

## Overview

The KEMET GT metal box filters cover single-phase requirements with a wide variety of characteristics. These filters are optimized for both common and normal mode noise. Their input/output terminals are screw type or Faston type.

## Applications

- Industrial equipment
- Electronic equipment
- Vending machines

## Benefits

- Single-phase
- Operating temperature range from -25°C to +55°C
- UL, CSA, or TÜV approved versions available
- RoHS compliant

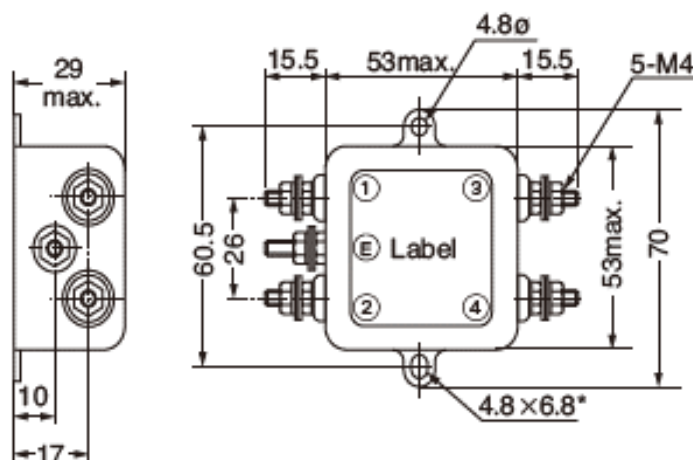


## Part Number System

| GT-    | 2                | 20                     | 01V                                                                                                                                                                                                                                                                               |
|--------|------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Series | Phase            | Rated Current (A)      | Specification                                                                                                                                                                                                                                                                     |
| GT     | 2 = Single-phase | 0x = 0x A<br>xx = xx A | 0 = Standard, no approvals<br>01 = High performance at low frequency<br>02 = High performance at low frequency<br>01V = High performance at low frequency<br>J = Faston terminal with DC input support<br>R = High performance to pulse noise<br>U = UL, CSA, and/or TÜV approved |

