

## Overview

The KEMET GTX plastic case filters cover single-phase EMC requirements with a wide variety of characteristics. By using nanocrystalline core material, these filters achieve excellent attenuation characteristics in a compact size. In addition, 6 different combinations of Y capacitors can be selected to support various inverter topologies. These filters are compact and lightweight due to its high mechanical density.

## Applications

- Industrial equipment
- General purpose inverter
- Medical equipment
- Commercial equipment

## Benefits

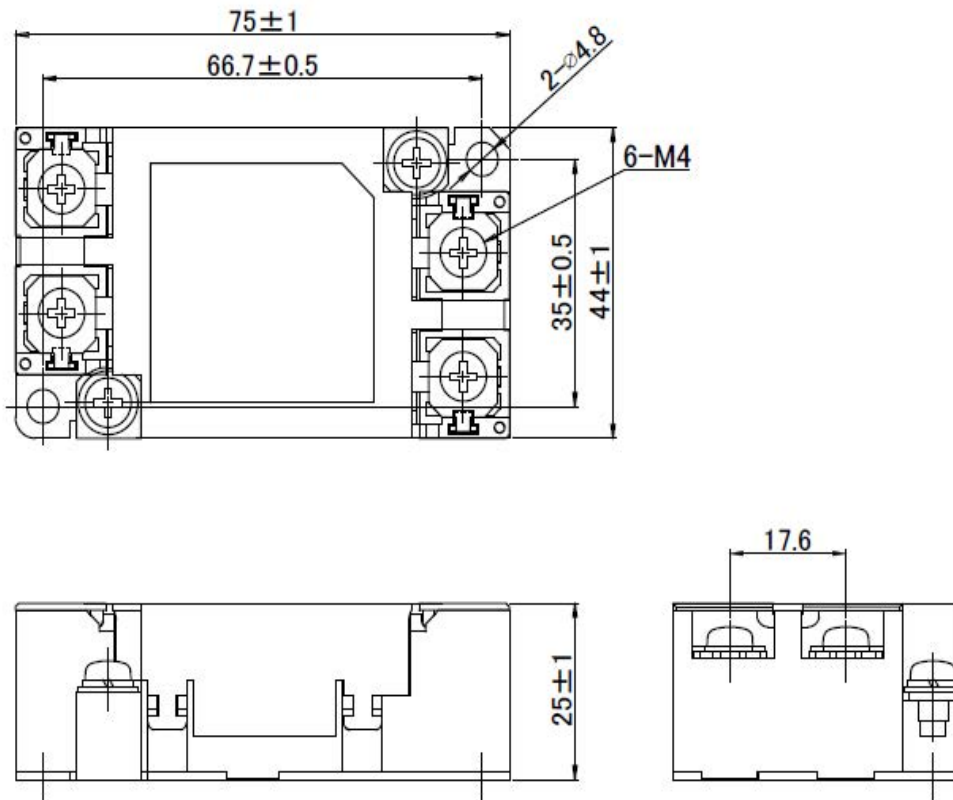
- Single-phase 250 VAC
- Current range from 6 to 30 A
- Nanocrystalline core material
- Selection of Y capacitors combinations
- Compact and lightweight
- Operating temperature range from -25°C to +55°C
- UL, c-UL, and TÜV approved
- RoHS compliant



## Part Number System

| GTX-   | 2                | 060-                    | Y00   |
|--------|------------------|-------------------------|---|
| Series | Phase            | Rated Current (A)       | Class Y Capacitors  |
| GTX    | 2 = Single-phase | 0x0 = x A<br>xx0 = xx A | Y00 = C <sub>y</sub> 1: None, C <sub>y</sub> 2: None<br>Y02 = C <sub>y</sub> 1: None, C <sub>y</sub> 2: 2,200 pF<br>Y03 = C <sub>y</sub> 1: None, C <sub>y</sub> 2: 3,300 pF<br>Y0X = C <sub>y</sub> 1: None, C <sub>y</sub> 2: 10,000 pF<br>Y22 = C <sub>y</sub> 1: 2,200 pF, C <sub>y</sub> 2: 2,200 pF<br>YXX = C <sub>y</sub> 1: 10,000 pF, C <sub>y</sub> 2: 10,000 pF |

**Dimensions – Millimeters**



**Environmental Compliance**

KEMET GTX EMI-RFI Filters are RoHS compliant.



