



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MTF50



- Wide Input Voltage Range 10–50 VDC
- Active Surge Protection
- Max Output Power 50 W
- Wide Temperature Range –55 °C to 100 °C
- MIL–STD–461E and DEF–STAN 59–411
- MIL–STD–1275 and DEF–STAN 61–5
- 3 Year Warranty

Specification

Input

Input Voltage Range	• 15.5-40 VDC
Input Transient	• 10-50 V for 10 s 600 V for 10 μ s 50 Ω source resistance per MIL-STD-704A, 100 V for 50 ms 0.5 Ω source resistance per MIL-STD-1275A, \pm 250 V for 100 μ s as per MIL-STD-1275A

Output

Output Voltage	• Clamped <50 VDC
Output Power	• 50 W maximum
Inhibit	• Off = TTL Low or short circuit On = TTL High or open circuit

General

Efficiency	• 97% typical
Resistance	• 0.25 Ω input to output <0.1 Ω case to case pin at 10A
Inhibited Power Dissipation	• 0.1 W
Inrush Current	• 25 A at 28 Vin
Fusing	• External fusing required
MTBF	• 846 kHrs to MIL-HDBK-217F at +40 °C, GF

Environmental

Operating Temperature	• –40 °C to +85 °C ambient –40 °C to +100 °C case Extended Temperature Range: (option -LT) –55 °C to +85 °C ambient –55 °C to +100 °C case
Storage Temperature	• –55 °C to +125 °C
Operating Altitude	• Tested to 70000 ft (21336 m)
Operating Humidity	• 88% relative humidity 240h MIL-STD-810D Method 507.2
Shock	• 100 g MIL-STD-810D Method 516.3
Vibration	• 5 to 500 Hz MIL-STD-810D Method 514.3
Bump	• 2000 Bumps in each axis 40 g MIL-STD-810D Method 516.3
Salt Atmosphere	• 48 hours MIL-STD-810E Method 509.1

EMC

Conducted Emissions	• EN55022 conducted level B. MIL-STD-461E/F, CE101 & CE102 DEF-STAN 59-411 DCE01/DCE02
Immunity	• MIL-STD-704E, MIL-STD 704A & MIL-STD-1275A/B/C/D DEF-STAN 61-5 part 6 issue 5
Conducted Susceptibility	• MIL-STD-461E/F, CS101, CS114, CS115 & CS116

EMC standards are met when used in conjunction with the MTC series of DC/DC converters

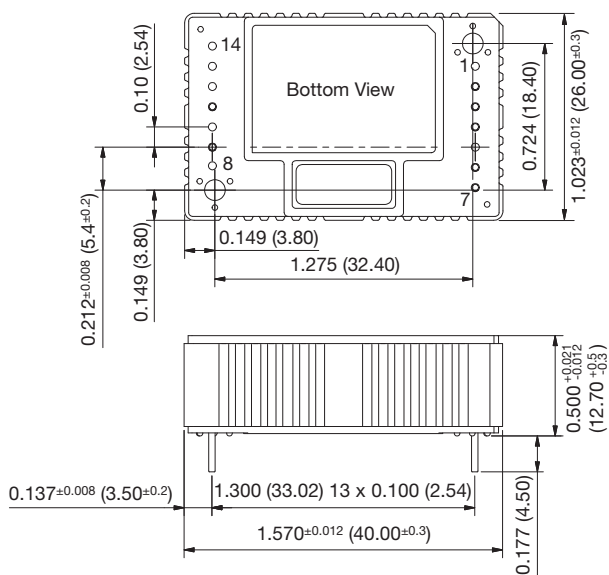
Models & Ratings

Output Voltage	Input Voltage	Efficiency	Model Number
50 VDC max	15.5-40 VDC	97%	MTF50

Notes

1. Add suffix '-LT' to the part number for extended temperature range version (-55 °C).
2. Add suffix '-ESS' to the part number for extended environmental stress screening.

Mechanical Details



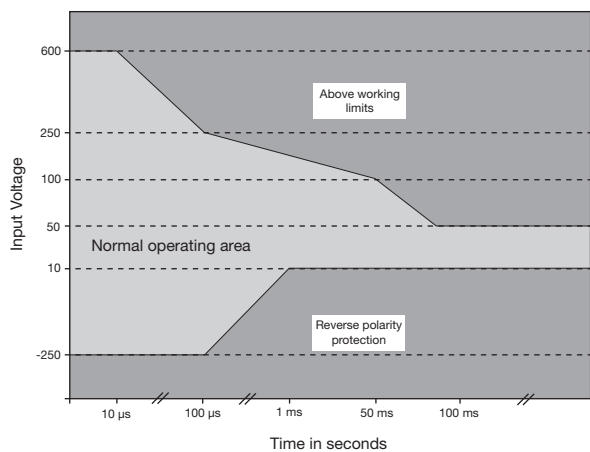
Pin	Function
1	No Pin
2	Case
3	Y-cap
4	-Vin
5	No Pin
6	+Vin
7	INH
8	No Pin
9	+Vout
10	No Pin
11	-Vout
12	No Pin
13	No Pin
14	No Pin

Notes

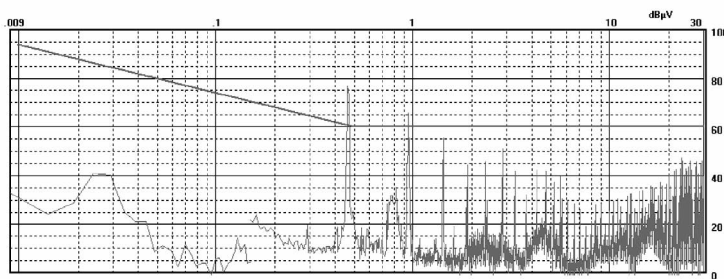
1. Dimensions are in inches (mm)
2. Tolerance: ±0.02 (±0.5) except where indicated
3. Weight: 0.06 lbs (25 g)
4. Materials & Finish:
 - Pin - Diameter: 0.032 (0.8)
Material: Cu Zn30 2.5 µm Ni
Finish: 0.2-0.5 µm AU (HV 170-200)
 - Mounting Hole - Diameter: 0.102 (2.6)
 - Case - Material: Aluminium (Al Mg Si 0.5)
Finish: Chromated
 - Nameplate - Non-conductive plastic

Application Notes

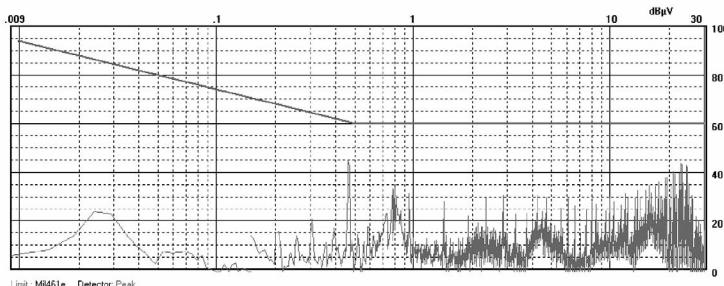
Safe Operating Area



Conducted Emissions



MTC0528S12 without MTF50 filter



MTC0528S12 with MTF50 filter

EMC Connection Diagram