## Dimensions – Millimeters

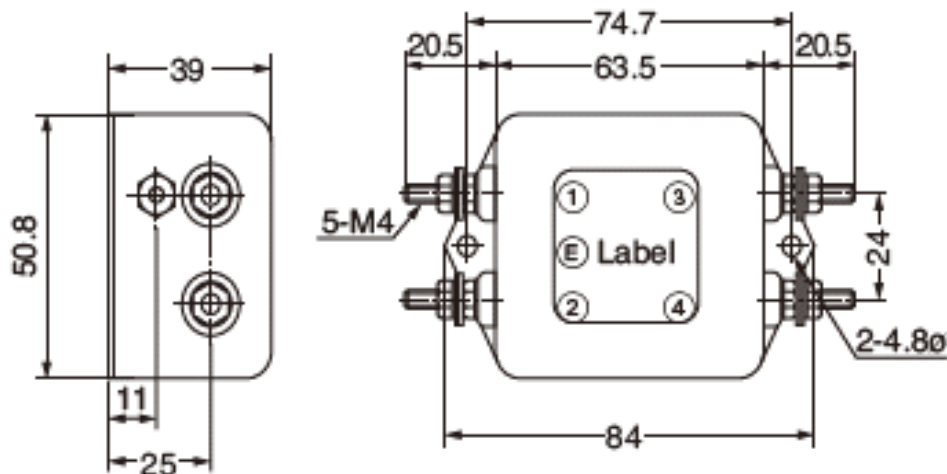
### GT-205U, GT-2050R



Recommended torque (N-m) maximum

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

### GT-2150R, GT-2100, GT-2150, GT-2200, GT-210U, GT-215U, GT-220U

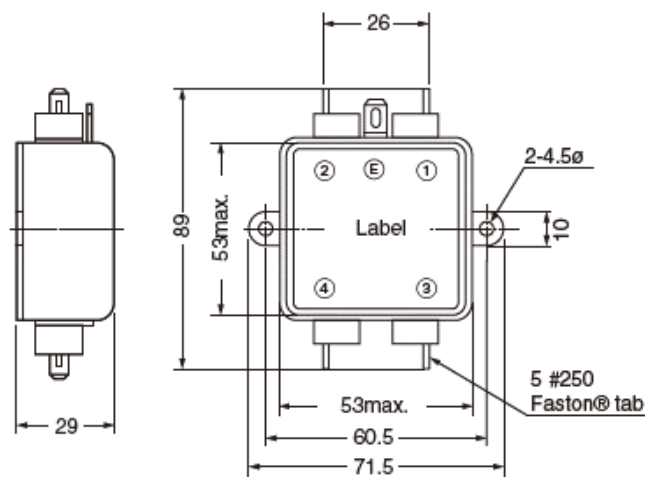


Recommended torque (N-m) maximum

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

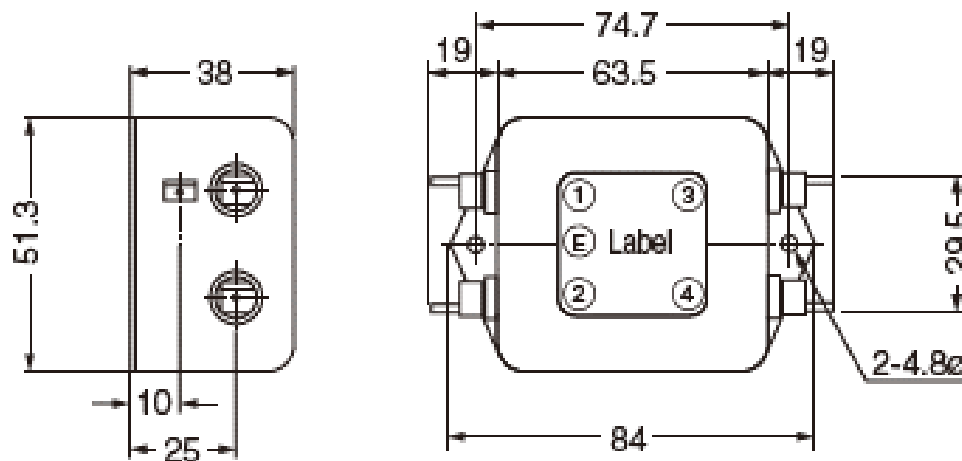
## Dimensions – Millimeters cont.

### GT-205J



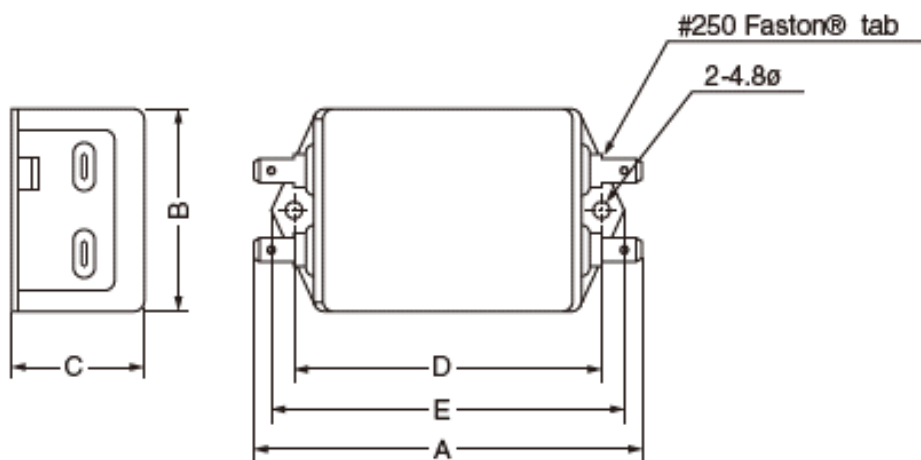
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### GT-210J, GT-215J



