SPECTRUM CONTROL INC.

# Switched and Fused Filtered Power Entry Modules

## For General Purpose Applications



## 64-65-BSF/64-65-SSF Series

Tested and found to be IAW VDE 0565 Part 3.

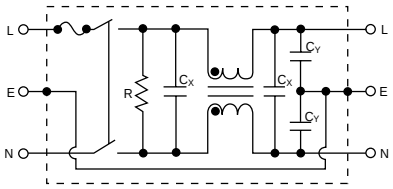
## Features

- North American and Metric fuse holders available
- Fuse holder and double pole power ON/OFF switch provided in a convenient/compact package
- Suitable for products that must conform to FCC and FTZ requirements
- Meets over voltage category II of IEC 664 and complies with IEC 950
- Metal case provides effective EMI shielding
- Easy access fuse drawer with space for spare fuse
- Flange-mounted or snap-in styles available for quick mounting
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page 47)

## Applications

- Computers and peripheral equipment
- Electronic equipment
- Digital equipment
- Measuring and testing instruments
- Telecommunications equipment

## Circuit Diagram




## Specifications

| Model* | Rated Voltage (@ 50/60Hz) | Rated Current | Leakage Current (Max.) | Capacitance $C_Y$ | Capacitance $C_{X1}$ | Capacitance $C_{X2}$ | Inductance ($L_1$) | Temperature Rise (Max.) |
|---|---|---|---|---|---|---|---|---|
| 64-XXX-020-3-12 | 250VAC | 2A | 0.35mA | 2200pF | 0.22uF | NONE | 10.5mH | 45°C |
| 64-XXX-020-3-04 | | | | | | 0.22uF | | |
| 64-XXX-020-3-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-020-3-06 | | | | | | 0.47uF | | |
| 64-XXX-020-5-12 | | | 0.50mA | 3300pF | 0.22uF | NONE | | |
| 64-XXX-020-5-04 | | | | | | 0.22uF | | |
| 64-XXX-020-5-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-020-5-06 | | | | | | 0.47uF | | |
| 64-XXX-040-3-12 | 250VAC | 4A | 0.35mA | 2200pF | 0.22uF | NONE | 4.2mH | 45°C |
| 64-XXX-040-3-04 | | | | | | 0.22uF | | |
| 64-XXX-040-3-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-040-3-06 | | | | | | 0.47uF | | |
| 64-XXX-040-5-12 | | | 0.50mA | 3300pF | 0.22uF | NONE | | |
| 64-XXX-040-5-04 | | | | | | 0.22uF | | |
| 64-XXX-040-5-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-040-5-06 | | | | | | 0.47uF | | |
| 64-XXX-060-3-12 | 250VAC | 6A | 0.35mA | 2200pF | 0.22uF | NONE | 1.6mH | 45°C |
| 64-XXX-060-3-04 | | | | | | 0.22uF | | |
| 64-XXX-060-3-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-060-3-06 | | | | | | 0.47uF | | |
| 64-XXX-060-5-12 | | | 0.50mA | | 0.22uF | NONE | | |
| 64-XXX-060-5-04 | | | | | | 0.22uF | | |
| 64-XXX-060-5-14 | | | | | 0.47uF | NONE | | |
| 64-XXX-060-5-06 | | | | | | 0.47uF | | |
| 65-XXX-020-3-12 | 125VAC | 2A | 0.35mA | 2200pF | 0.22uF | NONE | 10.5mH | 45°C |
| 65-XXX-020-3-04 | | | | | | 0.22uF | | |
| 65-XXX-020-3-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-020-3-06 | | | | | | 0.47uF | | |
| 65-XXX-020-5-12 | | | 0.50mA | 3300pF | 0.22uF | NONE | | |
| 65-XXX-020-5-04 | | | | | | 0.22uF | | |
| 65-XXX-020-5-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-020-5-06 | | | | | | 0.47uF | | |
| 65-XXX-040-3-12 | 125VAC | 4A | 0.35mA | 2200pF | 0.22uF | NONE | 4.2mH | 45°C |
| 65-XXX-040-3-04 | | | | | | 0.22uF | | |
| 65-XXX-040-3-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-040-3-06 | | | | | | 0.47uF | | |
| 65-XXX-040-5-12 | | | 0.50mA | 3300pF | 0.22uF | NONE | | |
| 65-XXX-040-5-04 | | | | | | 0.22uF | | |
| 65-XXX-040-5-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-040-5-06 | | | | | | 0.47uF | | |
| 65-XXX-060-3-12 | 125VAC | 6A | 0.35mA | 2200pF | 0.22uF | NONE | 1.6mH | 45°C |
| 65-XXX-060-3-04 | | | | | | 0.22uF | | |
| 65-XXX-060-3-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-060-3-06 | | | | | | 0.47uF | | |
| 65-XXX-060-5-12 | | | 0.50mA | | 0.22uF | NONE | | |
| 65-XXX-060-5-04 | | | | | | 0.22uF | | |
| 65-XXX-060-5-14 | | | | | 0.47uF | NONE | | |
| 65-XXX-060-5-06 | | | | | | 0.47uF | | |

