

ERZIA

NEW SPACE PRODUCT GUIDE



COTS Amplifiers Designed for
the Demands of New Space

ERZIA's New Space COTS Amplifiers

ERZIA's New Space COTS amplifier line has been specifically developed to address the stringent requirements of New Space applications. Each amplifier maintains the same high RF performance as our commercial off-the-shelf equivalent, ensuring robustness against vibration, acceleration, shock,

thermal cycling, and other environmental stresses encountered in space environments. In addition, several design enhancements have been implemented to optimize reliability and performance for NewSpace missions.

Part Number HPA's	Freq Start (GHz)	Freq Stop (GHz)	Pout (dBm)	Gain(dB)
ERZ-HPA-1730-2120-44-NS	17.30	21.20	43.5	50.00
ERZ-HPA-0002-0600-42-NS	0.02	6.0	42	38
ERZ-HPA-0200-0600-43-NS	2	6	43	43
ERZ-HPA-0200-0400-30-NS	2.00	4.0	30	39
ERZ-HPA-2000-4000-39-NS	20.00	40.0	39	52
ERZ-HPA-0600-1800-40-E-NS	6.00	18.0	41	46
ERZ-HPA-0100-1800-37-NS	1.00	18.0	36	36

Part Number LNA's	Freq Start (GHz)	Freq Stop (GHz)	Pout (dBm)	Gain(dB)	Noise Figure (dB)
ERZ-LNA-2500-4300-33-2-NS	25.00	43.0	4	28	2
ERZ-LNA-0700-1300-21-1-NS	7	13.0	11	24	1.2
ERZ-LNA-0100-0310-30-2-NS	1.00	3.10	19	30.00	1.6
ERZ-LNA-0070-0300-20-0.7-NS	0.70	3.00	21	20.00	0.7
ERZ-LNA-0400-0800-28-1-NS	4.00	8.00	5.5	28.00	1
ERZ-LNA-2100-2700-25-2-NS	21.00	27.00	15	25.00	2.5



Vacuum

Integrated de-pressurization structures enable the fastest de-pressurization profiles



Radiation

Radiation tolerant circuitry rated to 30 Krad and 32 MeV



Outgassing

Materials selected to comply outgassing requirements



Reporting

Acceptance Test Report is delivered at three temperatures with additional analysis by request



Components Quality

All passive components meet or exceed the AEC-Q200 standard



Testing

Thermal screening and electrical testing before delivery with additional environmental tests and screenings available

Optimized Mechanics for Vacuum environment

DC&Control section Rad-Tolerant rated to withstand 30 krad and 32 MeV

All Passive components with at least automotive grade



ERZIA

WE TAKE YOU FURTHER

FEATURE	COTS	NEW SPACE (-NS)
Operating Temperature range -45 to +85 °C (MIL-STD-810F, method 520.2)	X	X
Random Vibration 8g RMS (MIL-STD-810F, method 514.5)	X	X
Mechanical Shock 20g, 11ms SawTooth (MIL-STD-810F, method 516.5)	X	X
Acceleration 15g (MIL-STD-810F, method 513.5)	X	X
Thermal cycling (Based in MIL-HDBK-2164 Rev. A)	X	X
Simplified power interface Single DC supply line	X	X
ATP at three temperatures CoC & CoO supplied	X	X
RF section radiation tolerance (TID) Technology intrinsically tolerant to 300 krad (TID)	X	X
RF section radiation SEE tolerance: SEE-aware RF design and filtering	-	X
DC section radiation tolerance (TID) Radiation Tolerant to 30 krad (TID) plus housing shielding.	-	X
DC section radiation SEE tolerance: Passive SEE mitigation plus rad-tolerant (43 MeV-cm ² /mg) in key components	-	X
Vacuum-optimized mechanics (venting, joints) (ECSS-Q-ST-70-02)	-	X
Low-outgassing materials (ECSS-Q-ST-70 / NASA-ASTM-E595 compliant)	-	X
Pure-tin mitigation(whisker control / alternative finishes) (GEIA-STD-0005-2 guidelines)	-	X
Prepared for LEO (atomic-oxygen mitigation techniques)	-	X
All passive components with at least automotive grade (AEC-Q200)	-	X
Screening of RF active devices / Complete burn in	-	Optional
Additional documentation & analyses (FMECA, Worst-Case, etc.) — NDA required	-	Optional
Environmental testing on demand (TVAC, vibration, ...)	-	Optional



ERZIA Technologies
Josefina de la Maza 4
39012 Santander, Spain
Telephone: +34 942 29 13 42



ERZIA Technologies of America
1800 Diagonal Road, Suite 600
Alexandria, VA 22314
Telephone: +1 703-373-1946

sales@erzia.com
www.erzia.com