**Approvals**

| Certification Body       | File Number | Part Number             |
|--------------------------|-------------|-------------------------|
| UL/cUL                   | E506378     | All GTX EMI-RFI Filters |
| TÜV Rheinland Japan Ltd. | R50457083   | All GTX EMI-RFI Filters |

## Performance Characteristics

| Item                        | Performance Characteristics                          |
|-----------------------------|--|
| Rated Voltage               | 250 VAC (50/60Hz) and 560 VDC <sup>1</sup>           |
| Rated Current Range         | 6 – 30 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       | 0.01 – 4.60 mA maximum at 250 V/60 Hz                |
| Input/Output Terminal Type  | Screw  |
| Operating Temperature Range | -25°C to +55°C (not including self temperature rise) |

<sup>1</sup> Rated DC voltage is not allowed to approval standards.

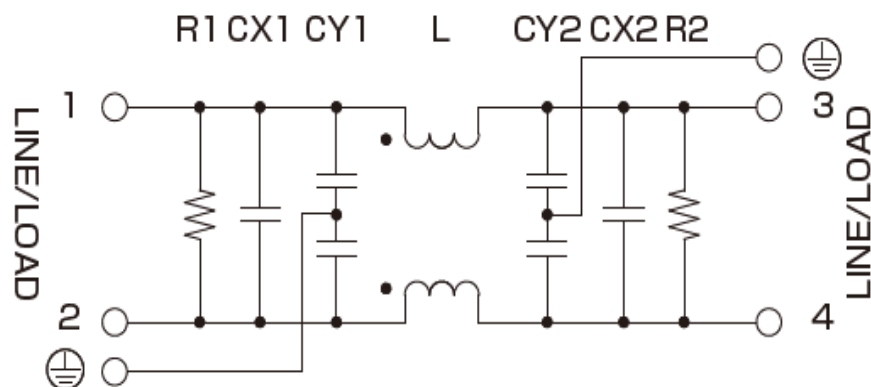
### Table 1 – Ratings & Part Number Reference

| Part Number  | Phase        | Rated Voltage AC/DC <sup>1</sup> (V) | Rated Current AC/DC (A) | Leakage Current at 250V/60 Hz (mA) Maximum | Temperature Rise (K) Maximum | Operating Temperature Range | Terminal Type | Approval          | Weight (g) |
|--------------|--------------|--------------------------------------|-------------------------|--|------------------------------|-----------------------------|---------------|-------------------|------------|
| GTX-2060-Y00 | Single-phase | AC250/DC560                          | 6                       | 0.01                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 123        |
| GTX-2060-Y02 | Single-phase | AC250/DC560                          | 6                       | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 123        |
| GTX-2060-Y03 | Single-phase | AC250/DC560                          | 6                       | 0.75                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 124        |
| GTX-2060-Y0X | Single-phase | AC250/DC560                          | 6                       | 2.30                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 125        |
| GTX-2060-Y22 | Single-phase | AC250/DC560                          | 6                       | 1.00                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 125        |
| GTX-2060-YXX | Single-phase | AC250/DC560                          | 6                       | 4.60                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 127        |
| GTX-2100-Y00 | Single-phase | AC250/DC560                          | 10                      | 0.01                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 121        |
| GTX-2100-Y02 | Single-phase | AC250/DC560                          | 10                      | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 122        |
| GTX-2100-Y03 | Single-phase | AC250/DC560                          | 10                      | 0.75                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 122        |
| GTX-2100-Y0X | Single-phase | AC250/DC560                          | 10                      | 2.30                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 124        |
| GTX-2100-Y22 | Single-phase | AC250/DC560                          | 10                      | 1.00                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 123        |
| GTX-2100-YXX | Single-phase | AC250/DC560                          | 10                      | 4.60                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 126        |
| GTX-2160-Y00 | Single-phase | AC250/DC560                          | 16                      | 0.01                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 125        |
| GTX-2160-Y02 | Single-phase | AC250/DC560                          | 16                      | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 126        |
| GTX-2160-Y03 | Single-phase | AC250/DC560                          | 16                      | 0.75                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 127        |
| GTX-2160-Y0X | Single-phase | AC250/DC560                          | 16                      | 2.30                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 128        |
| GTX-2160-Y22 | Single-phase | AC250/DC560                          | 16                      | 1.00                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 128        |
| GTX-2160-YXX | Single-phase | AC250/DC560                          | 16                      | 4.60                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 130        |
| GTX-2200-Y00 | Single-phase | AC250/DC560                          | 20                      | 0.01                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 128        |
| GTX-2200-Y02 | Single-phase | AC250/DC560                          | 20                      | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 129        |
| GTX-2200-Y03 | Single-phase | AC250/DC560                          | 20                      | 0.75                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 129        |
| GTX-2200-Y0X | Single-phase | AC250/DC560                          | 20                      | 2.30                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 131        |
| GTX-2200-Y22 | Single-phase | AC250/DC560                          | 20                      | 1.00                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 130        |
| GTX-2200-YXX | Single-phase | AC250/DC560                          | 20                      | 4.60                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 133        |
| GTX-2300-Y00 | Single-phase | AC250/DC560                          | 30                      | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 127        |
| GTX-2300-Y02 | Single-phase | AC250/DC560                          | 30                      | 0.50                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 128        |
| GTX-2300-Y03 | Single-phase | AC250/DC560                          | 30                      | 0.75                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 129        |
| GTX-2300-Y0X | Single-phase | AC250/DC560                          | 30                      | 2.30                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 130        |
| GTX-2300-Y22 | Single-phase | AC250/DC560                          | 30                      | 1.00                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 130        |
| GTX-2300-YXX | Single-phase | AC250/DC560                          | 30                      | 4.60                                       | 60                           | -25°C to +55°C              | Screw         | UL, c-UL, and TÜV | 132        |
| Part Number  | Phase        | Rated Voltage                        | Rated Current           | Leakage Current                            | Temperature Rise             | Operating Temperature Range | Terminal Type | Approval          | Weight     |

