

RO-MIL-2210

70W DC-DC Converter

INPUT 270V DC, OUTPUT 28V 2.5A

Basic Data

Input	Regulated Output
270V	28V 2.5A
WxDxH: 76.3x38.2x10.2mm	Weight: 60g max
Operating Temperature: -55°C to +85°C	



Description

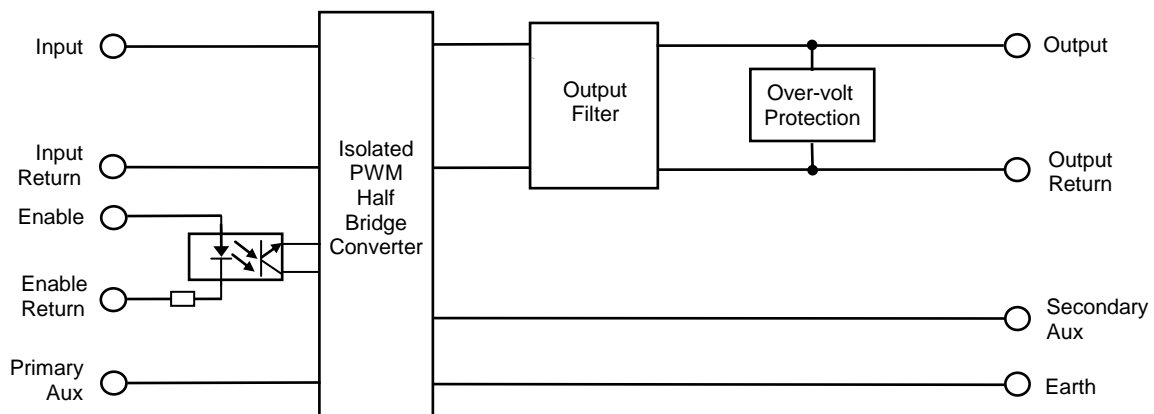
The RO-MIL-2210 is a 70W dc-dc converter that operates over a military temperature range without derating and an efficiency of up to 86%. It has a wide input voltage range of 160 to 400V and the output is isolated from the input. Its compact size is achieved by applying innovative packaging techniques.

Energy for the output is provided from a high frequency PWM half bridge converter. Overload and overvoltage protection is included. The unit has a remote enable facility.

The housing is a conversion coated machine box. Screw fixings are provided to secure the unit.

All units are manufactured on site in accordance with Roband's approved Quality Management System

Block Diagram



RO-MIL-2210

70W DC-DC Converter

INPUT 270V DC, OUTPUT 28V 2.5A

Specification

(Tcase 25°C, Vin 270V ±2%, 2.5A load, unless otherwise specified)

Input

Nominal Voltage	: 270Vdc
Working Range	: 160 to 400Vdc
Enable	: 5mA sink at 5V min See diagram

Output

Voltage	: 28Vdc
Current Rating	: 2.5A continuous
Ripple Voltage ⁽¹⁾	: 150mVp-p max
Line Regulation	: 25mV at 2A load
Load Regulation	: 100mV, 0 to 2.5A load

Efficiency : 86% typical at full load

Temperature

Operating, case	: -55°C to +85°C
Storage	: -55°C to +125°C
Coefficient	: 0.01% per °C

Dynamic Characteristics

Load Step Transient ⁽²⁾	: 1.2V
Load Step Recovery ⁽²⁾	: 2ms

Isolation

Input to Chassis	: >100Mohms at 500V
Input to Output	: >100Mohms at 500V
Output to Chassis	: >100Mohms at 500V
Isolated Enable Pins	: >100Mohms at 500V

Protection

Overload	: 3.5A typical
Overvoltage	: Surge arresting diode

Environmental

To MIL-STD 810D

	Method	Procedure
Temperature Altitude	: 504.1	I(-54 to+71°C, 70kft)
Temperature Shock	: 503.1	I(-54 to+71°C)
High Temperature	: 502.1	I(+71°C)
Low Temperature	: 502.1	I(40.000ft)
Low Pressure	: 500.1	I(40.000ft)
Vibration	: 514.2	I(5g)
Humidity	: 507.1	I(95%)
Fungus	: 508.2	
Dust	: 510.1	I
Salt, Fog	: 509.1	I

MTBF

To MIL-STD-217F

Environment	: Airborne Inhabited Fighter
At 70°C	: 81,000 hours

Enclosure

Size	: 76.3x38.2x10.2mm
Weight	: 60g max
Material	: Aluminium Alloy
Finish	: SurTec 650

Lead Soldering

Temperature : 300°C max for 5 seconds max

Caution

Unit must be treated as a static sensitive device.

Regulations

RoHS complaint
REACH compliant

⁽¹⁾ DC to 25MHz ±10% input, excluding spikes

⁽²⁾ Half to full load

