

Power Your Critical Mission Today



DC-DC Converters

and Accessories for Military, Avionics,
and Space Applications



PROTEC GmbH

Vertrieb elektronischer Bauteile
Laurinweg 1 - 85521 Ottobrunn bei München
Telefon: 089-6 60 29 23 - Fax: 089-6 09 8170
sales@protec-semi.de - www.protec-semi.de

Ansprechpartner: Christian Mayer

**Avionics Products
Presentation
Spring 2009**

VPT



VPT Series

*Non-Hermetic

*Low Cost Devices

*Excellent Performance

New COTS Modules 2007 / 2008

VPT Series

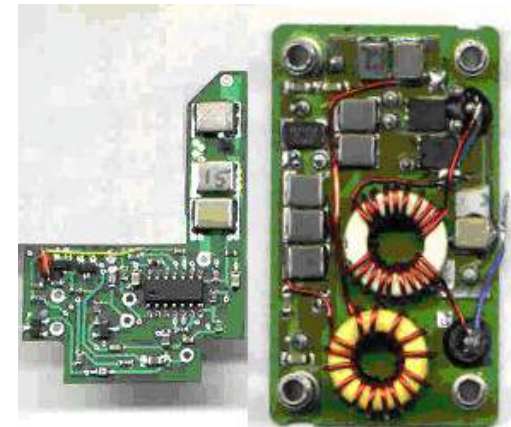
Value, Performance, Technology

VPT



► COTS Products General Overview

- Non hybrid
- -55 to 100 Dg C
- 6 sided Metal Cases
- Magnetic Feedback
- High Power Density
- EMI Filter Product Line to meet MIL-STD-461 C/D/E
- Very low Output Noise
- Lower Cost Solution



DISASSEMBLED COTS FILTER

VPT

Benefits compared to other COTS Modules



- ▶ Designed only for Military / Aerospace Applications, not as simply upscreen commercial devices:
- ▶ Designed for MIL-STD-704A-E Input Range, much wider then commercial products
- ▶ Designed and manufactured in USA , ISO-9001 and J-STD-001 and IPC-A-610

*based on typical commercial products

- ▶ Commercial with burn-in
- ▶ Very narrow 18-36Vin
- ▶ Commercial Standards



Benefits compared to other COTS Modules



- Designed and manufactured in USA , ISO-9001 and J-STD-001 and IPC-A-610
- 100% Environmental Testing

Screening	Condition
Pre-Cap Inspection	IPC-A-610
Stabilization Bake	MIL-STD-883, Method 1008, 125°C, 24 hours
Temperature Cycling	MIL-STD-883, Method 1010, Condition B -55°C, 125°C, 10 Cycles
Burn-In	96 hours at +100°C
Final Electrical	100% at 25°C
Final Inspection	MIL-STD-883, Method 2009

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VPT15-28xxS Series



- ▶ COTS Products
- ▶ Wide Input 15-50VDC ,
80VDC transients
 - -55 to 100 Dg C
 - Up to 15 Watts
 - Low Profile 6 sided Metal Cases (1.565 x 1.165 x .400)
 - Magnetic Feedback
 - Short Circuit Protection
 - Current Limit Protection
 - High Power Density, >20W cubic in
 - EMI Filter Product Line to meet MIL-STD-461 C/D/E
 - Very low Output Noise, 40mV max



