

# RO-MIL-2201

## 100V to 300V, 0.5mA

### Programmable High Voltage Converter

#### Basic Data

Input	Regulated Output
15V	100V to 300V 0.5mA
WxDxH: 27.2x12.6x12.5mm	Weight: 12g max
Operating Temperature: -40°C to +85°C	



#### Description

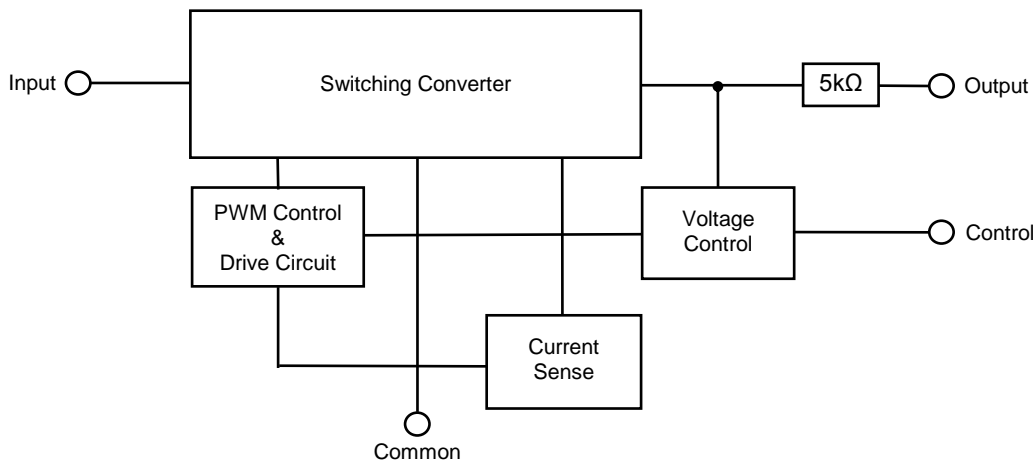
RO-MIL-2201 is a voltage controlled high voltage variable output converter. Its compact size is achieved by applying innovative packaging techniques. This device is ideal for high voltage biasing requirements.

An integral 5kΩ output resistor simultaneously reduces noise and peak current. The unit also includes active overload and short circuit protection.

The unit is an encapsulated assembly housed within a tin plated brass enclosure; this ensures mechanical integrity and RF screening. The shell is connected to the common pin.

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

#### Block Diagram



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#### Specification

(Tcase 25°C, Vin +15V ±5%, full load, unless otherwise specified)

##### Input

Nominal Voltage : 15Vdc  
Working Range : 14 to 16Vdc  
Control Max : 0.85V for 300Vout  
Control Min : 4.55V for 100Vout  
Current : 100mA max, 50mA typical

##### Output

Voltage : 100 to 300Vdc  
Current Rating : 0.5mA maximum  
Ripple Voltage<sup>(1)</sup> : 100mVp-p max  
Load Regulation : 3.5V max, 0 to 0.5mA load

##### Dynamic Characteristics

Start up time : 15ms typical

##### Protection

Overload  
Short Circuit (Unit auto recovery)  
Short Circuit Current : 200mA maximum

##### Temperature

Operating : -40°C to +85°C  
Storage : -56°C to +125°C  
Coefficient : 0.002% per°C

##### 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 : 119,031 Hours

##### Enclosure

Size : 27.2x12.6x12.5mm  
Weight : 12g max  
Material : Brass with Tin/Lead Over  
Nickel Finish: Optional  
Non- Reflective Black