Note: Test Voltage 1500VAC one minute, line to ground
Insulation Resistance: 300 MΩ min. at 500VDC
B(S) = Bolt-in terminals or (Snap-in terminals)

Voltage Drop: 1V max. at rated current
Weight: 130g
Inlet: Compatible with IEC-320

* **Substitute BSF or SSF for XXX**
BSF - Bolt-in switched and fused
SSF - Snap-in switched and fused



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**SPECTRUM CONTROL GmbH** • Hansastrasse 6 • 91126 Schwabach, Germany • Phone: (49)-9122-795-0 • Fax: (49)-9122-795-58

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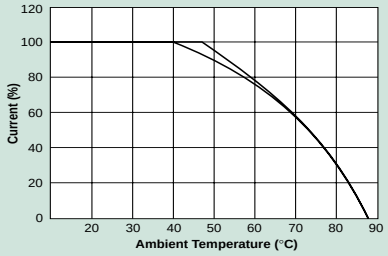
SPECTRUM CONTROL INC.

# Switched and Fused Filtered Power Entry Modules

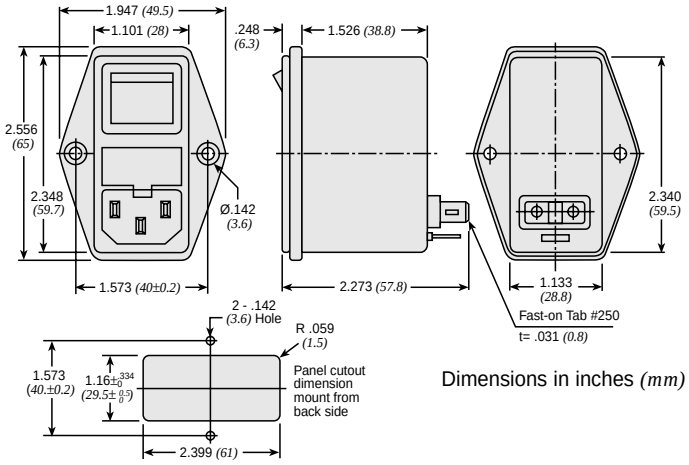
## For General Purpose Applications

## Temperature Characteristics



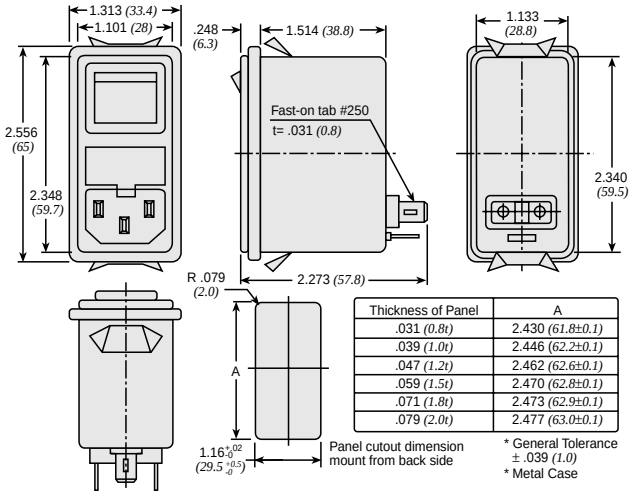

## Dimensions

### 64/65-BSF Series




Dimensions in inches *(mm)*

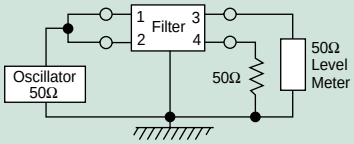
### 64/65-SSF Series



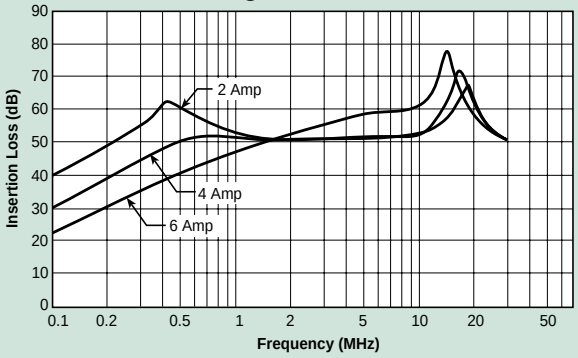

| Thickness of Panel | A |
|---|---|
| .031 (0.8t) | 2.430 (61.8±0.1) |
| .039 (1.0t) | 2.446 (62.2±0.1) |
| .047 (1.2t) | 2.462 (62.6±0.1) |
| .059 (1.5t) | 2.470 (62.8±0.1) |
| .071 (1.8t) | 2.473 (62.9±0.1) |
| .079 (2.0t) | 2.477 (63.0±0.1) |

