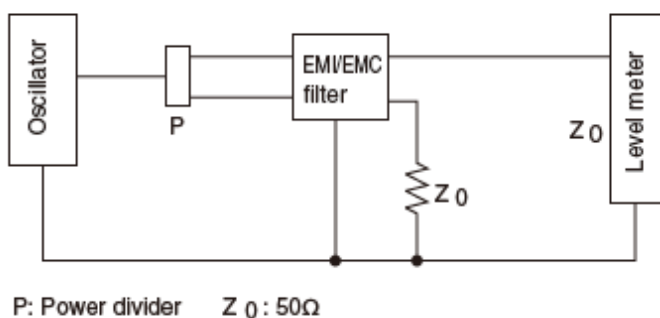
**Table 1 – Ratings & Part Number Reference**

Part Number	Phase	Rated Voltage AC/DC (V)	Rated Current AC/DC (A)	Leakage Current at 250 V/60 Hz (mA) Maximum	Temperature Rise (K) Maximum	Operating Temperature Range	Terminal Type	Approval	Weight (g)
GF-205U	Single-phase	250	5	1	30	-20°C to +60°C	Screw	UL	130
GF-210U	Single-phase	250	10	1	30	-20°C to +60°C	Screw	UL	140
GF-220U	Single-phase	250	20	1	30	-20°C to +60°C	Screw	UL	150
GF-205E	Single-phase	250	5	1	30	-20°C to +55°C	Faston®	CSA	130

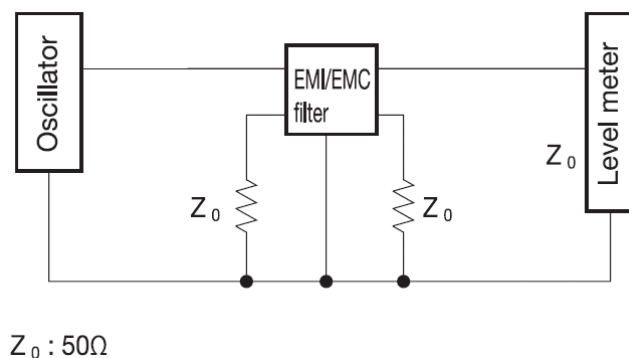
**Circuit Diagram**



**Measuring Circuit - Common Mode**

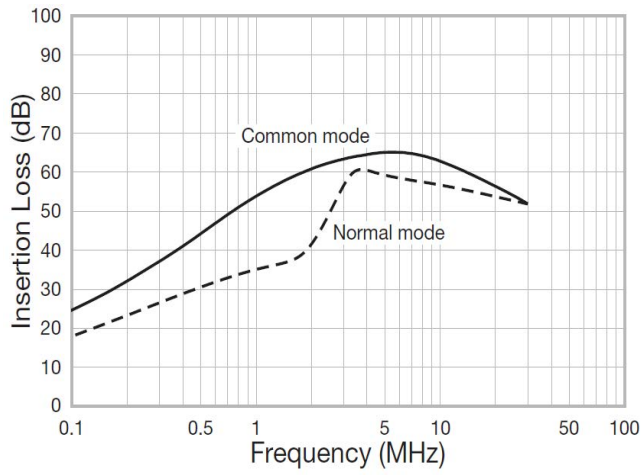


**Measuring Circuit - Normal Mode**

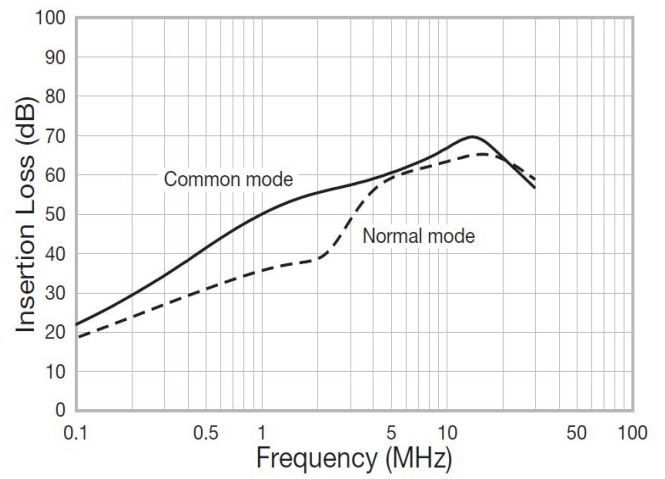


## Attenuation (Static Characteristics)

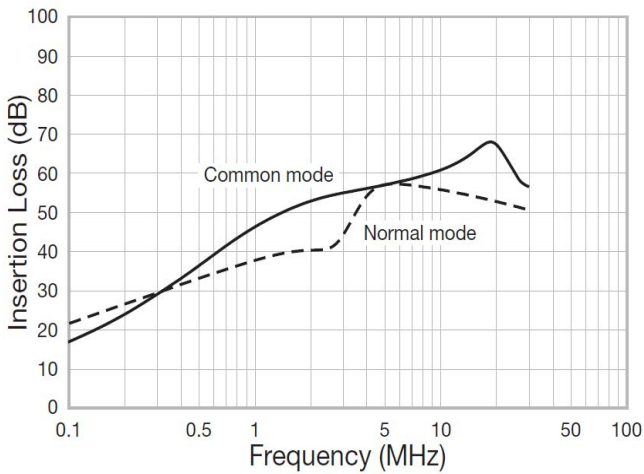
**GF-205U**



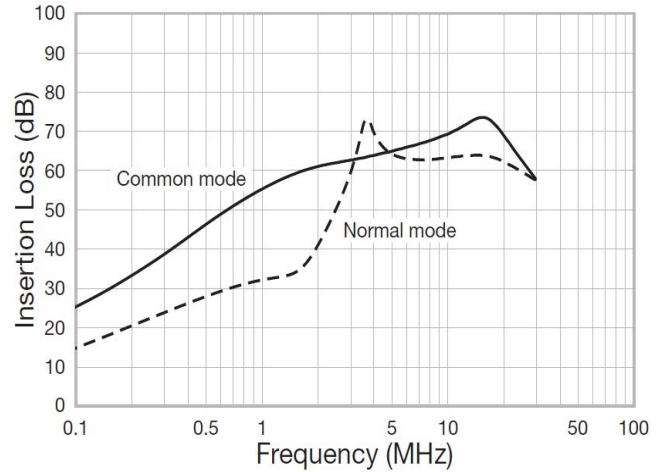
**GF-210U**



**GF-220U**



**GF-205E**



## Packaging

Part Type	Packaging Type	Pieces per Box
GF-2**U	Tray	10
GF-2**E		50

## Handling Precautions

### Precautions for product storage

EMI-RFI Filters should be stored in normal working environments. While the filters themselves are quite robust in other environments, solderability will be degraded by exposure to high temperatures, high humidity, corrosive atmospheres, and long term storage.

KEMET recommends that maximum storage temperature not exceed 40°C, maximum storage humidity not exceed 70% relative humidity, and atmospheres should be free of chlorine and sulfur bearing compounds. Temperature fluctuations should be minimized to avoid condensation on the parts. Also, avoid storage near strong magnetic fields as this might magnetize the product.

EMI-RFI Filters' stock should be used promptly, preferably within 12 months of receipt.

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