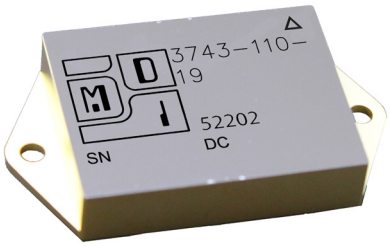
Model 3743

10 Amp Surge Suppressors



		3743-028			374-048			3743-110		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output set voltage	Surge limit	—	40V	—	—	75V	—	—	170V	—
Output current	—	0	—	10A	0	—	10A	0	—	10A
Input Output Drop	Max load	—	0.6V	1V	—	0.6V	1A	—	0.6V	1A
Spike Zener Voltage	—	—	120V	—	—	120V	—	—	120V	—
Inhibit current rating	Surge limit	—	—	0.1A	—	—	0.1A	—	—	0.1A
Input Capacitance	—	—	14µF	—	—	0.66µF	—	—	0.45µF	—
Quiescent Current	Nominal voltage	—	200µA	—	—	200µA	—	—	200µA	—

Features

- For MIL-STD-1275 Spikes and Surges
- For EN50155 Spikes and Surges
- For DO-160 Spikes and Surges
- For MIL-STD-704A Spikes and Surges
- Silicon Carbide limiting transistor
- Reverse Polarity Protection
- User adjustable set point
- Inhibit output for downstream DC-DC converters
- Built in EMI pre-filter
- Rugged Seam Welded Hermetic Package 1.12" by 1.45"
- Available with or without case mounting flange

Specifications

Inputs:
28 VDC nominal at 10A -028 version
48 VDC nominal at 5A -048 version
110 VDC nominal at 3A - 110 version

Isolation:
Input to case: 500 VDC
Input to output: 500 VDC
10 Megohms minimum

Environment:
Storage temperature: -65°C to 150°C
Shock: MIL-STD-810 Method 516.5 Procedure III
Acceleration: MIL-STD 883 Method 2001, test condition A1, Y1 direction 500G's
Random Vibration: MIL-STD-883 Method 2026, test condition 2H

Case Temperature Range:
Operating -40°C to 70°C (Industrial Grade)
Operating -55°C to 85°C (M Grade)
Operating -55°C to 125°C (E Grade)

Weight: 30 grams typical

Many aircraft, shipboard, vehicle and railroad electrical systems have a well-controlled voltage range for 99.9% of the time, but can experience large spikes and surges for.1% of the time. The spikes and surges can be generated by many causes, but the result can be the failure of DC-DC converters feeding user equipment.

By adding the Model 3743 Surge Suppressor ahead of the DC-DC converter, damaging spikes and surges can be controlled and damage averted.

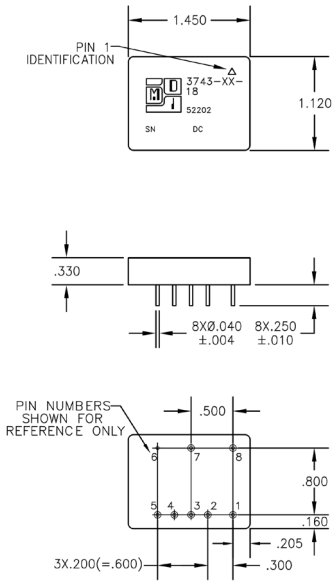
Spikes and high amplitude, narrow pulse width inputs that have finite energy. Model 3743 contains an EMI pre-filter that absorbs spike energy, as well as a fast acting, bi-directional transient absorbing Zener diode that clamps the spike amplitude.

This circuitry is followed by reverse polarity protection that stops negative input voltages.

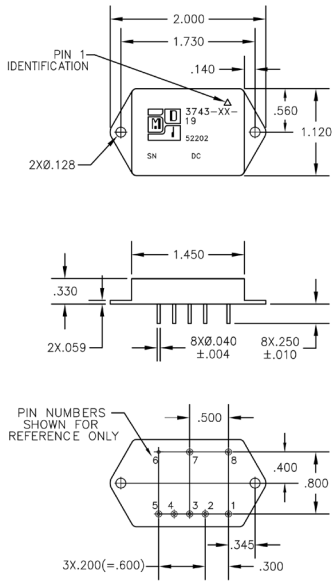
Surges are medium amplitude, long duration waveforms that have a low source impedance. Model 3743 absorbs surges using a Silicon Carbide transistor. The surge limiting voltage is fixed internally, but may be adjusted externally by the user. For an upward adjustment of approximately 9%, connect a 100k resistor from the adjust pin to ground.

Model 3743 also contains an inhibit output that can turn off downstream DC-DC converters when the surge occurs. This inhibit pin is high impedance under normal conditions, and goes low when a surge is detected.

Case Style 18



Case Style 19



Pin	Function
Pin 1	N/C
Pin 2	Output Return
Pin 3	Output Positive
Pin 4	Adjust
Pin 5	Inhibit Out
Pin 6	Case Ground
Pin 7	Input Return
Pin 8	+ Input

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