# **MR Plastic Box Single-Phase Filters**



### **Overview**

The KEMET MR compact plastic case filters cover singlephase requirements with a wide variety of characteristics. These filters are optimized for both common and normal mode noise or in particular for normal mode noise. Their input/output terminals are Faston type.

## **Applications**

- · Industrial equipment
- · Electronic equipment

### **Benefits**

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

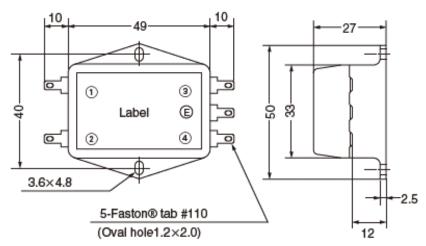


## **Part Number System**

MR-	2	02	1
Series	Phase	Rated Current (A)	Specification
MR	2 = Single-phase	0x = 0x A	1 = Normal mode choke 2 = Without Cy capacitor 3 = With Cx capacitor 1 pc



## **Dimensions - Millimeters**



Note: No E terminals on MR-2032. Faston® is a registered trademark of Tyco Electronics AMP.

# **Environmental Compliance**

All KEMET EMI-RFI Filters are RoHS compliant.



## **Performance Characteristics**

ltem	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 MΩ minimum at 500 VDC (1 minute, line to ground)
Leakage Current	0.75 mA at 250 V/60 Hz maximum
Input/Output Terminal Type	Faston
Operating Temperature Range	-25°C to +55°C (not including self temperature rise)



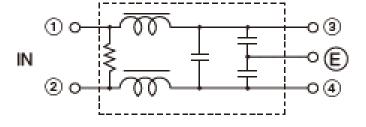
## Table 1 - Ratings & Part Number Reference

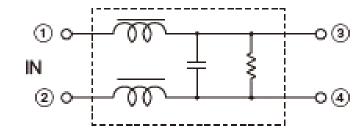
Part Number	Phase	Rated Voltage AC/DC (V)	Rated Current AC/DC (A)	Leakage Current at 250 V/60 Hz (mA) Maximum	Temperature Rise (K) Maximum	Operating Temperature Range	Terminal Type	Approval	Weight (g)
MR-2021	Single-phase	250	2	0.75	30	-25°C to +55°C	Faston	UL, CSA, and TÜV	35
MR-2032	Single-phase	250	3	-	30	-25°C to +55°C	Faston	UL and CSA	35
MR-2043	Single-phase	250	4	0.75	30	-25°C to +55°C	Faston	UL, CSA, and TÜV	45

# **Circuit Diagram**

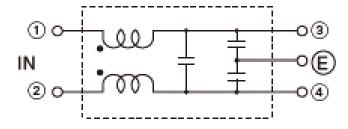
MR-2021

MR-2032





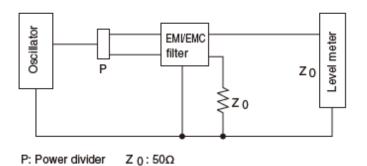
#### MR-2043



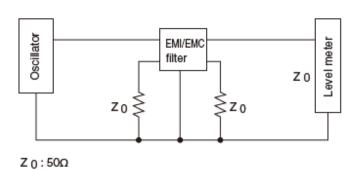


## **Circuit Diagram cont.**

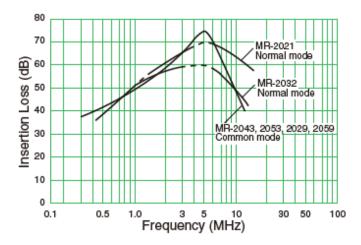
#### **Measuring Circuit - Common Mode**



#### **Measuring Circuit - Normal Mode**



## **Attenuation (Static Characteristics)**



# **TÜV Rheinland Japan Ltd. Certification Numbers**

Part Number	File Number
MR-2021	N° R50379879
MR-2043	N° R50379879



### **Packaging**

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

## **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.

#### **Disclaimer**

All product specifications, statements, information and data (collectively, the "Information") in this datasheet are subject to change. The customer is responsible for checking and verifying the extent to which the Information contained in this publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without guarantee, warranty, or responsibility of any kind, expressed or implied.

Statements of suitability for certain applications are based on KEMET Electronics Corporation's ("KEMET") knowledge of typical operating conditions for such applications, but are not intended to constitute – and KEMET specifically disclaims – any warranty concerning suitability for a specific customer application or use. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by KEMET with reference to the use of KEMET's products is given gratis, and KEMET assumes no obligation or liability for the advice given or results obtained.

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 indicted or that other measures may not be required.