* General Tolerance ± .039 (1.0)
* Metal Case

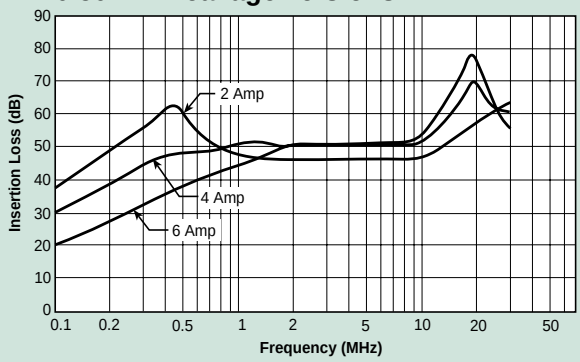
## Common Mode



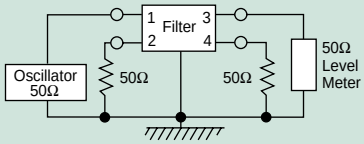

### 0.35 mA Leakage Versions



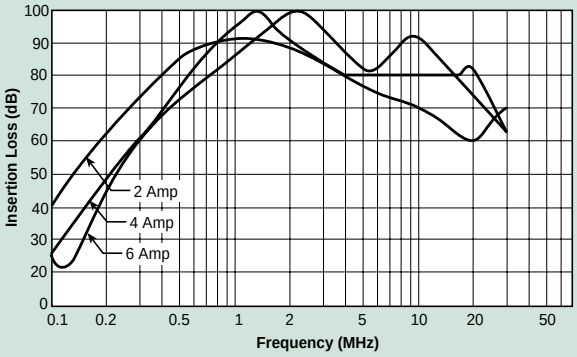

### 0.50 mA Leakage Versions



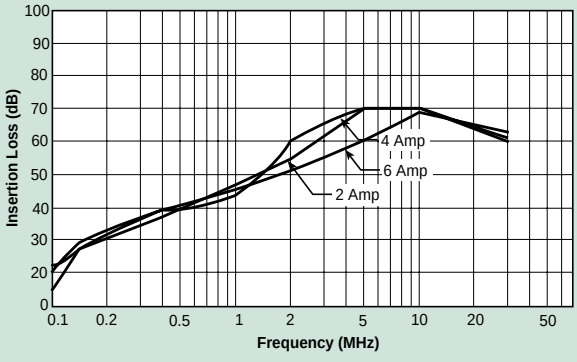

## Normal Mode




### 64/65-B(S)SF-*-*-02(04,06)




### 64/65-B(S)SF-*-*-11(12,14)





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SPECTRUM CONTROL INC.

# Switched and Fused Filtered Power Entry Modules

## For Medical or General Purpose Applications



## 66-67-BSF/66-67-SSF Series

Tested and found to be IAW VDE 0565 Part 3

## Features

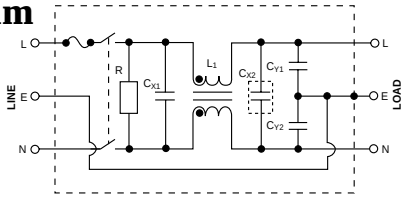
- Metric and North American fuse holders available
- Fuse holder and a double pole power ON/OFF switch provides a convenient/compact package
- Suitable for products that must conform to FCC and FTZ requirements
- Meets over voltage category II of IEC 664 and complies with IEC 950
- Provides susceptibility protection without the leakage current associated with line-to-ground capacitors
- Designed to meet requirements for non-patient and patient care equipment
- Metal case provides effective EMI shielding
- Easy access fuse drawer - space for spare fuse
- Flange-mounted or snap-in styles available for quick mounting
- Operating temperature: -25°C to +85°C (including temperature rise, see graph on page 49)

## Applications

- Medical equipment
- Industrial equipment
- Telecommunications equipment
- Measuring and testing instruments
- Digital equipment (including switching power supplies)
- General purpose filter for susceptibility or high frequency "clean up" applications