## Dimensions – Millimeters cont.

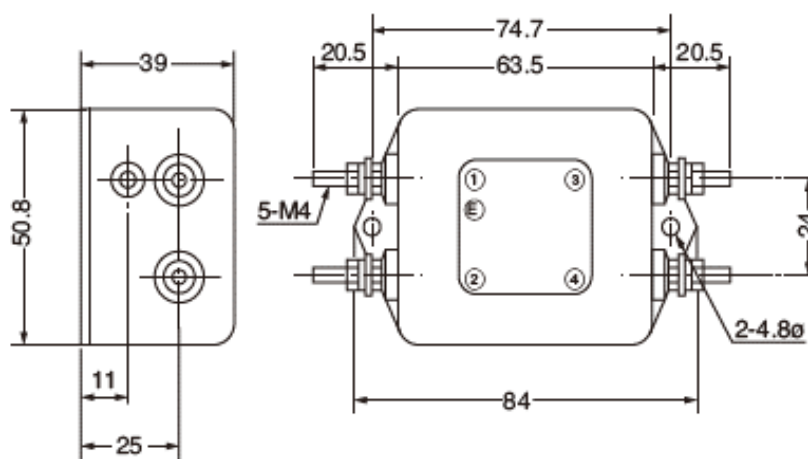
### GT-20301, GT-21001, GT-20302



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| Part Number | A     | B    | C    | D    | E    |
|-------------|-------|------|------|------|------|
| GT-20301    | 93.0  | 53.0 | 30.0 | 74.7 | 85.0 |
| GT-21001    | 105.5 | 57.5 | 44.5 | 87.0 | 96.5 |
| GT-20302    | 93.0  | 53.0 | 46.0 | 74.7 | 84.3 |

### GT-20501V, GT-21001V, GT-22001V



Recommended torque (N-m) maximum

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

## Environmental Compliance

All KEMET EMI-RFI Filters are RoHS compliant.



## Performance Characteristics

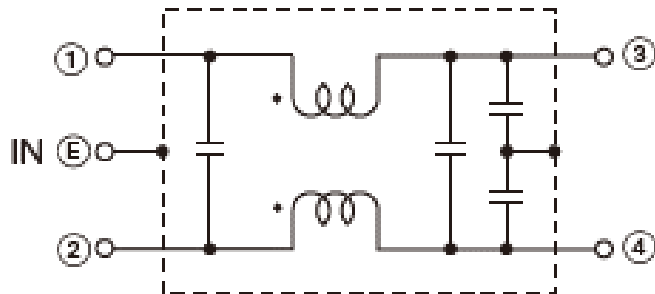
| Item                        | Performance Characteristics                          |
|-----------------------------|------------------------------------------------------|
| Rated Voltage               | 250 V                                                |
| Rated Current Range         | 3 – 20 A                                             |
| 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 Range       | 0.5 – 1.0 mA at 250 V/60 Hz maximum                  |
| Input/Output Terminal Type  | Screw and Faston                                     |
| Operating Temperature Range | -25°C to +55°C (not including self temperature rise) |

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

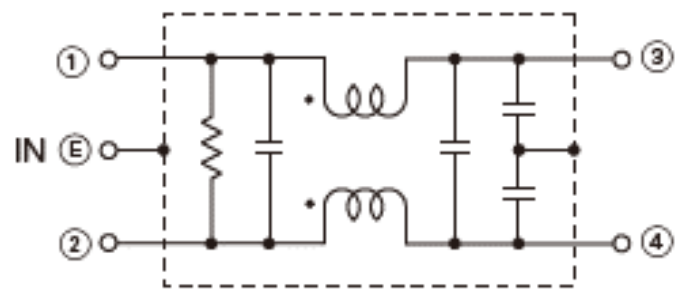
| Part Number | Phase        | Rated Voltage AC/DC (V) | Rated Current AC/DC (A) | Leakage Current at 250 V/60 Hz (mA) Maximum | Temperature Rise (K) Maximum | Operating Temperature Range | Terminal Type | Approval         | Weight (g) |
|-------------|--------------|-------------------------|-------------------------|---------------------------------------------|------------------------------|-----------------------------|---------------|------------------|------------|
| GT-205U     | Single-phase | 250                     | 5                       | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL, CSA, and TÜV | 170        |
| GT-2050R    | Single-phase | 250                     | 5                       | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 160        |
| GT-2150R    | Single-phase | 250                     | 15                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 280        |
| GT-2100     | Single-phase | 250                     | 10                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 260        |
| GT-2150     | Single-phase | 250                     | 15                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 270        |
| GT-2200     | Single-phase | 250                     | 20                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 270        |
| GT-210U     | Single-phase | 250                     | 10                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL, CSA, and TÜV | 260        |
| GT-215U     | Single-phase | 250                     | 15                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL               | 270        |
| GT-220U     | Single-phase | 250                     | 20                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL and TÜV       | 270        |
| GT-205J     | Single-phase | 250                     | 5                       | 0.5                                         | 35                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 135        |
| GT-210J     | Single-phase | 250                     | 10                      | 0.5                                         | 35                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 240        |
| GT-215J     | Single-phase | 250                     | 15                      | 0.5                                         | 35                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 255        |
| GT-20301    | Single-phase | 250                     | 3                       | 1.0                                         | 30                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 160        |
| GT-21001    | Single-phase | 250                     | 10                      | 1.0                                         | 30                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 300        |
| GT-20302    | Single-phase | 250                     | 3                       | 1.0                                         | 30                           | -25°C to +55°C              | Faston        | UL, CSA, and TÜV | 215        |
| GT-20501V   | Single-phase | 250                     | 5                       | 0.5                                         | 35                           | -25°C to +55°C              | Screw         |                  | 220        |
| GT-21001V   | Single-phase | 250                     | 10                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL, CSA, and TÜV | 280        |
| GT-22001V   | Single-phase | 250                     | 20                      | 0.5                                         | 35                           | -25°C to +55°C              | Screw         | UL and TÜV       | 285        |

