Filter & Surge Protection

DSF226 Series

- Up to 200 W Output Power
- Active Surge Protection
- MIL–STD 461 & DEF–STAN 59–411
- MIL–STD 1275
- DEF–STAN 61–5 Part 6 Issue 6
- MIL–STD 810
- 3 Year Warranty

Specification

Input

Input Voltage Range	• 15 - 33 VDC
Input Transient	• ±250 V for 70 µs 15 mJ, 100 V for 50 ms 0.5 Ω per MIL-STD-1275A/B/C/D ±600 V for 10 µS per MIL-STD-704A, ±200 V for 100 ns, pulse train, 174 V+Vin for 350 ms per DEF-STAN 61-5 part 6 issue 6 10V for 1 s.
Input Reverse Voltage Protection	• Continuous
Fuse Protection	• External T25 A fuse is recommended

Output

Output Voltage	• Tracks input voltage & clamps <36 VDC
Output Power	• 200 W max
Thermal Warning (TW)	• The TW output is an open collector transistor rated at 100 VDC, with a maximum sink current of 10 mA, referenced to –V in/-V out. The signal output is low when the maximum base plate temperature is exceeded. This signal indicates an over temperature condition so that action can be taken by the end application such as shutting down non critical loads or individual downstream DC/DC converters. If connected to the DIS pin of the DSF226 this will disable the filter output and perform as a thermal shut down for the system. The TW output will automatically return to a high signal level once the filter base plate has cooled to a temperature of less than 100°C.
Maximum Output Capacitor	• 10,000 µF recommended

General

Efficiency	• 97% typical
Isolation Voltage	• 500 VDC Input & Output to Case
Series Resistance	• <0.1 Ω
Disabled Input Current	• <25 mA
Disable (DIS)	• On = Open circuit Off = Logic low or short circuit
No Load Current	• <35 mA
Package Style	• Photo-etched nickel-silver case and aluminium baseplate
MTBF	• >2000 kHrs to MIL-HDBK-217F at 40 °C, GB

Environmental

Operating Temperature	• -46 °C to +100 °C baseplate
Storage Temperature	• -55 °C to +100 °C
Salt Atmosphere	• MIL-STD-810G method 509.4
Humidity	• MIL-STD-810G 507.4
Altitude	• MIL-STD-810G 500.4
Shock	• MIL-STD-810G 516.5 function test for ground equipment 40 g in 3 axes
Vibration	• MIL-STD-810G method 514.5C-17. Minimum integrity test for military equipment (1 Hr/axis, 3 axes). Vibration 5-33 Hz, 0.5 mm displacement

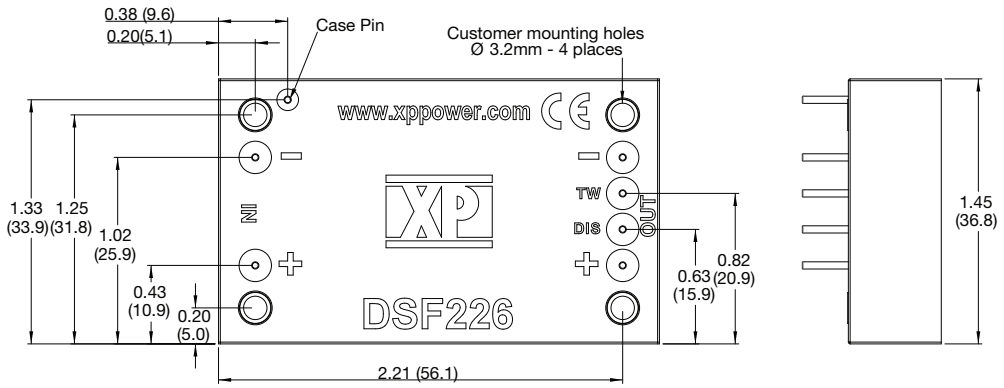
EMC & Safety

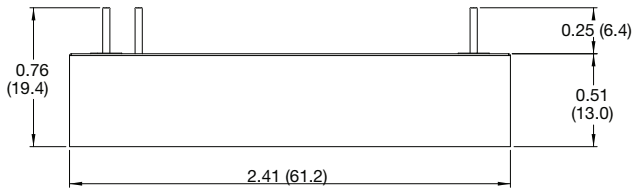
Immunity	• MIL-STD-1275A-D, MIL-STD-461E/F/G (CS101, CS114, CS115 & CS116) MIL-STD-704A, DEF-STAN 61-5 part 6 issue 6
Emissions	• MIL-STD 461E/F/G CE101, CE102 & DEF STAN 59-411 DCE01/DCE02 with external components. (See application notes)
Safety Approvals	• CE & UKCA meets all applicable directives & legislation.

Models & Ratings

Output Power	Input Voltage	Output Voltage	Typical Efficiency	Model Number
200 W	15-33 VDC	<36 VDC	97%	DSF226

Mechanical Details





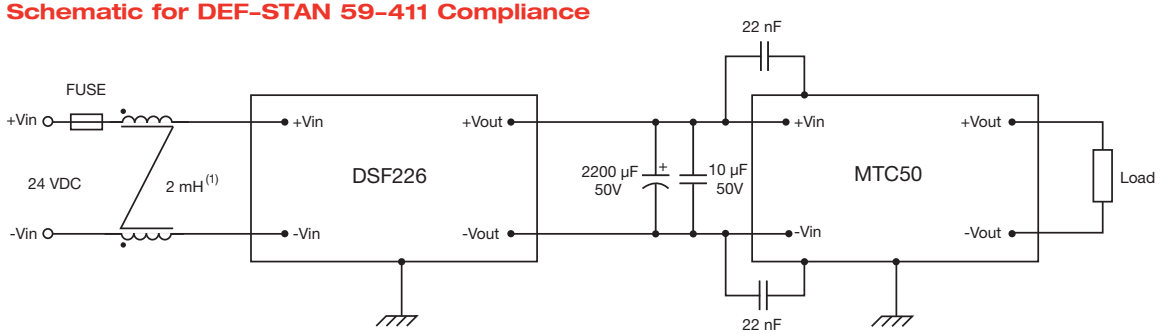
Pin Size - 7 Places:
Diameter: 0.047 (1.2)
Mounting Hole: 0.059 (1.5)
Material: Copper - tin alloy
Finish: 2.5 µ copper and
2.5 µ Sn (tin)

Notes

1. All dimensions in inches (mm).
2. Weights: 0.165 lbs (75 g)
3. Tolerance ±0.012 (±0.3)

Application Notes

Typical Schematic for DEF-STAN 59-411 Compliance



(1) Common mode choke part number W409 core from VAC and 2 x 6 turns, 1.5 mm wire.

Typical Schematic for MIL-STD-461 Compliance