



Main Features:

- Single Up Converter.
- Input Frequency: 1.25 to 1.75 GHz.
- Output Frequency: 47.75 to 48.25 GHz.
- Bandwidth: 500 MHz
- Output Power: 37 dBm
- Gain: >50 dB.
- External LO: 9.3 GHz
- Hi-reliability and dedicated screening against MIL STDs.

Typical Applications:

- Satcom
- Aerospace.

Electrical Specifications

Parameter	Value			Units
	Min	Typ	Max	
Output Frequency Range	47.75	-	48.25	GHz
Bandwidth	-	500	-	MHz
Input Frequency Range	1.25	-	1.75	GHz
External LO Frequency range	9.1	9.3	9.7	GHz
LO Input Power	10	12	13	dBm
Output Power (@Psat)	36	37	38	dBm
Small Signal Gain	50	51	52	dB
Gain Flatness	-	±1	-	dB
Input VSWR	-	1.3:1	1.5:1	-
Output VSWR	-	1.2:1	1.5:1	-
Input Voltage	24	28	32	V
Power Consumption	-	200	-	W
Connectors	RF: SMA Female / WR-19 (IN/OUT) LO: SMA Female			-

Specifications at a case temperature of 25°C

Output Power Vs Frequency

Figure 1 shows saturated output power at as a function of frequency at room temperature (25°C).

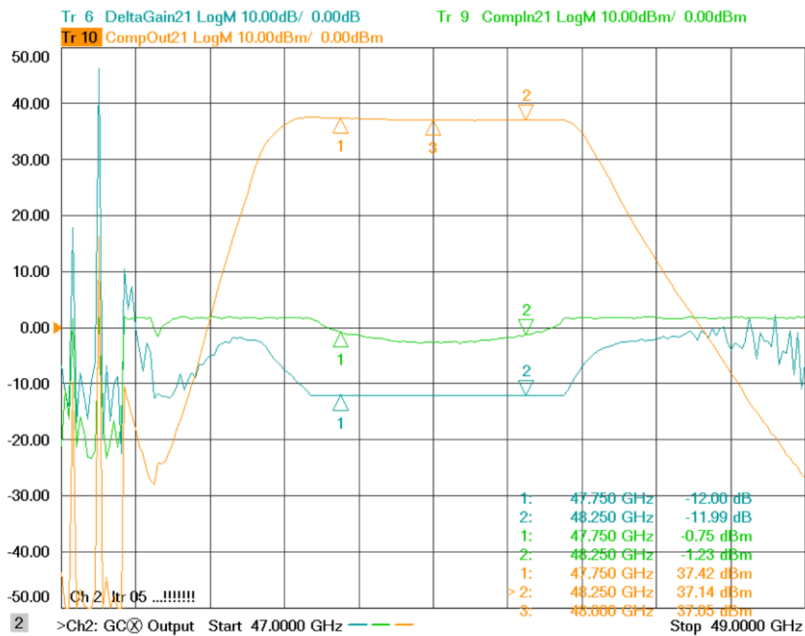


Figure 1: ERZ-HPA-4775-4825-37 Psat

Output Power Vs Pin

Figure 2 shows output power at as a function of input power at room temperature (25°C).

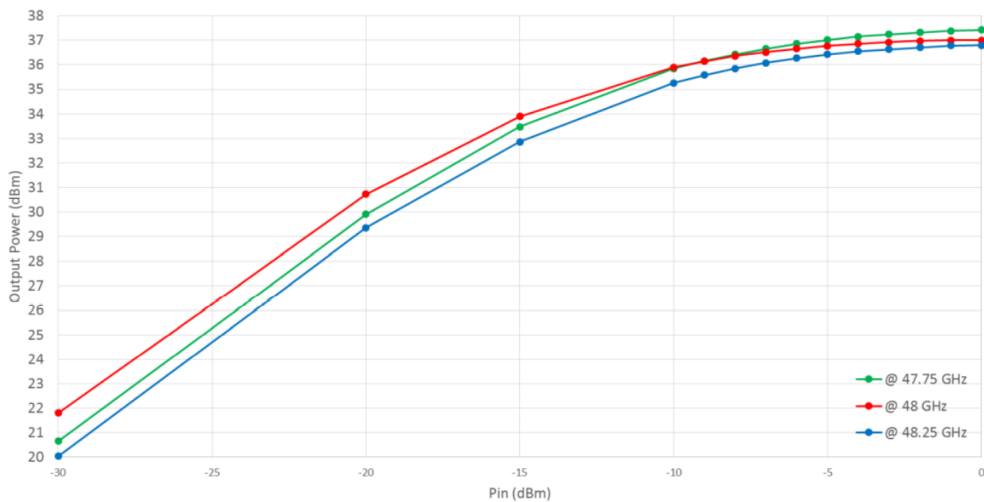


Figure 2: ERZ-HPA-4775-4825-37 PoutVsPin

S-Parameters

Figure 3 shows S-parameters as a function of frequency at room temperature (25°C).