## Circuit Diagram

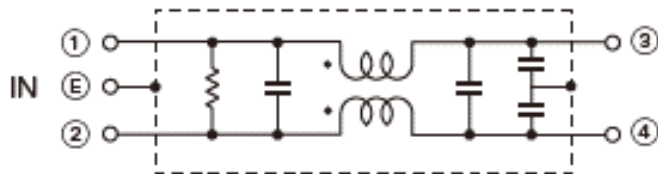
GT-2\*\*0, GT-2\*\*0R



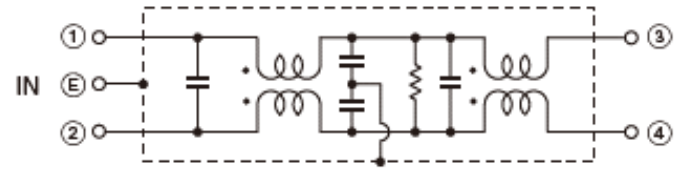
GT-2\*\*U



GT-2\*\*J, GT-2\*\*01

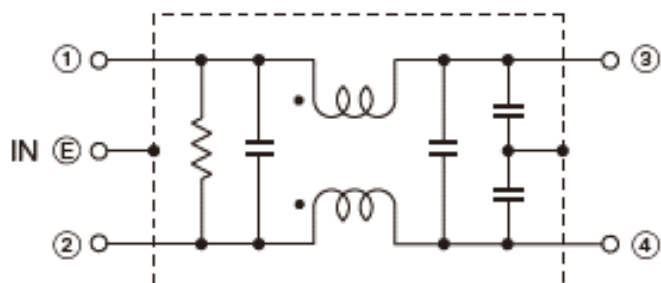


GT-2\*\*02

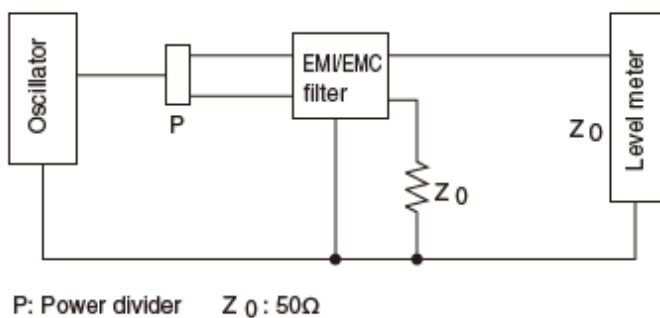


## Circuit Diagram cont.

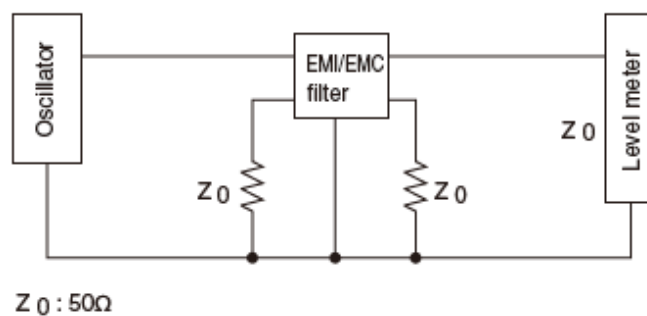
GT-2\*\*01V



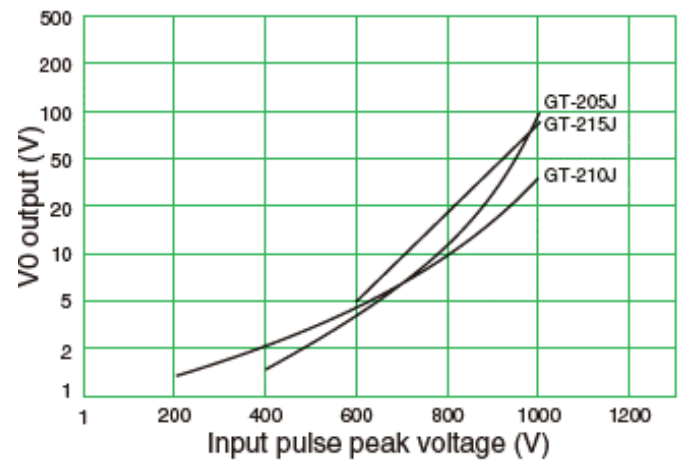
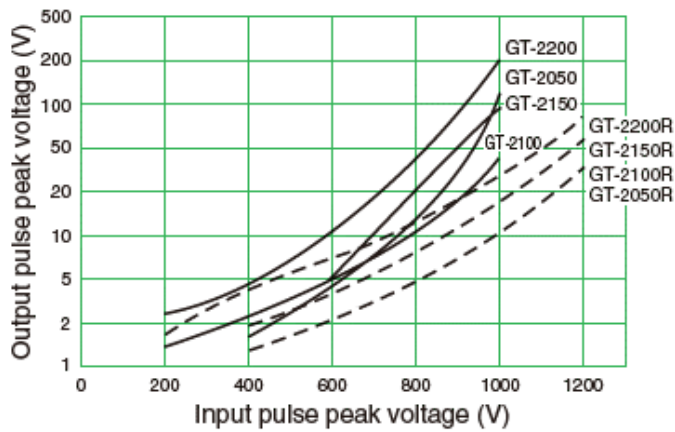
### Measuring Circuit - Common Mode