V100-28XXS

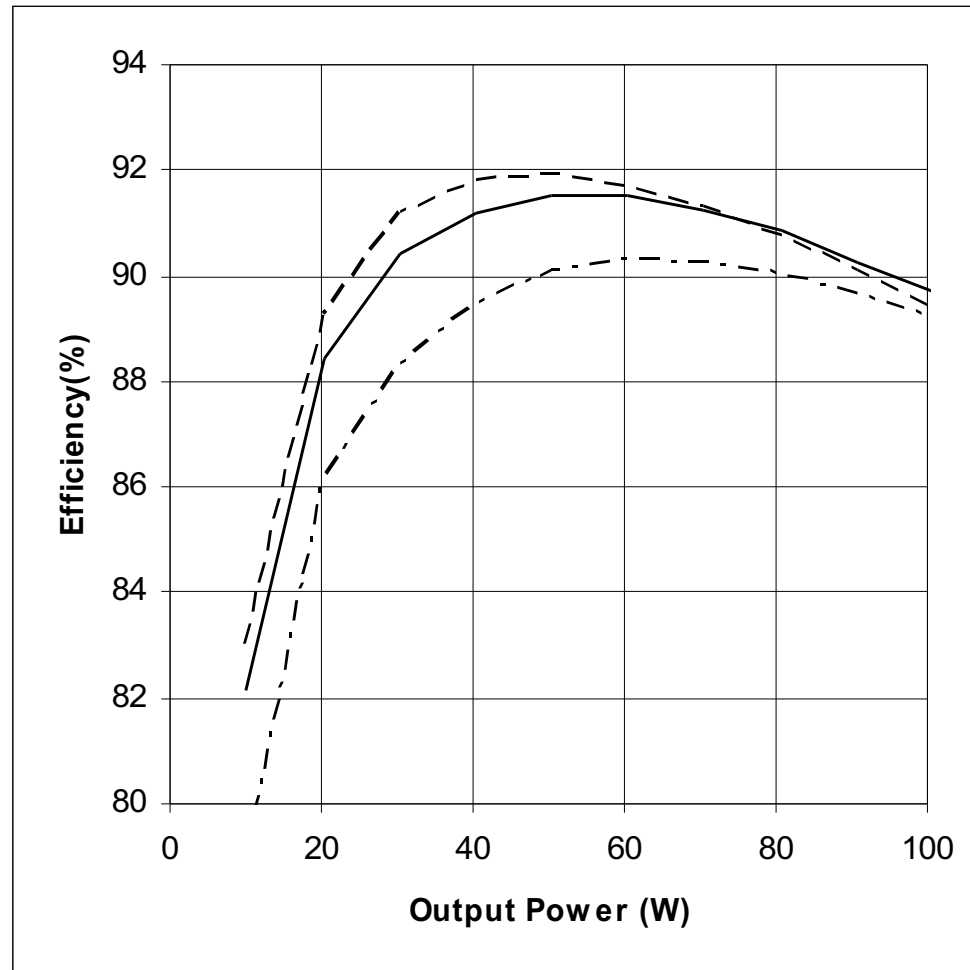


- ▶ COTS Product
- ▶ Wide Input 16-40VDC , 50 VDC transients
- ▶ -55 to +100 Dg C
- ▶ Up to 100 Watts
- ▶ High Efficiency up to > 90%
- ▶ 3.3 , 5, 12, 15, 28 VDC Outputs
- ▶ Output Voltage Trim Range -10 to +20%
- ▶ Low Profile 6 sided Metal Cases (2.35 x 1.55 x .455)
- ▶ Quarter Brick Style
- ▶ Magnetic Feedback
- ▶ Inhibit, Sense, and Synchronization
- ▶ Short Circuit Protection
- ▶ Current Limit Protection
- ▶ Magnetic Feedback
- ▶ Lower Cost Solution



