

## Overview

The KEMET MR compact plastic case filters cover single-phase requirements with a wide variety of characteristics. These filters are optimized for conduction noise or in particular for normal mode noise. Their input/output terminals are Faston® type.

## Applications

- Industrial equipment
- Electronic equipment

## Benefits

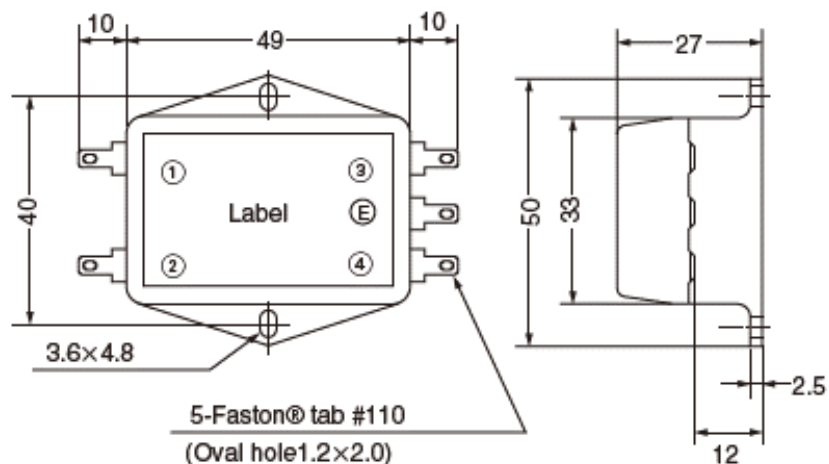
- Single-phase 250 VAC
- Current range from 2 to 4 A
- Operating temperature range from -20°C to +60°C
- UL and CSA or UL, CSA, and TÜV approved versions available
- RoHS compliant



## Part Number System

MR-	2	02	1
Series	Phase	Rated Current (A)	Specification
MR	2 = Single-phase	0x = 0x A	1 = Normal mode choke 2 = Without C <sub>y</sub> capacitor 3 = With C <sub>x</sub> capacitor 1 pc

## Dimensions – Millimeters



Note: No E terminals on MR-2032.

Faston® is a registered trademark of Tyco Electronics AMP.

## Environmental Compliance

KEMET MR 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
MR-2021	Yes	7(c)-I
MR-2032	Yes	7(c)-I
MR-2043	Yes	No

Code	Exemption
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	MR-2021, MR-2032 and MR-2043
CSA	LR50413	MR-2021, MR-2032 and MR-2043
TÜV Rheinland Japan Ltd.	R50379879	MR-2021 and MR-2043

## Performance Characteristics

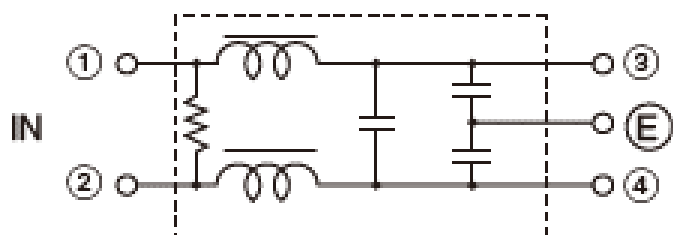
Item	Performance Characteristics
Rated Voltage	250 V
Rated Current Range	2 - 4 A
Withstanding Voltage	1,500 VAC (1 minute, line to ground)
Insulation Resistance	300 M $\Omega$ minimum at 500 VDC (1 minute, line to ground)
Leakage Current	0.75 mA maximum at 250 V/60 Hz
Input/Output Terminal Type	Faston <sup>®</sup>
Operating Temperature Range	-20°C to +60°C (not including self temperature rise)

## Table 1 – Ratings & Part Number Reference

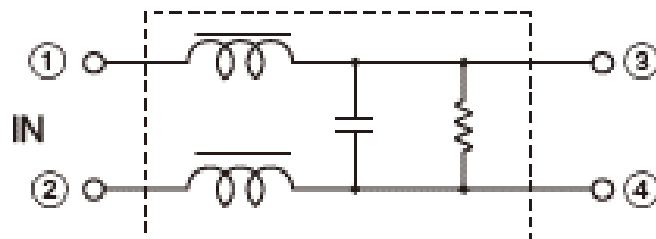
Part Number	Phase	Rated Voltage AC/DC (V)	Rated Current AC/DC (A)	Leakage Current at 250 V/60 Hz (mA) Maximum	Temperature Rise (K) Maximum	Operating Temperature Range	Terminal Type	Approval	Weight (g)
MR-2021	Single-phase	250	2	0.75	30	-20°C to +60°C	Faston <sup>®</sup>	UL, CSA and TÜV	35
MR-2032	Single-phase	250	3	-	30	-20°C to +60°C	Faston <sup>®</sup>	UL and CSA	35
MR-2043	Single-phase	250	4	0.75	30	-20°C to +60°C	Faston <sup>®</sup>	UL, CSA and TÜV	45

