HD31576
SOLID STATE HIGH POWER PULSE AMPLIFIER

FEATURES

High peak power S-Band pulse applications
High power advanced GaN pulse devices
Instantaneous bandwidth
Suitable for linear pulse applications
Built-in control, monitoring and protection circuits
High efficiency, reliability and ruggedness



ELECTRICAL SPECIFICATIONS Relative to 50Ω

Parameter	Specification			Notes
Operating Frequency Range	2.7 - 2.9 GHz			
Peak Output Power	8 KWatt Min			
Pulse Characteristics (Max Rating)	**Duty**	**Width**	**PRF**	
	10 %	150 µSec	2KHz	Duty 10%, Pulse Width 150uS requires PRF rating of 660Hz Duty 10%, PRF rating of 2KHz requires Pulse width of 50uS.
Rise / Fall Time	<50 nS Typ <60nS Min			10% to 90%
Input Peak Power for Nominal Output	0 dBm ±1.0dB Nom			Power Gain = 69 dB Nom
Harmonics	-20 dBc Max			
Spurious	-50 dBc Max			
Power flatness	≤1.0 dB			Over operating frequency
Pulse Width Variation (Jitter)	<-70 nS			
Amplitude Pulse Droop	≤0.5 dB for 150 µSec Pulse ≤0.1 dB for 10 µSec Pulse			Duty 10% requires Pulse Width of 50uS max.
Amplitude Ripple	≤0.3 dB			
Phase change along the pulse	≤35°, 0 ≤ t ≤ 5 µSec ≤50°, 5 ≤ t ≤ 100 µSec			
Phase ripple along the pulse	≤1°			
Pulse to pulse phase stability	< 0.15°			
Pulse Amplitude Stability	0.05dB			
Input / Output VSWR	1.5 : 1 Min			
Pulse Phase Noise	≤100 dBc/Hz @ 1 KHz from carrier			
System Efficiency	15 % Min			

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions W x H x D	14 U	Without cabinet
Weight	115 Kg. Max	Including cabinet
RF Connectors In/Out	Type N-F / Waveguide WR284	Front/Rear Panel Standard
RF Output Monitoring FWD / REV	Type N-F	
AC Power	380/220 VAC, 48-64Hz, 3 Phase & Natural	4 Wires
Interface Connector	TBD	
Monitor & Control - **OPTIONAL Interface**	1 Ethernet RJ-45 circular connector TCP/IP 1 RS422/485 D-dub 9S port for redundancy	
Cooling	Built in forced air	

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ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Ambient Temperature	-20 to +55°C	
Storage Temperature	-40 to +70°C	
Relative Humidity	95% @ 40°C	Non -condensing
Shock & Vibrations	MIL STD 810E	
EMI/EMC	MIL STD 461E	
Cabinet Emitted Radiation	Residual RF radiation < 5mW/cm^3	Continuous 8 hours exposure

OUTLINE DRAWING (for illustration only)



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