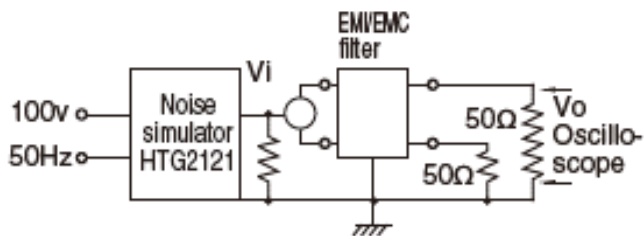
### Measuring Circuit - Normal Mode



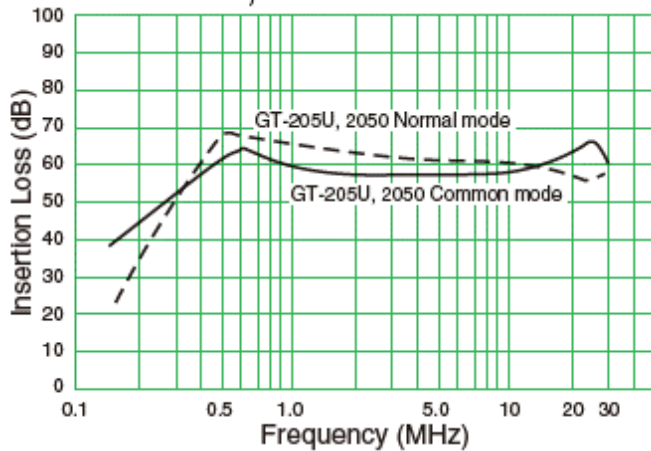
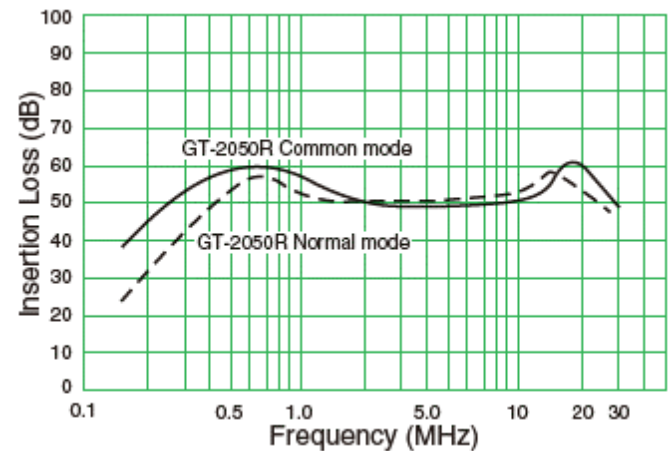
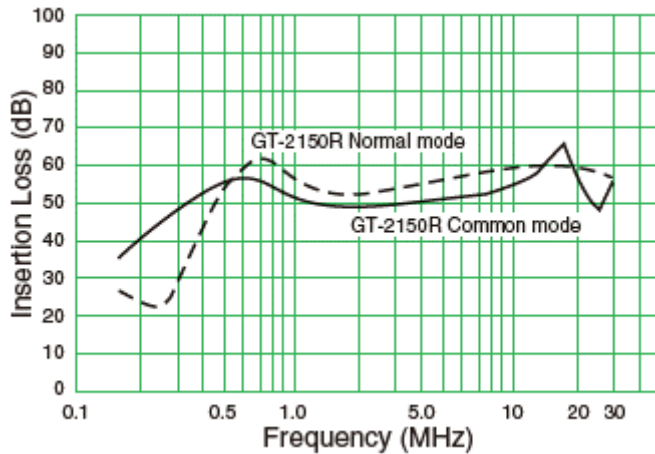