## Circuit Diagram

**Note:** $C_{Y1}$ and $C_{Y2}$ capacitors omitted on 66/67 B(S)F-XXX-1-X Filters




## Specifications

| Model* | Rated Voltage 50/60Hz | Rated Current | Leakage Current (Max.) | Capacitance $C_Y$ | Capacitance $C_{X1}$ | Capacitance $C_{X2}$ | Temp. Induct. ($L_1$) | Rise (Max.) |
|---|---|---|---|---|---|---|---|---|
| 66-XXX-020-0-12 | 250 VAC | 2A | .075mA | 330pF | 0.22uF | NONE | 10.5mH | 40°C |
| 66-XXX-020-0-04 | | | | | | 0.22uF | | |
| 66-XXX-020-0-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-020-0-06 | | | | | | 0.22uF | | |
| 66-XXX-020-1-12 | | | .01mA | NONE | 0.22uF | NONE | | |
| 66-XXX-020-1-04 | | | | | | 0.22uF | | |
| 66-XXX-020-1-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-020-1-06 | | | | | | 0.22uF | | |
| 66-XXX-020-4-12 | | | 0.1mA | 470pF | 0.22uF | NONE | | |
| 66-XXX-020-4-04 | | | | | | 0.22uF | | |
| 66-XXX-020-4-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-020-4-06 | | | | | | 0.22uF | | |
| 66-XXX-040-0-12 | | 4A | .075mA | 330pF | 0.22uF | NONE | 4.2mH | 45°C |
| 66-XXX-040-0-04 | | | | | | 0.22uF | | |
| 66-XXX-040-0-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-040-0-06 | | | | | | 0.22uF | | |
| 66-XXX-040-1-12 | | | .01mA | NONE | 0.22uF | NONE | | |
| 66-XXX-040-1-04 | | | | | | 0.22uF | | |
| 66-XXX-040-1-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-040-1-06 | | | | | | 0.22uF | | |
| 66-XXX-040-4-12 | | | .01mA | 470pF | 0.22uF | NONE | | |
| 66-XXX-040-4-04 | | | | | | 0.22uF | | |
| 66-XXX-040-4-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-040-4-06 | | | | | | 0.22uF | | |
| 66-XXX-060-0-12 | | 6A | .075mA | 330pF | 0.22uF | NONE | 1.6mH | |
| 66-XXX-060-0-04 | | | | | | 0.22uF | | |
| 66-XXX-060-0-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-060-0-06 | | | | | | 0.22uF | | |
| 66-XXX-060-1-12 | | | .01mA | NONE | 0.22uF | NONE | | |
| 66-XXX-060-1-04 | | | | | | 0.22uF | | |
| 66-XXX-060-1-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-060-1-06 | | | | | | 0.22uF | | |
| 66-XXX-060-4-12 | | | 0.1mA | 470pF | 0.22uF | NONE | | |
| 66-XXX-060-4-04 | | | | | | 0.22uF | | |
| 66-XXX-060-4-14 | | | | | 0.47uF | NONE | | |