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VPT100-28XXS EFFICENCY



VPT100-2805S

The information contained herein may

VPT

VPTPCM12

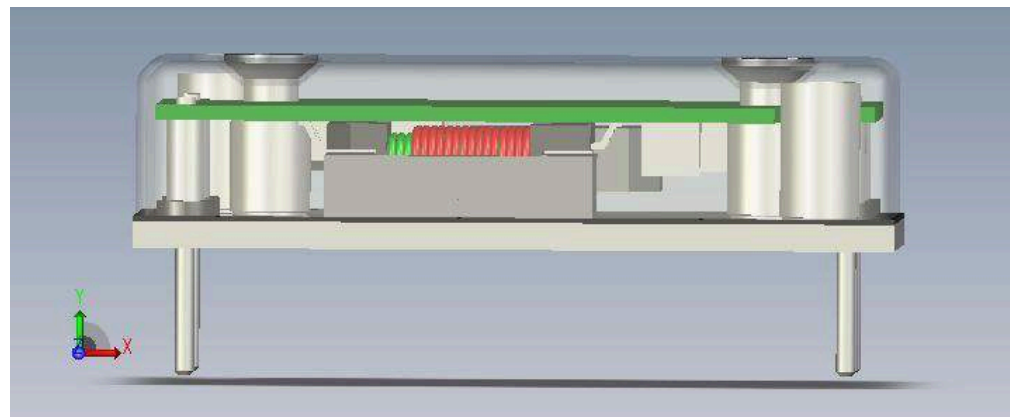
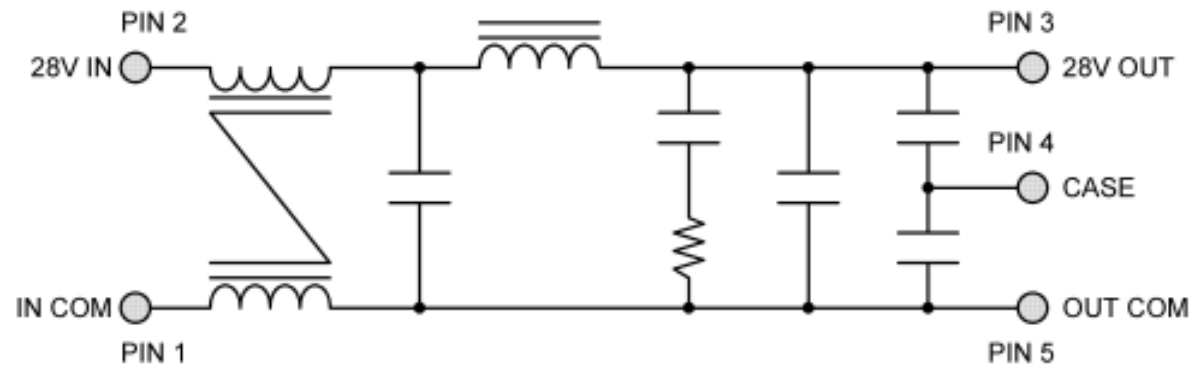
- ▶ Pre- Conditioning Module
- ▶ MIL-1275 or MIL-STD-704 Input
- ▶ Full Power from 8 to 40VDC Input
- ▶ Half Power from 6 to 8 VDC Input
- ▶ Transients to 100VDC
- ▶ Provides a semi-regulated output to “Feed” VPT Series Converters
- ▶ High Efficiency(99%)
- ▶ Inrush Current Limiting



