The avanta PCB Mounted, baseplate cooled, Surge and Transient Protection Device is a mil-spec, low profile, fully compliant, base plate cooled surge suppression module with a current capability of up 20A

Designed for harsh military applications, the AVMIL-SB-230-28 clamps all surges above 38VDC, to protect your downstream equipment, for both platform and terminal connected equipment.

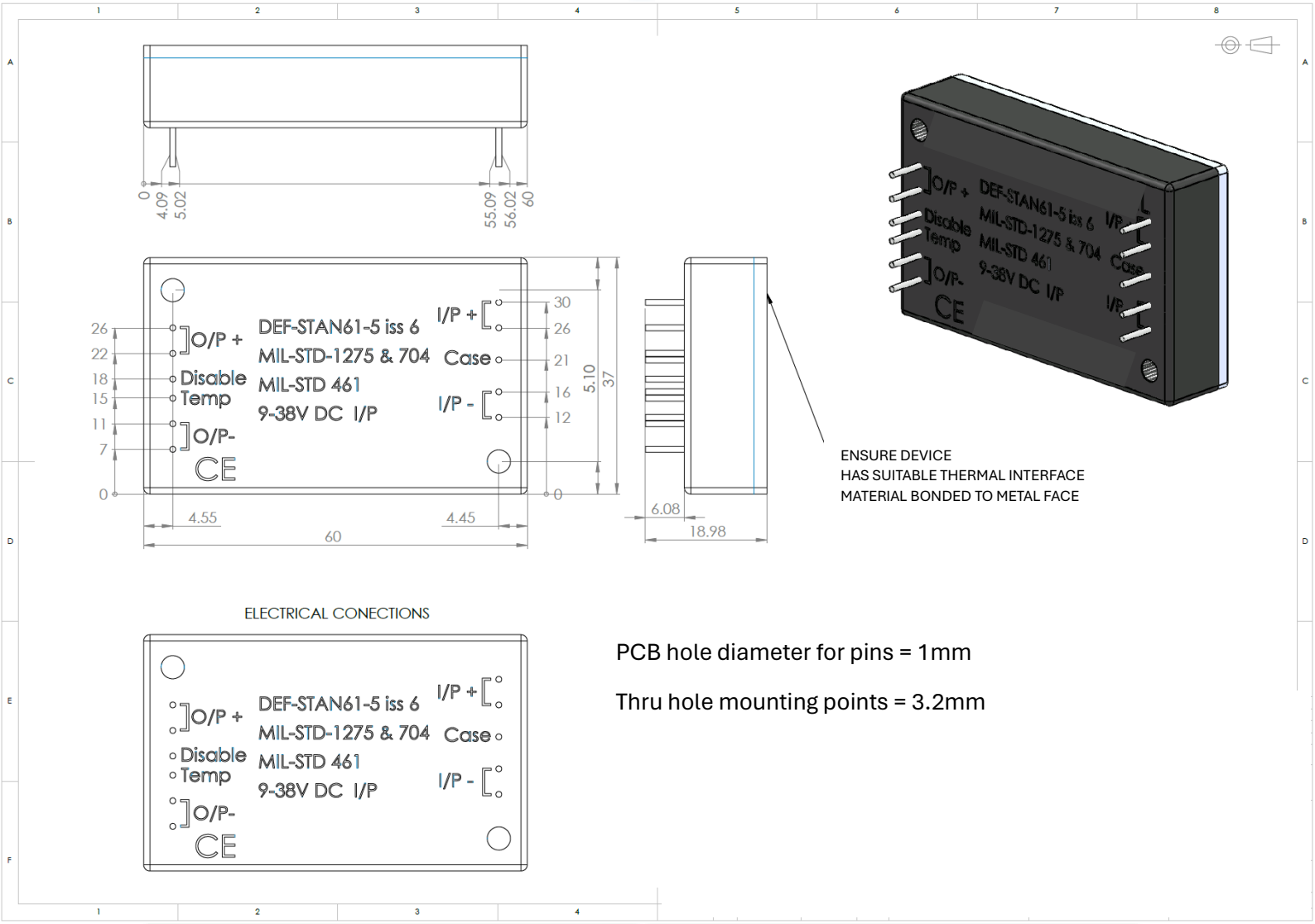
Integrated EMC filtering to MIL-STD 461 and surge protection to MIL-STD 704/ 1275/ DEF-STAN 61-5-part 6 Part 6 Issue 6 allows for direct connection to the supply voltage.

Benefit	Feature
No need for additional filters	EMC to MIL-STD 461G Surge & Transient Protection to: DEF-STAN 61-5 Part 6 issue 6 Reverse Polarity Protection
Simple to cool	Base plate cooled
Fits anywhere	Small form factor Aerospace compliant Land compliant Marine compliant
Easy to integrate	PCB Mounted
Available off the shelf	Distributor stocked

TECHNICAL DETAILS

Input Specifications	
Input Voltage	9 to 36V DC
Max Input Current	20A
Output Specifications	
Output Voltage	Input Voltage, but clamped to 36V Max
Protection	
Short Circuit Protection	Continuous, Auto Recovery, Hiccup Mode
Over Temperature Protection	105C at the Centre of the Baseplate
Efficiency	
100% Load	86% at Nominal Input Voltage
Turn On Time	<60ms
MTBF	>300 KHrs
EMC	
Mil Standards	
Mil-Std 461G	CE101, CE102, CS101, CS103,
MIL-Std 810F	Shock/Vibration
DEF-Standards	
DEF-STAN 59-411	DCE01, DCE02, DCS01, DCS02
DEF-STAN 00-35	
CE / UKCA	

MECHANICAL DETAILS



ELECTRICAL CONECTIONS

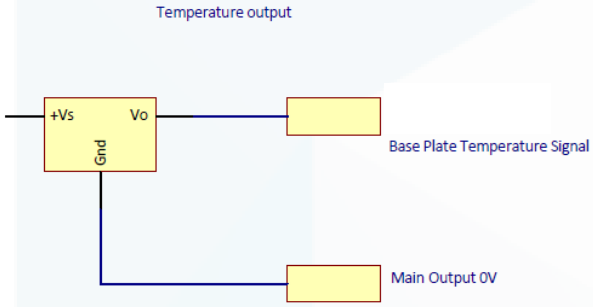
PCB hole diameter for pins = 1mm

Thru hole mounting points = 3.2mm

SIGNAL DETAILS

Base plate temperature signal (23 deg C = 580mV),
referenced to the output 0V VO = (+6.25 mV/°C × T °C) + 424 mV

Temperature (T) Typical VO
+125°C +1205 mV
+100°C +1049 mV
+25°C +580 mV
0°C +424 mV
-25°C +268 mV
-40°C +174 mV



This signal is referenced to the Zero Volt output.

A current of < 1mA can be driven from this device

The Formula to calculate temperature is

T = (VO - 424mV) / 6.25mV

Example 1
Where VO = 580mV

T = (580 - 424) / 6.25
T = 25C

Example 2
Where VO = 1049mV

T = (1049 - 424) / 6.25
T = 100C

Disable - connect to input 0V to turn all outputs off, leave open/high to turn all outputs on.