| 66-XXX-060-4-06 | | | | | | 0.22uF | | |

| Model* | Rated Voltage 50/60Hz | Rated Current | Leakage Current (Max.) | Capacitance $C_Y$ | Capacitance $C_{X1}$ | Capacitance $C_{X2}$ | Temp. Induct. ($L_1$) | Rise (Max.) |
|---|---|---|---|---|---|---|---|---|
| 67-XXX-020-0-12 | 125 VAC | 2A | 0.04mA | 330pF | 0.22uF | NONE | 10.5mH | 40°C |
| 67-XXX-020-0-04 | | | | | | 0.22uF | | |
| 67-XXX-020-0-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-020-0-06 | | | | | | 0.22uF | | |
| 67-XXX-020-1-12 | | | .005mA | NONE | 0.22uF | NONE | | |
| 67-XXX-020-1-04 | | | | | | 0.22uF | | |
| 67-XXX-020-1-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-020-1-06 | | | | | | 0.22uF | | |
| 67-XXX-020-4-12 | | | 0.05mA | 470pF | 0.22uF | NONE | | |
| 67-XXX-020-4-04 | | | | | | 0.22uF | | |
| 67-XXX-020-4-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-020-4-06 | | | | | | 0.22uF | | |
| 67-XXX-040-0-12 | | 4A | 0.04mA | 330pF | 0.22uF | NONE | 4.2mH | 45°C |
| 67-XXX-040-0-04 | | | | | | 0.22uF | | |
| 67-XXX-040-0-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-040-0-06 | | | | | | 0.22uF | | |
| 67-XXX-040-1-12 | | | .005mA | NONE | 0.22uF | NONE | | |
| 67-XXX-040-1-04 | | | | | | 0.22uF | | |
| 67-XXX-040-1-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-040-1-06 | | | | | | 0.22uF | | |
| 67-XXX-040-4-12 | | | 0.05mA | 470pF | 0.22uF | NONE | | |
| 67-XXX-040-4-04 | | | | | | 0.22uF | | |
| 67-XXX-040-4-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-040-4-06 | | | | | | 0.22uF | | |
| 67-XXX-060-0-12 | | 6A | 0.04mA | 330pF | 0.22uF | NONE | 1.6mH | |
| 67-XXX-060-0-04 | | | | | | 0.22uF | | |
| 67-XXX-060-0-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-060-0-06 | | | | | | 0.22uF | | |
| 67-XXX-060-1-12 | | | .005mA | NONE | 0.22uF | NONE | | |
| 67-XXX-060-1-04 | | | | | | 0.22uF | | |
| 67-XXX-060-1-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-060-1-06 | | | | | | 0.22uF | | |
| 67-XXX-060-4-12 | | | 0.05mA | 470pF | 0.22uF | NONE | | |
| 67-XXX-060-4-04 | | | | | | 0.22uF | | |
| 67-XXX-060-4-14 | | | | | 0.47uF | NONE | | |
| 67-XXX-060-4-06 | | | | | | 0.22uF | | |

