HD Communications Corp.

HD30970
SOLID STATE HIGH POWER AMPLIFIER

FEATURES

Class AB linear LDMOS design
Designed for L-Band High Power Pulse applications
Heatsink assembly
Built-in protection circuits
High reliability and ruggedness

ELECTRICAL SPECIFICATIONS

Parameter	Specification	Notes
Operating Frequency Range	950 - 1250MHz	
Output Power Peak Pulse	3 KW Min, 4 KW Typ	Pulse
Power Gain	65 dB Min	
Power Gain Flatness	2.0 dB p-p Max	
Input / Output Return Loss	15 dB / 10 dB Min	
Harmonics	>30 dBc	At rated Pout
Non Harmonics Spurious	>60 dBc	
Pulse Width	100 uS	
Pulse Duty Cycle	10 %	
Pulse Droop	1.0 dB	
Rise & Fall Time	75 nS	
Switching Delay	400 nS Typ	
Noise Figure	10 dB Max	
Operating Voltage	50 VDC Nom	
Current Consumption	32 Amp Avg Max	
Max Input Power Protection	+3 dBm Max	Without damage
Load VSWR Protection	∞ : 1	Output Isolator

ENVIRONMENTAL CHARACTERISTICS

Parameter	Specification	Notes
Operating Case Temperature	-30 to +60°C	
Storage Temperature	-40 to +70°C	
Relative Humidity	5 to 95 %	Non Condensation

MECHANICAL SPECIFICATIONS

Parameter	Specification	Notes
Dimensions	390 x 224 x 43 mm	See outline drawings
Weight	-	
RF Connectors In/Out	SMA-F / Type N-F	
DC Power / Interface Connector	7-Pin Hybrid D-Sub	
Cooling	External Heatsink	Forced air required

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Drive AMP D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Test Results
A1	VDD	+50VDC
P1	CURRENT MONITOR: I_D @ 18.9mV/100mA Typ.	0.33V_{DC} @ IDQ = 0.75A
P2	TEMP. MONITOR: 10mV/°C + 500mV	0.83V_{DC} @ ROOM Temp = 33°C
P3	N/C	N/C
P4	SHUTDOWN	TTL
P5	GND	Ground
A2	GND	Ground

Final1 AMP D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Test Results
A1	VDD	+50VDC
P1	CURRENT MONITOR: I_D @ 14.7mV/100mA Typ.	0.15V_{DC} @ IDQ = 1.02A
P2	TEMP. MONITOR: 10mV/°C + 500mV	0.83V_{DC} @ ROOM Temp = 33°C
P3	N/C	N/C
P4	SHUTDOWN	TTL
P5	GND	Ground
A2	GND	Ground

Final2 AMP D-SUB CONNECTOR PIN ASSIGNMENT

Pin	Function	Test Results
A1	VDD	+50VDC
P1	CURRENT MONITOR: I_D @ 14.3mV/100mA Typ.	0.13V_{DC} @ IDQ = 0.92A
P2	TEMP. MONITOR: 10mV/°C + 500mV	0.83V_{DC} @ ROOM Temp = 33°C
P3	N/C	N/C
P4	SHUTDOWN	TTL
P5	GND	Ground
A2	GND	Ground