##### Lead Soldering

Temperature : 300°C max for 5 seconds max

##### Caution

Unit must be treated as a static sensitive device

##### Regulations

RoHS compliant  
REACH compliant

<sup>(1)</sup> DC to 25MHz ±10% input, Excluding Spikes

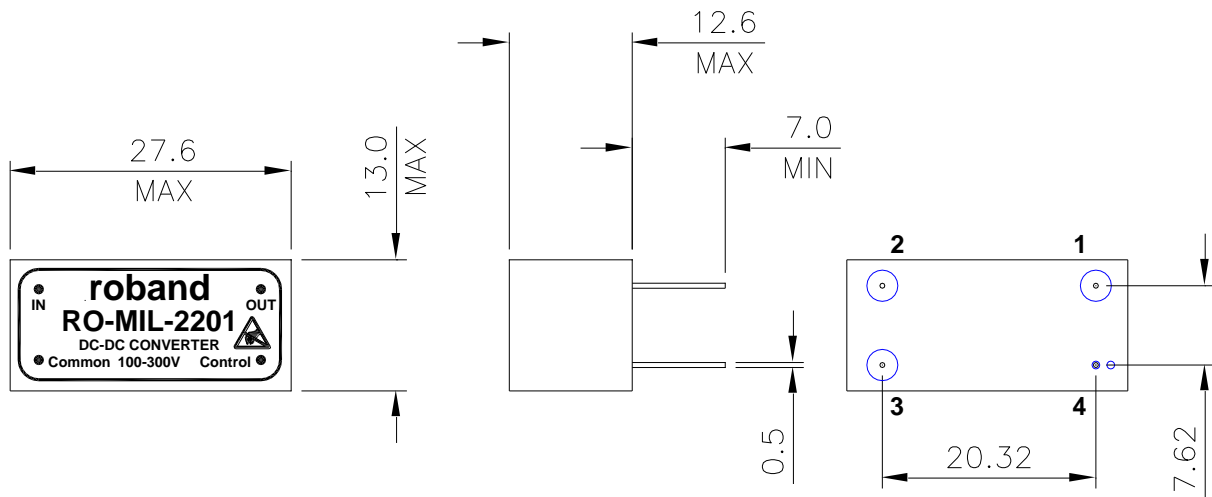
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#### Outline Drawing

