Communications & Power Industries

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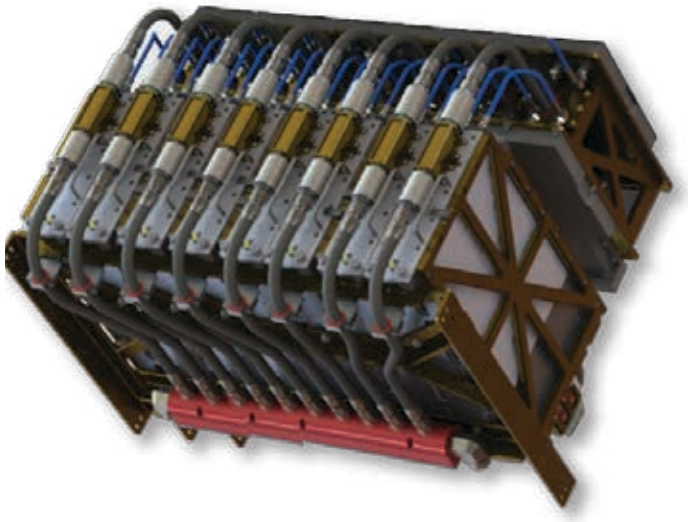
C-Band GaN 16 kW Pulsed Solid State Transmitter

VSC3701



Features:

- Eight combined 1.1 kW pulsed modules
- High efficiency GaN transistors
- BIT & controls via EIA-422 remote connection
- Blind mate DC and control connectors
- Controllable output power reduction
- Can be configured into an enclosure, with:
  - Control features
  - Cooling
  - Power conditioning

Benefits:

- Easy to maintain
- High gain
- Excellent pulse fidelity
- Outstanding spectral performance
  - Graceful power degradation

Note: Several configurations available.

Applications:
- **Maritime, ATC, and defense radars**
- **High resolution weather radars**

C-Band RF Power Modules

High efficiency, high power and compact with proven GaN technology, the VSC3701 can be easily combined to create high power C-band radar transmitters, up to 50 kW.

CPI BMD's solid state transmitters are reliable, highly-efficient and easy to maintain. The VSC3701 solid state transmitters are designed for use in maritime, surveillance and weather radar transmitters and cover the 5.4 – 5.9 GHz frequency band. GaN transistors are combined into a 16 kW output and are air cooled.

C-Band GaN 16 kW Pulsed Solid State Transmitter - VSC3701

Note: Can be power-combined for higher power levels

Specifications	
Frequency range	5.4 to 5.9 GHz
Maximum saturated peak RF output	16 kW
Typical pulse width	1 to 100 µsec
Maximum pulse droop	0.6 dB
Maximum duty cycle	10%
Output power flatness across frequency range	±1 dB
Input RF Level	+31 +/- 1
Stability	60 dB
Maximum output VSWR	1.5:1
Maximum harmonic output	-35 dBc
Maximum Interpulse Thermal Noise	-160 dBm/Hz
Noise power density	-90 dBc in a 1 MHz Bandwidth
Pulse repetition rate	To 1.2 KHz
NTIA Compliance	Compliant for a radar of this frequency – with customer pulse shaping as required.

Mechanical and Environmental Specifications	
Prime power	55 VDC @ 150 Amps max
Operating ambient Temperature	+5º to +50º C
Non-condensing relative humidity	95%
Operating altitude	15,000 ft (4.57 km)
Shock and vibration	Rack mounted – shipboard/ground
Cooling	Liquid Cooled to +50C
RF Input connection	N Type Female
RF Output connection	WR 187 mounted on top of transmitter
AC power, control, water cooling lines and test points	Right side of transmitter cabinet
Dimensions	Nominally 12.3 in.(312.4 mm) Nominally 24.9 in.(633.6 mm) Nominally 21.1 in.(535.9 mm)
Maximum weight	276 lbs. (124.8 kg)

For information on this and other CPI products visit our webpage at www.cpii.com/BMD, or contact:
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