VPT

VPT3-28F EMI Filter

- ▶ 3A EMI Filter
- ▶ MIL-STD-461 C, D, E



VPT



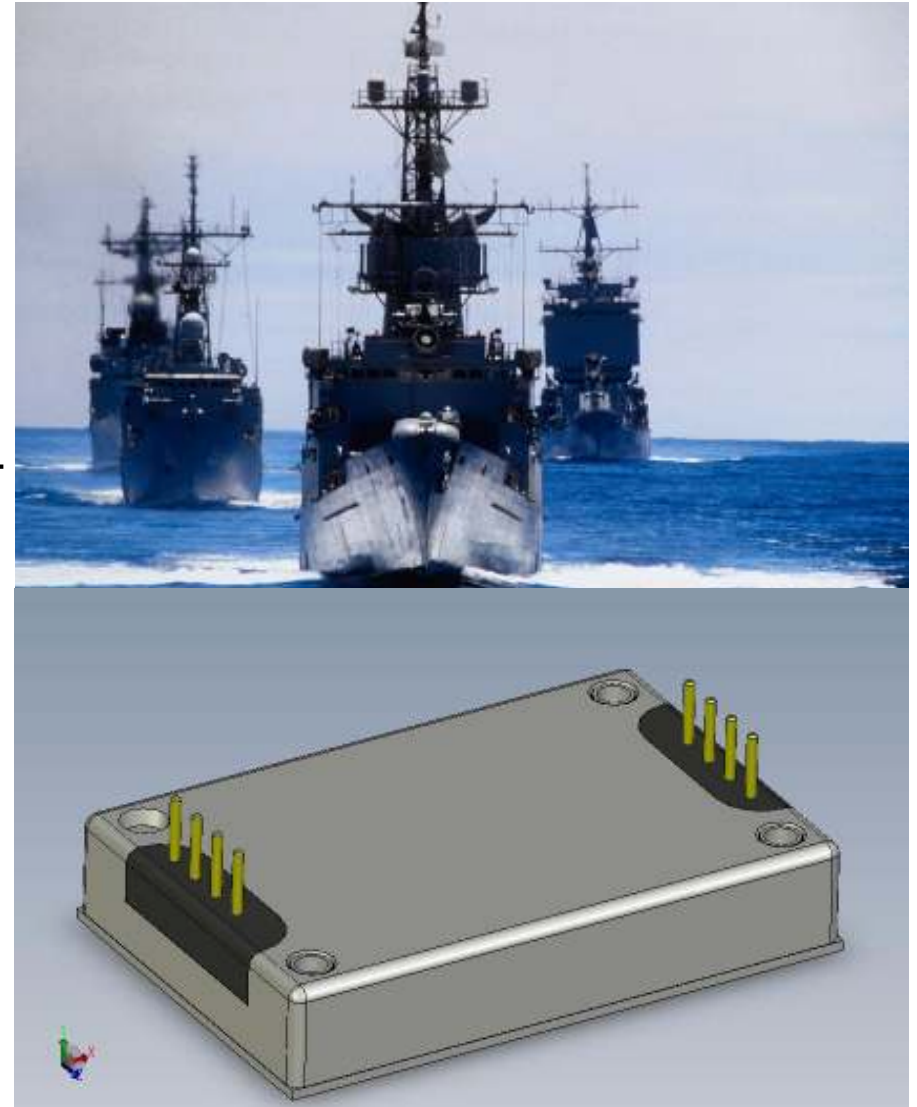
Other VPT Series Products Available

- ▶ VPT05-28XXS, 5W SINGLE
- ▶ VPT05-2800D, 5W Dual
- ▶ VPT15-28XXD, 15W DUAL
- ▶ VPT30-28XXS, 30W SINGLE
- ▶ VPT30-28XXD, 30W DUAL
- ▶ VPT1F, 1A Filter
- ▶ VPTF10, 10A Filter
- ▶ VPTF20, 20A Filter

New Product Directions

▶ VPTHVM-270

- Regulated Bus Controller Module
 - 270V Nominal Input
 - 28V Regulated Output
 - 180-350V input voltage range per MIL-STD-704
 - 500V Transient / 1 sec
 - 160V Transient / 1 sec
 - 200W
 - 91% EFFICENCY
 - NON HERMETIC
 - ALL METAL SHIELDED
 - 3,000V Isolation
 - Summer 2009



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New Product Releases

▶ COTS PRODUCTS

- VPT100-2812D / VPT100-2815D
 - 28V to +/-12V or +/-15V Regulated Module
 - 16-40V, 500V Transient
 - 100W
 - HIGH EFFICENCY, FORWARD TOPOLOGY(~88%)
 - NON HERMETIC
 - ALL METAL SHIELDED
 - FALL 2009



New Output Voltages



- ▶ DVFL2828S
- ▶ DVFL 2818S
- ▶ DVFL289R5S
- ▶ DVFL286R3S
- ▶ DVFL286R3D
- ▶ DVFL289R5D
- ▶ DVFL2807S
- ▶ DVFL2808S
- ▶ DVTR2818S
- ▶ DVTR2807S
- ▶ DVTR2808S
- ▶ DVTR2818D
- ▶ DVTR2808D
- ▶ DVHF2818S