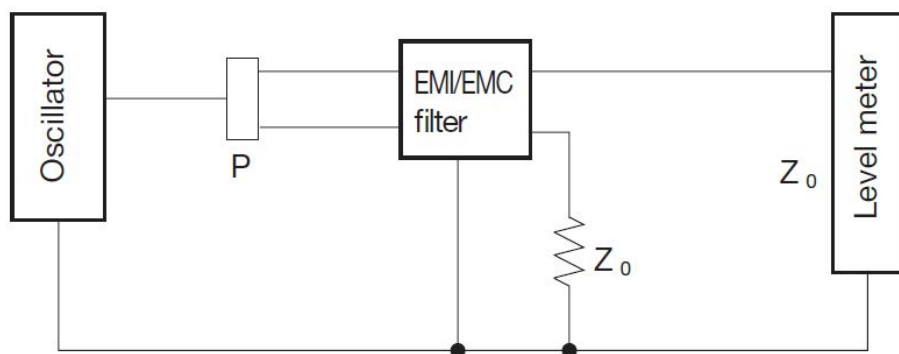
<sup>1</sup> Rated DC voltage is not allowed to approval standards

## Circuit Diagram

### Circuit Diagram



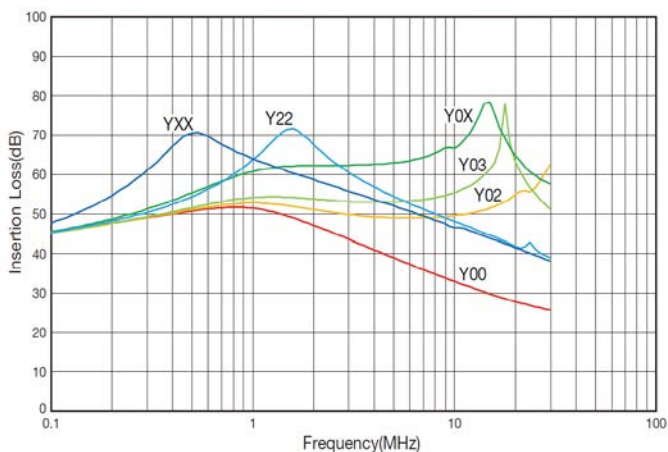
### Measuring Circuit - Common Mode



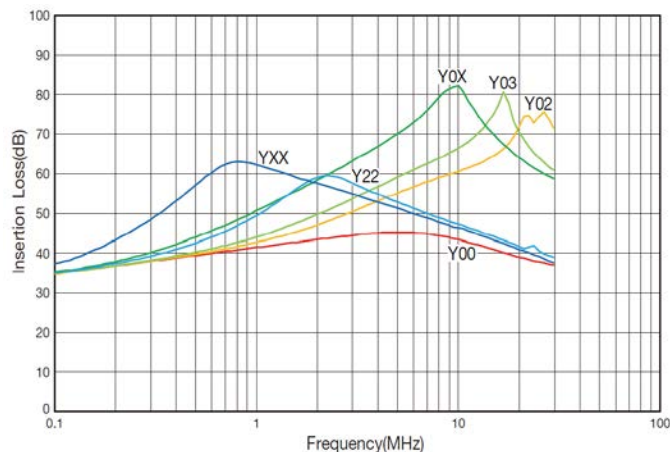
P: Power divider     $Z_0$ : 50Ω

## Attenuation (Static Characteristics)

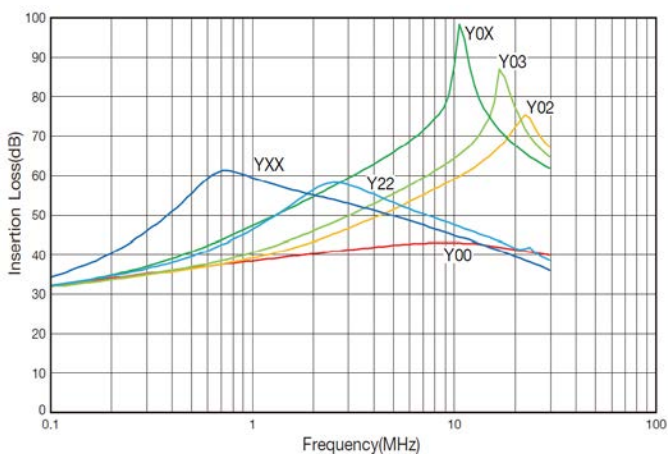
**GTX-2060-\*\*\***



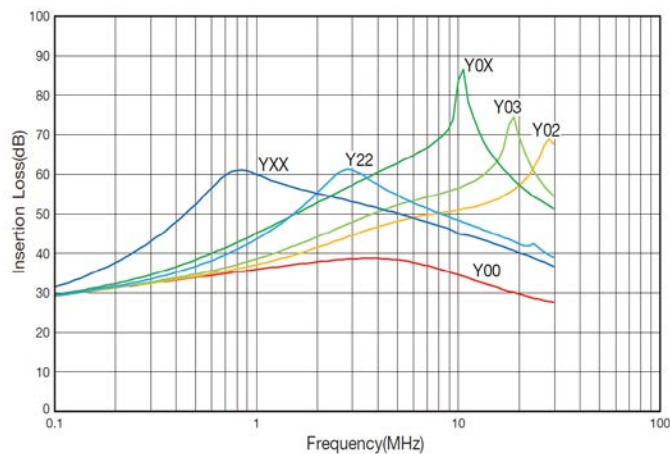
**GTX-2100-\*\*\***



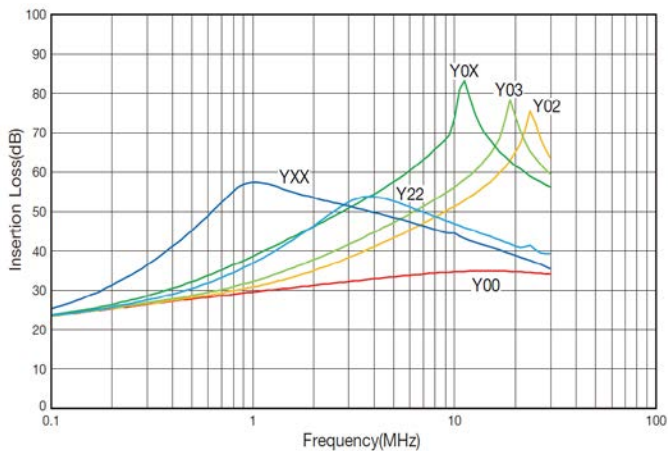
**GTX-2160-\*\*\***



**GTX-2200-\*\*\***



**GTX-2300-\*\*\***



## Packaging

| Part Type    | Packaging Type | Pieces per Box |
|--------------|----------------|----------------|
| GTX-2**0-Y** | Box            | 30             |

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## 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.

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

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