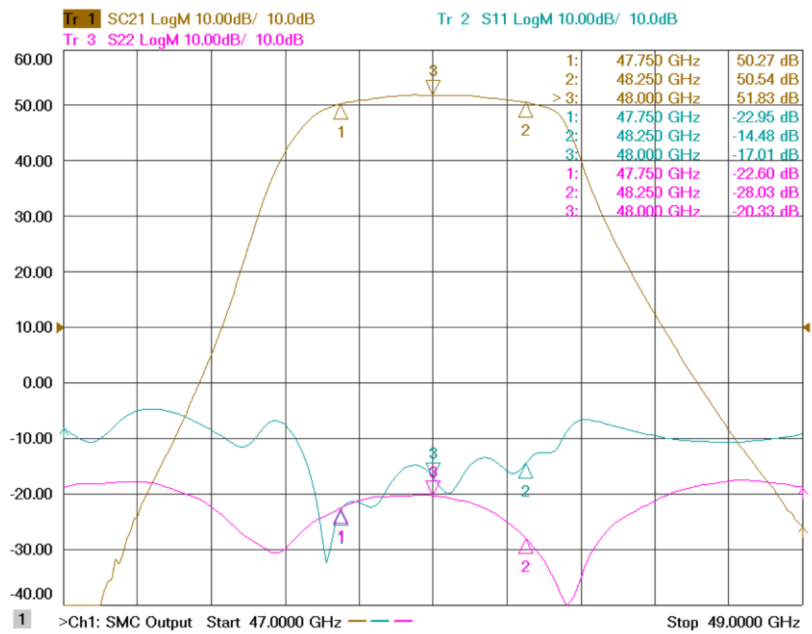


Figure 3: ERZ-HPA-4775-4825-3 S-parameters

[illegible]

Interfaces

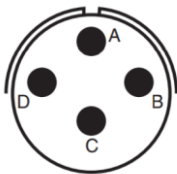


Front Panel



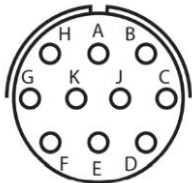
Rear Panel

Power Supply connector pinout



Pin	Signal	Description
A	+24 VDC	BUC Power Supply
B	+24 VDC	BUC Power Supply
C	+24 VDC RTN	BUC Power Supply Reference
D	+24 VDC RTN	BUC Power Supply Reference

M&C connector pinout



Pin	Signal	Description
A	TX- (RS-485)	RS-485 negative BUC Transceiver
B	TX+ (RS-485)	RS-485 positive BUC Transceiver
C	RX+ (RS-485)	RS-485 positive BUC Receiver
D	SHUTDOWN	Active high shutdown, TTL signal
E	RX (RS-232)	RS-232 BUC Receiver
F	TX (RS-232)	RS-232 BUC Transceiver
G	GND	Control ground reference
H	NC	Not Connected
J	RX- (RS-485)	RS-485 negative BUC Receiver
K	NC	Not Connected

Absolute Maximum Ratings

Condition	Value
DC Voltage	+32 VDC
Maximum Input Power (CW)	0 dBm
Operation temperature (at case)	-40 to 85 °C
Storage temperature	-55 to 125 °C

- Stress above these ratings may cause permanent damage to the device.
- It is final user responsibility to maintain the amplifier within the specified ranges.

Environmental Specifications (By Design)

Operating Temperature:	-40 to +85 °C	(MIL-STD-810F, method 520.2)
Storage Temperature:	-55 to 125 °C	(MIL-STD-810F, method 520.2)
Vibration:	8g rms	(MIL-STD-810F, method 514.5)
Shock:	20g,11ms,saw-tooth	(MIL-STD-810F, method 516.5)
Acceleration:	15g	(MIL-STD-810F, method 513.5)

RoHS & REACH Compliance

This part is compliant with EU 2011/65/UE RoHS (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment) and REACH (Registration, Evaluation, Authorization and restriction of Chemical substances) directives.



ERZIA

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