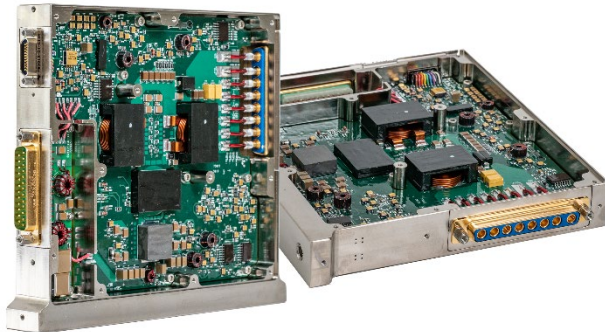




Power Your Critical Mission Today

# SGRB10028S SERIES

## SPACE QUALIFIED DC-DC CONVERTERS



SGRB Series DC-DC Converter

### MODELS AVAILABLE

Input: 100 V
Output: 28 V, 400 W
Efficiency up to 95%
Operating Temperature: -35 °C to 85 °C
Space level component screening available
Custom versions available

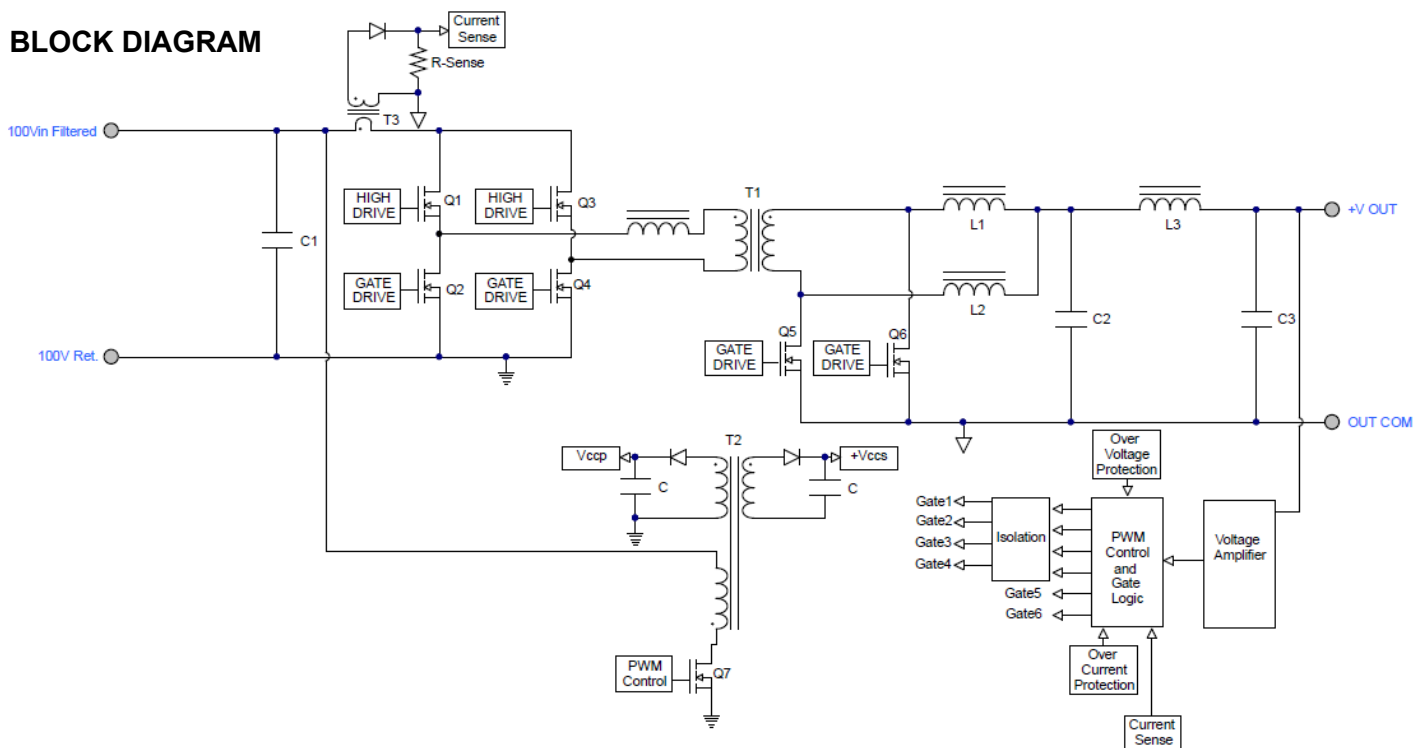
### DESCRIPTION

The SGRB Series of space qualified DC-DC converters is specifically designed for the harsh radiation environment of space applications. Using advanced GaN technology, the SGRB is radiation tolerant and achieves very high efficiency. A fixed-frequency reduced voltage switching topology results in very low input and output noise, making it suitable for use in telecommunication systems. VPT's history of proven space flight heritage ensures long term performance and reliability.