Note: Test Voltage: 1500VAC one minute, line to ground
Insulation Resistance: 300 MΩ min. at 500VDC
Voltage Drop: 1V max. at rated current

Weight: 130g
Inlet: Compatible with IEC-320
B(S) = Bolt-in terminals or (Snap-in terminals)

*** Substitute BSF or SSF for XXX**
BSF - Bolt-In Switched and Fused
SSF - Snap-In Switched and Fused



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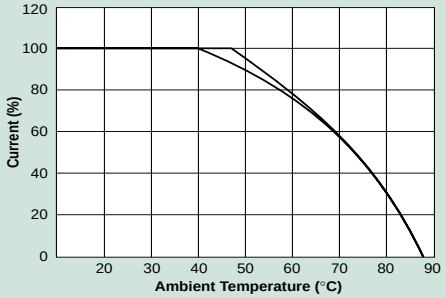
# Switched and Fused Filtered Power Entry Modules

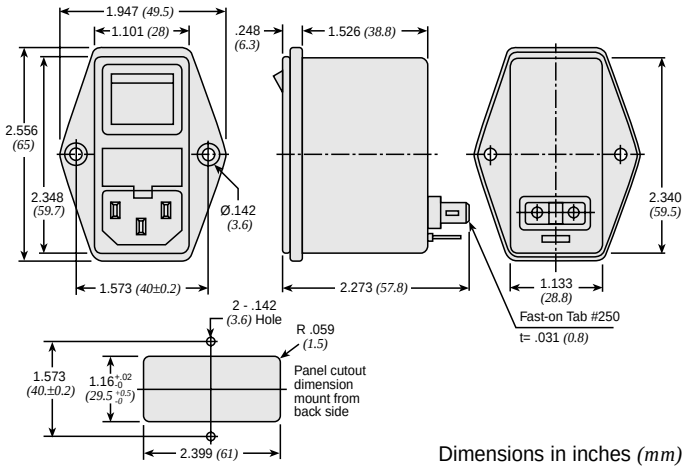
## For Medical or General Purpose Applications