Dimensions in mm



#### Pin Allocation

Pin No	Function
1	Input
2	Output
3	Control
4	Common

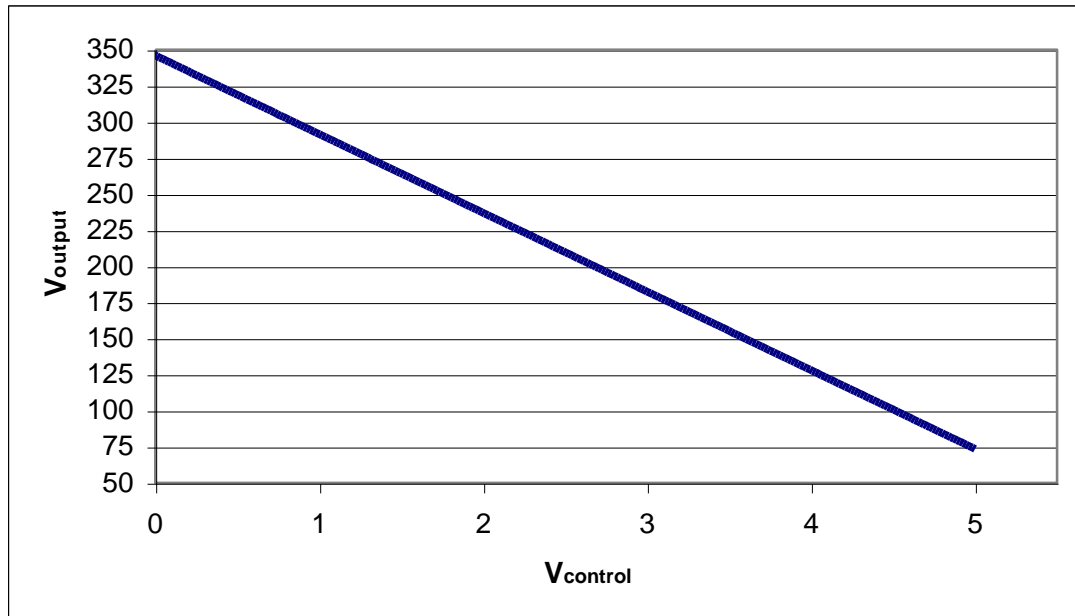
Pin 3 is static sensitive

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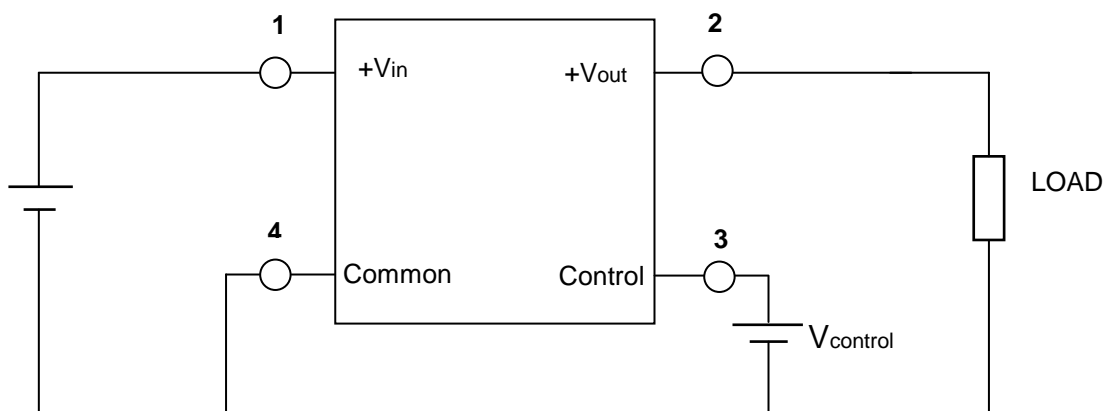
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#### Output Voltage Control



#### Connection Diagram



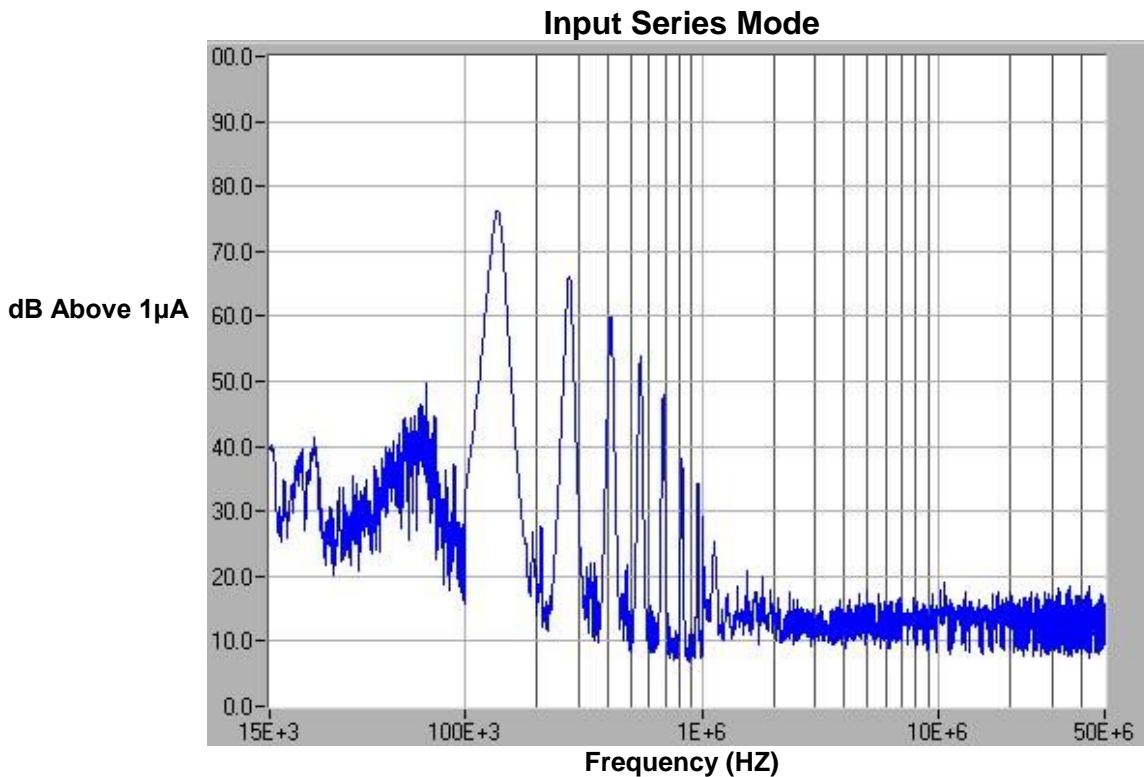
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#### Conducted Emissions to MIL-STD-461C CE03



**Input EMI Noise Generated (dB µA) vs Frequency (Hz)**

The seller reserves the right to amend or alter the specification without notice.  
Roband recognizes that different applications may require specific amendments to the unit.  
Whenever possible we will accommodate these special requirements seamlessly.