



Power Conversion Products

For Military & Avionics Applications

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Military and Avionics Series Power

Save board space, weight, heat, and cost when you create an efficient power system using our isolated DC-DC converters plus our family of non-isolated, synchronous, buck regulated point-of-load DC-DC converters.

Compliances and Certifications:

- ▶ Products available qualified to MIL-PRF-38534 Class H and Class K
- ▶ MIL-PRF-38534 Class H and Class K certified manufacturing facility
- ▶ MIL-STD-704A input voltage requirements
- ▶ DO-160, ISO-9001
- ▶ MIL-STD-883 environmental screening
- ▶ MIL-STD-461 C-F when used with a VPT EMI filter
- ▶ DLA SMDs available for most modules

Note: Compliances and certifications vary by product series. Please see specific product datasheets for more information.

Features:

- ▶ 100% hermetic
- ▶ No optocouplers
- ▶ High efficiencies
- ▶ 28Vin nominal unless otherwise noted
- ▶ A host of circuit protection features
- ▶ Fault-tolerant magnetic feedback circuits
- ▶ Thick-film hybrid technology
- ▶ Available in industry standard output voltages including:
 - Single outputs: typically 3.3, 5, 5.2, 12, 15V
 - Dual outputs: typically ± 5 , ± 12 , $\pm 15V$
 - Triple outputs: typically $3.3/\pm 12$, $3.3/\pm 15$, $5/\pm 12$, $5/\pm 15V$



DC-DC CONVERTERS, ISOLATED

Power Level (W)	Model Series	Outputs	DLA SMD #
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DV Series of DC-DC Converters: Thick-film hybrid. -55 °C to +125 °C.

1.5	DVCH2800S/D	Single and Dual	5962-09242, 5962-09243
6	DVSA2800S/D	Single and Dual	5962-03241, 5962-03242
12.5	DVSB2800D	Dual	5962-08207
12.5	DVGF+2800T	Triple	5962-08205
15	DVHV2800S/D	Single and Dual	5962-11226, 5962-11227
15	DVAB2800D	Dual	5962-14232
15	DVHF+2800T	Triple	5962-08206
20	DVHF2800S/D	Single and Dual	5962-03243, 5962-03244
25	DVWR2800T	Triple	5962-16203
30	DVTR2800T	Triple	5962-16202
40	DVTR2800S/D	Single and Dual	5962-11224, 5962-11225
50	DVHE2800S	Single	5962-15230
120	DVFL2800S/D	Single and Dual	5962-07243, 5962-07244

DV Series of DC-DC Converter with Integral EMI Filter: -55 °C to +125 °C.

10	DVEHF2800T	Triple	Contact VPT
40	DVETR2800S/D	Single and Dual	5962-15208, 5962-15209

POINT-OF-LOAD DC-DC CONVERTERS, NON-ISOLATED

Power Level (W)	Model Series	Outputs	DLA SMD #
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DV Series of POL DC-DC Converters: 5Vin nominal. -55 °C to +125 °C.

3	DVPL0503S	Single	5962-13243
5	DVPL0505S	Single	5962-09241
10	DVPL0510S	Single	5962-13219
20	DVPL0520S	Single	5962-13244

INRUSH CURRENT LIMITER

Output Current (A)	Model Series	Outputs	DLA SMD #
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Control the Inrush Current: -55 °C to +125 °C.

11	DVCL28	Single	5962-13240
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EMI FILTERS

Output Current (A)	Model Series	Outputs	DLA SMD #
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Reduce Noise Even Further: -55 °C to +125 °C.

0.8	DVMSA28	Single	11016
1	DVMA28	Single	06004
2	DVMH28	Single	06005
2	DV704A	Single	Contact VPT
4	DVMC28	Single	06023
7	DVMD28	Single	06024
15	DVME28	Single	07004

THERMAL PADS

Output Current (A)	Model Series	Outputs	DLA SMD #
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Ensure Low Thermal Resistance

N/A	TP-001 to 011	N/A	N/A
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Hi-Rel COTS Series Power

VPT's COTS DC-DC converters deliver the high reliability needed for cost-conscious programs, with electrical designs based on VPT's proven military products.

Compliances and Certifications:

- MIL-STD-1275 A-E (when used with VPTPCM-12 for VPT Series)
- MIL-STD-704A input voltage requirements
- MIL-STD-461 C-F when used with a VPT EMI filter
- DO-160, ISO-9001 h DEF STAN 59-411
- Testing to JESD22, MIL-STD-810, MIL-STD-883 J-STD-001, ISO-9001, IPC-A-610 manufacturing

Note: Compliances and certifications vary by product series. Please see specific product datasheets for more information.

Features:

- Technology based on proven military heritage designs
- Cost effective
- High efficiencies
- 28Vin nominal unless otherwise noted
- Full performance over wide temperature ranges of -55 °C to +105 °C, no power derating necessary
- Host of circuit protection features
- Six-sided metal packages for maximum EMI shielding
- V-SHIELD® epoxy encapsulation standard on VXR series models and available as an option on many VPT series models
- Full military standard input voltage ranges
- Available in industry standard output voltages including:
 - Single outputs: typically 3.3, 5, 12, 15V
 - Dual outputs: typically ±5, ±12, ±15V
 - Triple outputs: typically 5/±12, 5/±15V



DC-DC CONVERTERS, ISOLATED

Power Level (W)	Model Series	Outputs
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VXR Series of DC-DC Converters: 2000 V isolation. -55 °C to +105 °C.