## Circuit Diagram

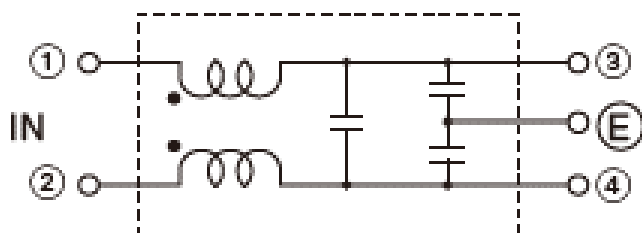
MR-2021



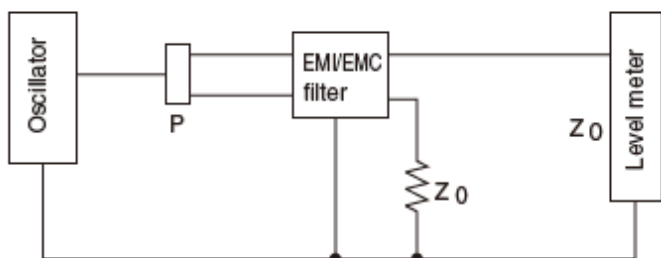
MR-2032



MR-2043

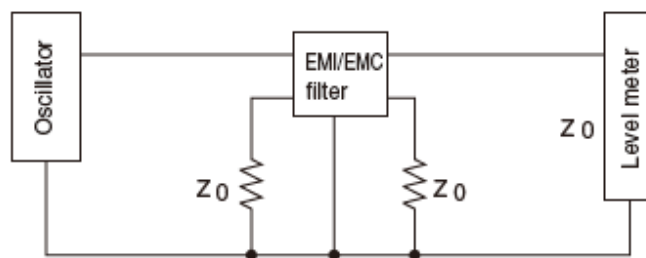


### Measuring Circuit - Common Mode



P: Power divider  $Z_0 : 50\Omega$

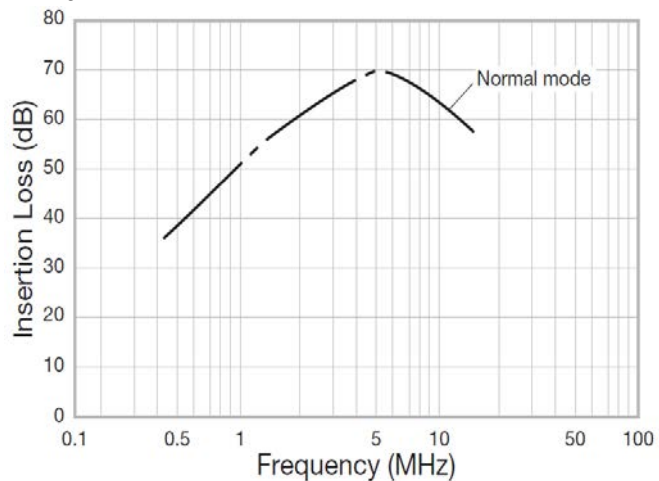
### Measuring Circuit - Normal Mode (Only for MR-2021, MR-2032)



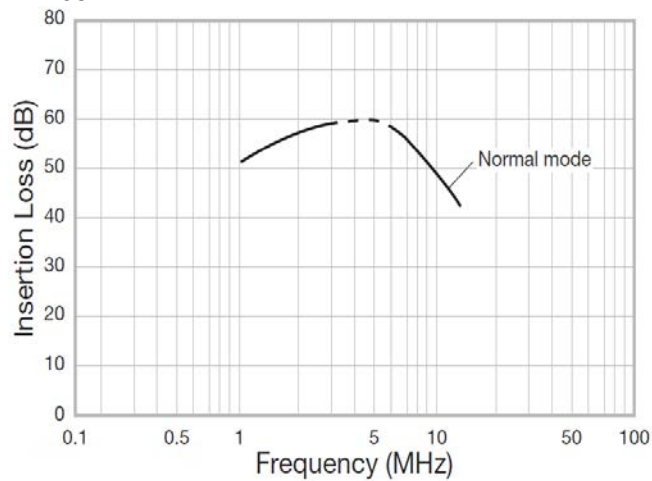
$Z_0 : 50\Omega$

## Attenuation (Static Characteristics)

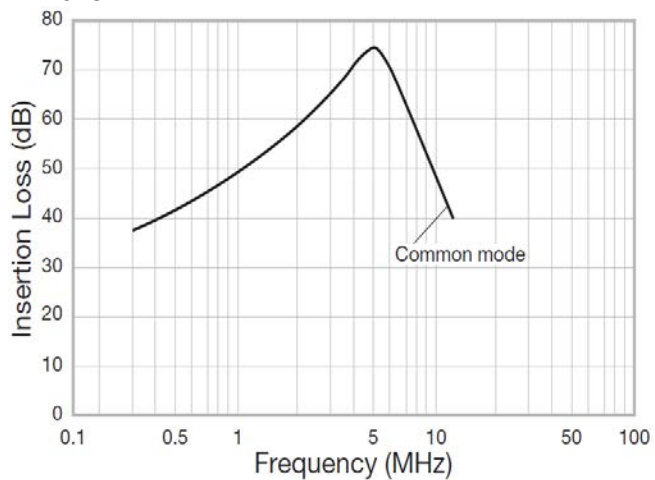
**MR-2021**



**MR-2032**



**MR-2043**



## Packaging

Part Type	Packaging Type	Pieces per Box
MR-2***	Tray	100

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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, 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.

## KEMET Electronics Corporation Sales Offices

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Although KEMET designs and manufactures its products to the most stringent quality and safety standards, given the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage.

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.

When providing KEMET products and technologies contained herein to other countries, the customer must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the International Traffic in Arms Regulations (ITAR), the US Export Administration Regulations (EAR) and the Japan Foreign Exchange and Foreign Trade Act.

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