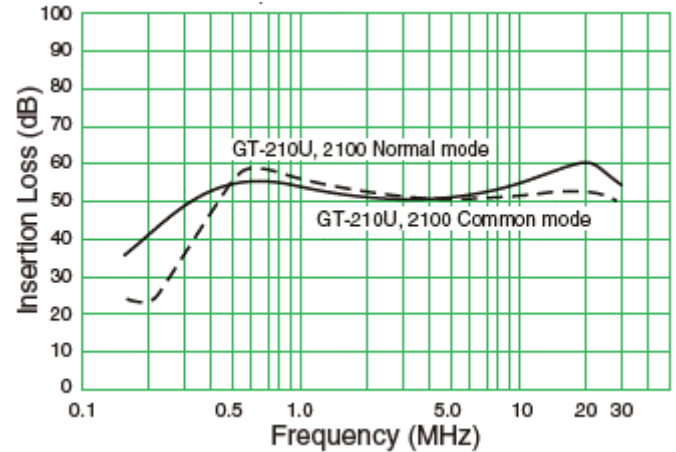
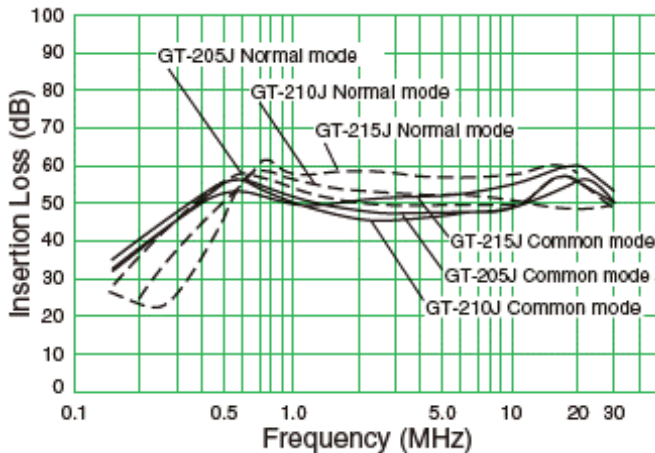
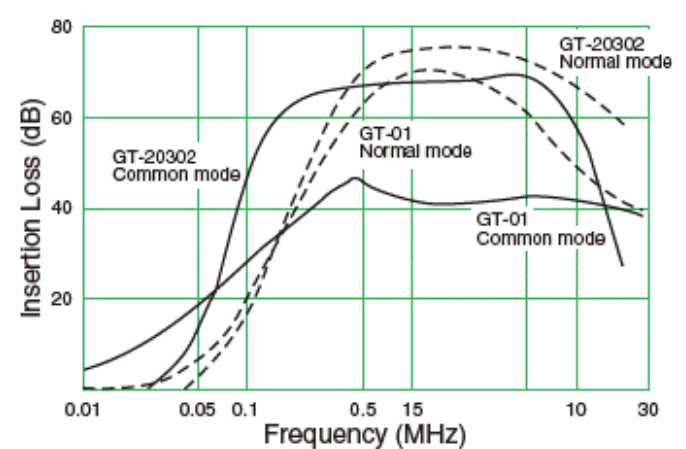
## Pulse Attenuation Characteristics