7	VXR7-2800S/D	Single and Dual
15	VXR15-2800S/D	Single and Dual
30	VXR30-2800S/D	Single and Dual
100	VXR100-2800S/D	Single and Dual
250	VXR250-2800S	Single

VPT Series of DC-DC Converters: Metal packaging. VPT15 and VPT30 also available in epoxy-encapsulated packaging. -55 °C to +100 °C.

5	VPT5-2800S/D	Single and Dual
15	VPT15-2800S/D	Single and Dual
30	VPT30-2800S/D/T	Single, Dual, Triple
100	VPT100-2800S	Single
100	VPT100+2800S/D	Single and Dual

DV Series of COTS Modules: Metal packaging. -55 °C to +100 °C.

30	DVST-2800T	Triple
175	DV200-27000S/D	Single and Dual
200	DV200-2800S/D	Single and Dual

EMI FILTERS

Output Current (A)	Model Series	Outputs
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VXR Series of EMI Filters: Epoxy-encapsulated packaging. -55 °C to +105 °C.

2	VXRF2-28	Single
5	VXRF5-28	Single
10	VXRF10-28	Single
20	VXRF20-28	Single
50	VXRF50-28	Single

VPT Series of EMI Filters: Metal and epoxy-encapsulated packaging. -55 °C to +100 °C.

1	VPTF1-28	Single
3	VPTF3-28	Single
10	VPTF10-28	Single
20	VPTF20-28	Single

FRONT END MODULES

Output Current / Power Level	Model Series	Outputs
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EMI Filters and Transient Suppression Combination Modules: -55 °C to +100 °C.

10 A	VPTc10-28	Single
10 A	VPTi10-28	Single
14 A	DVMN-28	Single

Power Conditioning Module: -55 °C to +100 °C.

120 W	VPTPCM-12	Single
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Bus Converter Module: 270V to 28V. -55 °C to +100 °C.

200 W	VPTHVM-270	Single
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VME POWER SUPPLY

Power Level (W)	Model Series	Outputs
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Single Slot 6U, Configurable VME Power Supply

500	VPTVME-28	Up to 5, configurable
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Leading Power Products for When the Mission is Critical

VPT®, Inc. is a global leader in providing power conversion solutions for use in avionics, military, space, and other high reliability applications. VPT offers DC-DC converters, EMI filters, accessory power products, and custom engineering services for the rapid development of critical power systems.

Every day, leading organizations including NASA, Lockheed Martin, Boeing, BAE, Honeywell, GE, Thales, the U.S. Air Force, and many more power critical systems with quality solutions from VPT. VPT is part of the HEICO Electronic Technologies Group (NYSE: HEI.A, NYSE: HEI).

Immediate Availability

No need to wait weeks, months, or even years for your power conversion products. In most cases, products are available for immediate shipment from stock. Contact VPT for a quotation to fulfill your system requirements.

Designed and Qualified for Extreme Environments

VPT products undergo rigid quality testing procedures in qualified facilities to ensure optimal performance through the toughest environments.

- MIL-PRF-38534 Class H and Class K Site Certification
- QML-38534 Qualified Manufacturers List
- QPD SIS-38534 Qualified Products Database to Class E, H, & K
- MIL-STD-883 Lab Suitable, MIL-PRF-38534, FSC 5962
- ISO-9001 Certification
- Most military and space grade modules on Defense Logistics Agency Standard Microcircuit Drawings
- Radiation Hardness Assurance Certified to MIL-PRF-38534, Appendix G

Screened for Rugged Environments

Each product line offers several grades of environmental screening. Tests performed may include:

- Non-destructive bond pull
- Internal visual
- Temperature cycling
- Constant acceleration
- PIND
- Stabilization bake
- Pre burn-in electrical
- 100% final electrical
- Hermeticity
- Radiography
- External visual

VPT, Inc. Sales and Support Headquarters

19909 120th Avenue NE, Suite 102, Bothell, WA 98011 | **Telephone:** (425) 353-3010
Fax: (425) 353-4030 | **Email:** vptsales@vptpower.com

Products described in this communication are subject to all export license restrictions and regulations which may include but are not limited to ITAR (International Traffic in Arms Regulations) and the Export Administration and Foreign Assets Control Regulations. Further restrictions may apply. Contact VPT sales for details.

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Whatever Your Mission, Get it Accomplished with VPT

Innovative technology.
Fast delivery.
Affordable solutions.
Certified quality.

Save Board Space, Weight, and Cost

VPT's continual investment in advancing power conversion technology delivers many advantages across our product lines:

- Maximum reliability thick-film hybrid technology
- Innovative rugged hi-rel COTS technology
- Full operation over the specified temperature ranges
- Excellent EMI performance
- High power densities
- Lightweight

VPT, Inc. Headquarters

1971 Kraft Drive, Blacksburg, VA 24060 **Telephone:** (540) 552-5000
Fax: (540) 552-5003 | **Email:** vptsales@vptpower.com

Decades of Proven Military, Avionics, and COTS Heritage, including:

- Airbus A350/A380/A400M
- Apache Helicopter
- Bell Helicopter
- Blackhawk Helicopter
- Boeing 737/757/777/787
- Bradley Fighting Vehicle
- Embraer Commercial Jet
- Eurohawk UAV
- F-15/16/18/22/35
- Global Hawk UAV
- Hummingbird UAV
- Husky Mine Vehicle
- Lear Jet
- Pac-3 Missile
- Predator UAV
- S-80 Submarine
- Stryker Tank
- Type 23 Frigate
- Virginia Class Submarine
- Watchkeeper UAV