### FEATURES

- High Efficiency up to 95% using GaN technology
- Integrated EMI filter
- 120 V, 10 msec transient
- 80 V, 10 msec transient
- Over Voltage Protection
- Output Current limit protection
- Output Short Circuit Protection
- 28V Command on
- 28V Command off
- Input Current telemetry
- Parallel up to 5 units with current share
- Guaranteed TID performance to 100 krad(Si) including ELDRS
- SEE performance to 85 MeV/mg/cm<sup>2</sup>. Transients are fully characterized for cross section and magnitude
- Manufactured in a facility certified to ISO9001, J-STD-001 and IPC-A-610
- Designed in line with MIL-HDBK-1547
- Screening up to level T available

### BLOCK DIAGRAM

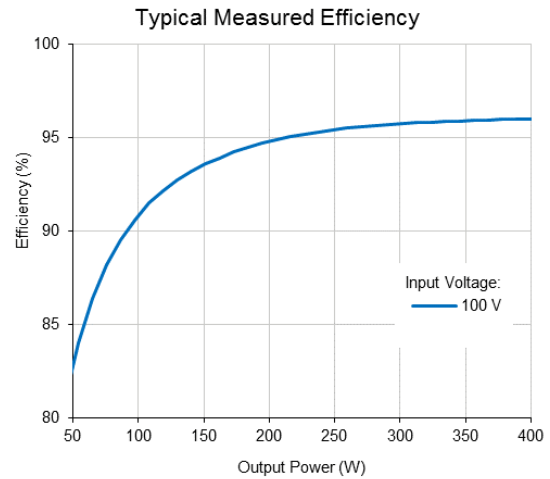


This product is currently under development. All specifications and characteristics herein are subject to change without notice.

## PERFORMANCE SPECIFICATIONS

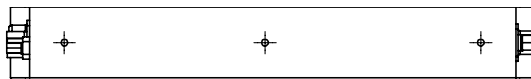
T<sub>case</sub> = -35 °C to +85 °C, V<sub>in</sub> = +100 V ± 5%, Full Load, Unless Otherwise Specified

SGRB10028S					
Parameter	Conditions	Min	Typ	Max	Units
<b>INPUT</b>					
Voltage	Continuous	94	100	105	V
	Transient, 10 msec	-	-	120	V
Current	CMD off	-	-	5	mA
	No Load	-	-	100	mA
<b>OUTPUT STATIC</b>					
Voltage	V <sub>out</sub> , T <sub>case</sub> = 25 °C	26.6	28	29.4	V
Power		0	-	400	W
Current		0	-	14.3	A
<b>OUTPUT DYNAMIC</b>					
CMD-On, V <sub>in</sub> = 100 V	Delay	-	5	20	ms
	Overshoot	-	0	25	mVpk
<b>GENERAL</b>					
Efficiency		94	95	-	%

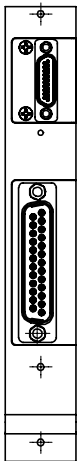


## PACKAGE INFORMATION

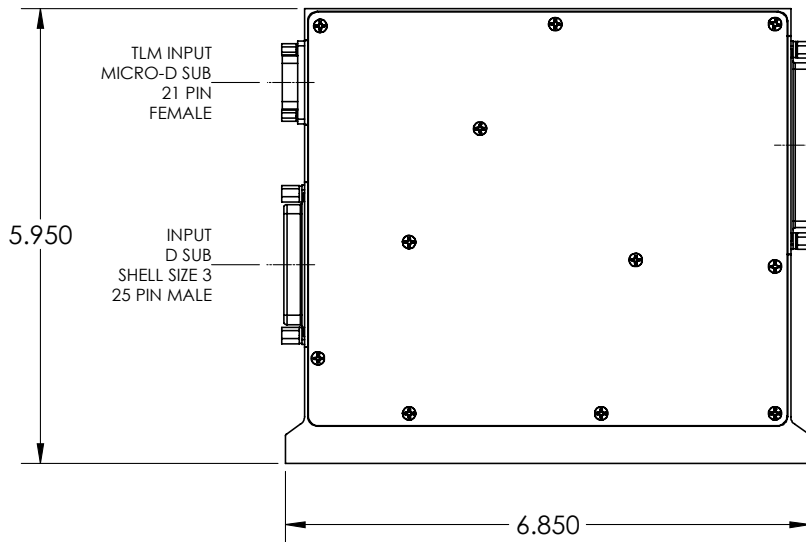
Top View



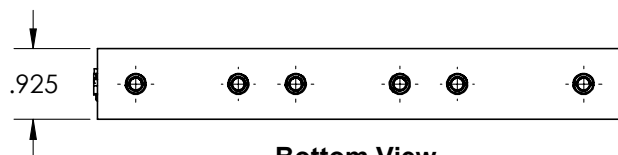
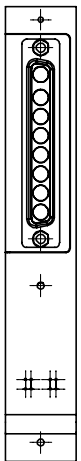
Left View



Front View



Right View



Bottom View

- Materials: Case (Aluminum 6061 nickel plated); Cover (Steel, nickel plated)