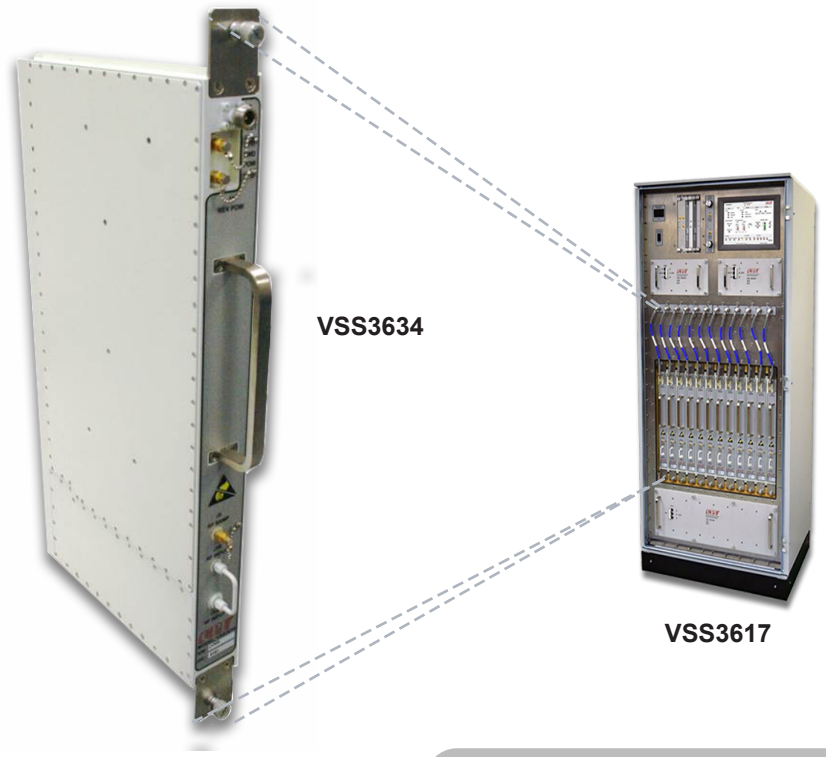
S-Band 1.3 kW Solid State Power Amplifier VSS3634

CPI Electron Device Business - Solid State Power Amplifier



CPI EDB-Built RF Power Modules

High efficiency, high power and compact with proven GaN technology.

CPI EDB's Solid State Power Amplifiers are reliable, highly-efficient and easy to maintain. The VSS3634 Solid State Power Amplifiers are designed for use in air traffic control radar transmitters and cover the 2.6 – 3.0 GHz frequency band. GaN transistors are combined into 1.3 kW (VSS3634) bricks which are air cooled. These 1.3 kW bricks can be power-combined using radial combiners and waveguide combiners to achieve the power levels required for Air Traffic Control radars.

FEATURES:

- Designed for Air Traffic Control radars
- 1.3 kW pulsed modules
- High efficiency GaN transistors
- BIT and controls via EIA-422 remote connection
- Compact and light weight
- Blind mated power and control connectors
- Internal processor with health monitoring
- Controllable 6dB output attenuation

BENEFITS:

- Easy to maintain
- Provides high gain
- Excellent pulse fidelity
- Exceptional AM/PM, phase-noise and spectral regrowth performance

APPLICATIONS:

- Air Traffic Control Radar

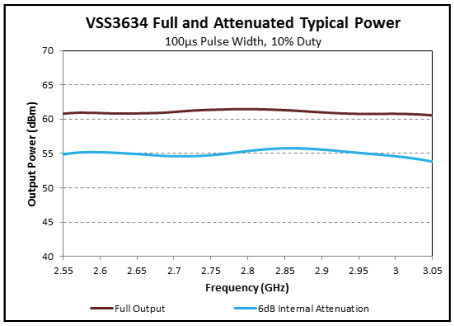
S-Band 1.3 kW Solid State Power Amplifier: VSS3634

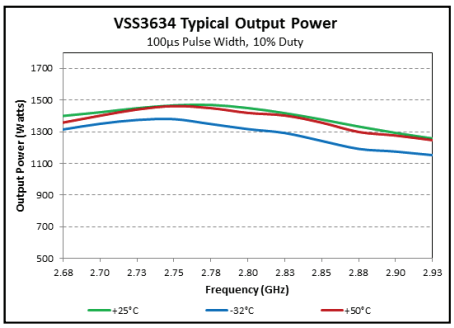
Specifications

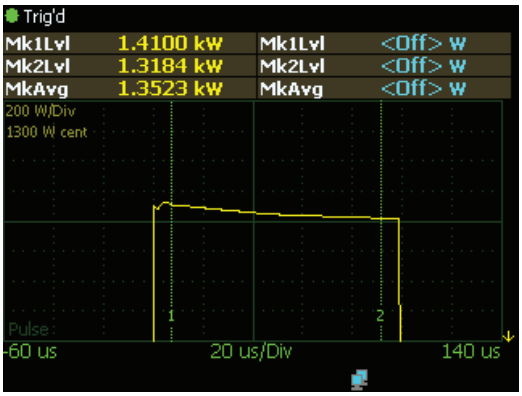
Frequency range	2.6 – 3.0 GHz
Minimum saturated peak RF Output	1.3 kW
Typical pulse width	1 to 100 µsec
Maximum Pulse Droop	0.5 dB
Duty cycle	10%
Output power flatness across frequency range	1 dB
Nominal small signal gain	50 dB
Maximum input VSWR	1.5:1
Maximum output VSWR	1.5:1
Harmonic output	-65 dBc
Maximum interpulse thermal noise	-160 dBm/Hz
Noise power density	-100 dBc into a 1 MHz bandwidth
MTBF	>140,000 hours
NTIA Compliance	Compliant with customer pulse shaping as required

Specifications

Prime Power	31 VDC @ 14 Amps
Ambient Temperature	-32C to +70C operating
Relative Humidity	100% non -condensing
Altitude Operating	30,000 feet (9.14km)
Non -operating	70,000 feet (21.34km)
Shock and Vibration	Air & Truck Transportation
Cooling	Forced air
RF Input Connection	BMA male
RF Output Connection	Type N female
RF Output Detector	Control connector
RF Input Monitor	SMA female
Forward / Reverse Power monitor	SMA female
Dimensions (width)	2 in (50.8 mm)
Dimensions (height)	20.5 in (52.07 cm)
Dimensions (depth)	10 in (25.4 cm)
Weight	20 lbs. (9.07 kg)
Internal Output Isolator	Provided for VSWR protection.







100 µs PW
1kHz PRF

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