## Pulse Characteristic Measuring Circuit



## Attenuation (Static Characteristics)

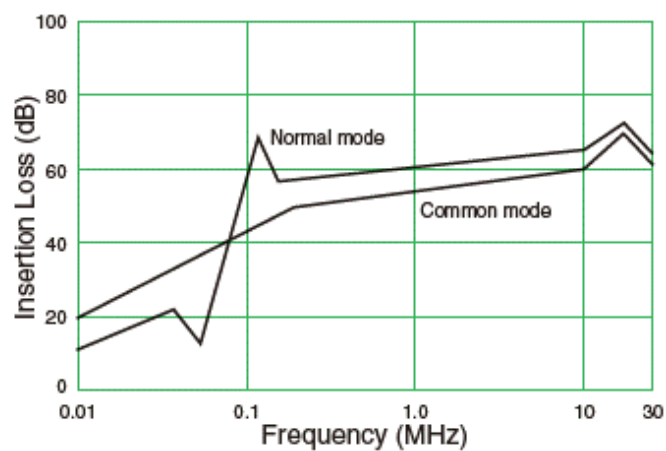
**GT-205U**

**GT-2050R**

**GT-2150R**

**GT-2200, GT-220U**

**GT-205J, GT-210J, GT-215J**

**GT-20301, GT-21001, GT-20302**


## Attenuation (Static Characteristics) cont.

### GT-20501V

Image coming soon

### GT-21001V



### GT-22001V

Image coming soon

## TÜV Rheinland Japan Ltd. Certification Numbers

| Part Number | File Number    |
|-------------|----------------|
| GT-205U     | N° R50015833   |
| GT-210U     | N° R50015833   |
| GT-220U     | N° R9651191    |
| GT-205J     | N° R50014761   |
| GT-210J     | N° R50014761   |
| GT-215J     | N° R50014761   |
| GT-20301    | N° R50015833   |
| GT-21001    | N° R50015833   |
| GT-20302    | N° R50015833   |
| GT-21001V   | N° R2-50004761 |
| GT-22001V   | N° R50007113   |

## Packaging

| Part Type | Packaging Type | Pieces per Box |
|-----------|----------------|----------------|
| GT-205U   | Tray           | 30             |
| GT-2050R  |                |                |
| GT-2150R  |                | 20             |
| GT-2100   |                | 40             |
| GT-2150   |                | 20             |
| GT-2200   |                | 30             |
| GT-210U   |                | 40             |
| GT-215U   |                | 20             |
| GT-220U   |                | 30             |
| GT-205J   |                | 50             |
| GT-210J   |                |                |
| GT-215J   |                | 40             |
| GT-20301  |                | 30             |
| GT-21001  |                | 32             |
| GT-20302  |                | 30             |
| GT-20501V |                | 40             |
| GT-21001V |                | 20             |
| GT-22001V |                | 40             |

## 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 and 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.

For optimized solderability, EMI-RFI Filters' stock should be used promptly, preferably within 6 months of receipt.

## Export Control

### For customers in Japan

For products which are controlled items subject to the "Foreign Exchange and Foreign Trade Law" of Japan, the export license specified by the law is required for export.

### For customers outside Japan

EMI-RFI Filters should not be used or sold for use in the development, production, stockpiling, or utilization of any conventional weapons or mass-destructive weapons (nuclear weapons, chemical or biological weapons, or missiles), or any other weapons.

## KEMET Electronics Corporation Sales Offices

For a complete list of our global sales offices, please visit [www.kemet.com/sales](http://www.kemet.com/sales).

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Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated or that other measures may not be required.

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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