### Temperature Characteristics



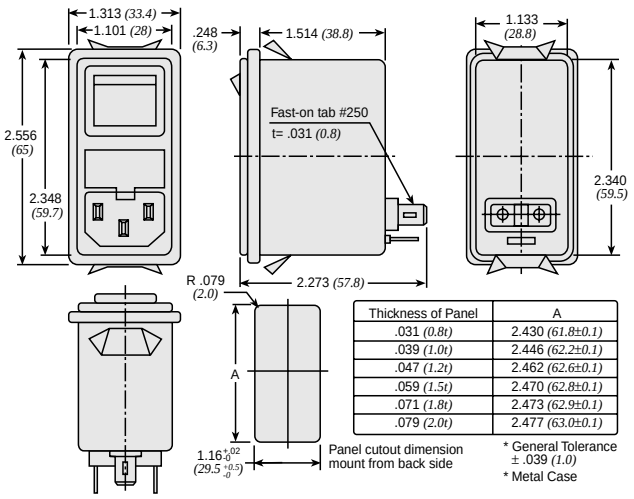

## Dimensions

### 66/67-BSF Series




Dimensions in inches *(mm)*

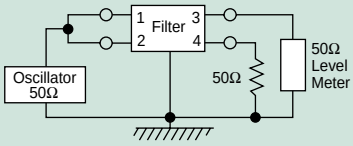
### 66/67-SSF Series



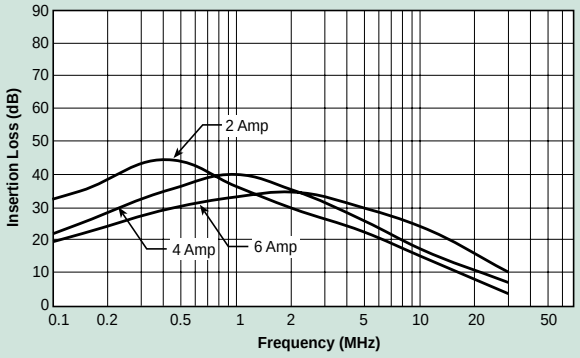

| Thickness of Panel | A |
|---|---|
| .031 (0.8t) | 2.430 (61.8±0.1) |
| .039 (1.0t) | 2.446 (62.2±0.1) |
| .047 (1.2t) | 2.462 (62.6±0.1) |
| .059 (1.5t) | 2.470 (62.8±0.1) |
| .071 (1.8t) | 2.473 (62.9±0.1) |
| .079 (2.0t) | 2.477 (63.0±0.1) |

* General Tolerance ± .039 (1.0)
* Metal Case

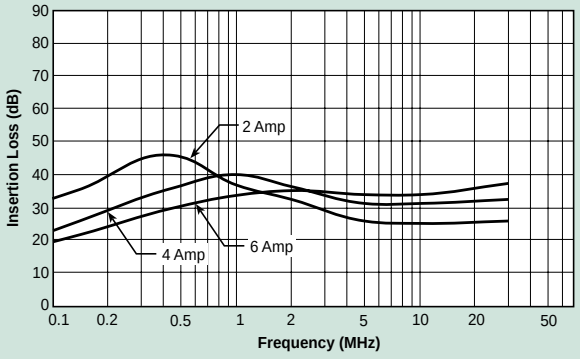
## Common Mode



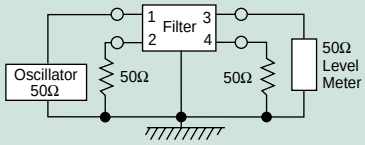

### 0.01 mA Leakage Current



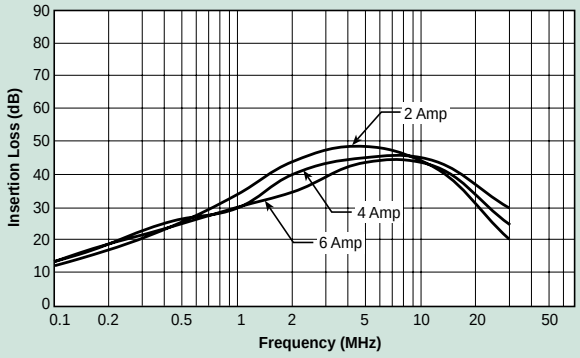

### 0.075 and 0.1 mA Leakage Current



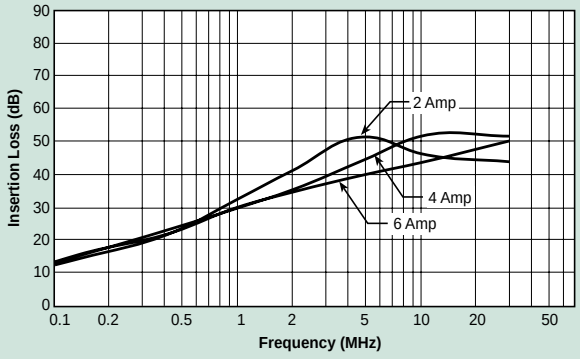

## Normal Mode




### 0.01 mA Leakage Current




### 0.075 and 0.1 mA Leakage Current





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