

REC/HXI Products & Capabilities

Renaissance Electronics HXI

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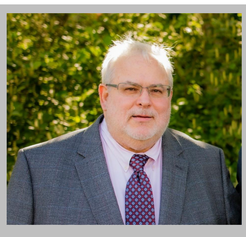
Welcome to Renaissance!
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Welcome to Renaissance!



Welcome Gerry Couture!

Gerry joined us in January in the role of Operations Manager. Gerry comes to Renaissance with over 20 years of experience in various technical and operational roles in Manufacturing. With his experience in costing, technical sales documentation, applications engineering and operations analysis, we are thrilled to add his expertise to the organization. We look forward to his contributions!



Welcome Brian Reardon!

Brian Reardon recently joined Renaissance's Sales Team to support Technical Sales and Business Development. Brian has worked in the RF/Microwave industry for over 40 years in varying technical sales roles, managing key accounts and developing internal and external sales teams. Brian is well-known in the industry, and we are excited to have his knowledge and expertise to support organizational growth and goals.

Space Grade Screening

Renaissance Electronics designs and builds Circulators and Isolators to meet the demands of both Commercial and Defense satellite applications. All of these have been designed and tested to our unique customer requirements. This has expanded to include may other passive elements such as power dividers, filters, mixers etc.

As the market has transformed with the number of satellites increasing, REC has adapted to this market by recommending a standard screening process that will cover many, if not most of your requirements.

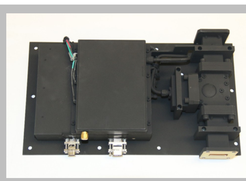
What is shown below is a common screening process often used at REC, including Acceptance, Qualification and Vibration Testing.

This can be adapted to your unique requirements as needed.

Test	Sampling Basis	Condition
Pre-Cap Inspection	100%	REC-HXI Inspection Procedure
Stabilization Bake	100%	MIL-STD-883, Method 1008, Condition A or B, +90°C for 48 hours minimum, prior to package seal
External Visual and Mechanical Examination	100%	Parts shall be examined at 10X magnification
Initial Electrical Measurements	100%	Tested at +25°C for all parameters
Thermal Shock	100%	MIL-STD-202, Method 107, temperature limits shall be -50°C to +95°C, 10 cycles
Interim Electrical Measurements	100%	Testing performed at three temperatures, -40°C, +25°C and +85°C for all parameters
Mechanical Shock	100%	MIL-STD-202, Method 213. Pulse shall be half-sine and the peak acceleration shall be 1500g. The duration of the pulse shall be 0.3ms. 3 shocks on each axis
Vibration: Random	100%	MIL-STD-202, Method 214, Acceptance Parameters, See Random Vibration Table below
Final Electrical Measurements	100%	Testing performed at three temperatures, -40°C, +25°C and +85°C for all parameters

All Axes (X, Y, Z Axes)		
Frequency (Hz)	Acceleration PSD or Slope Level	
	Acceptance Parameters	Qualification Parameters
20	0.013 g²/Hz	0.026 g²/Hz
20-50	+ 6.0 dB/octave	+ 6.0 dB/octave
50-800	0.08 g²/Hz	0.16 g²/Hz
800-2000	-6.0 dB/octave	-6.0 dB/octave
2000	0.013g²/Hz	0.026g²/Hz
Overall	10.0 grams	14.1 grams
Duration	60 seconds/axis	120 seconds/axis

Test	MIL-STD-202 (unless otherwise specified)
	Condition
Initial Electrical	Tested at +25°C for all parameters
Thermal Shock	Method 107, temperature limits shall be -50°C to +90°C, 25 cycles
Vibration: Random	MIL-STD-202, Method 214, Qualification Parameters See Random Vibration Table below
Final Electrical	Testing performed at three temperatures, -40°C, +25°C and +85°C for all parameters



X-Band Receiver Protector Space Applications

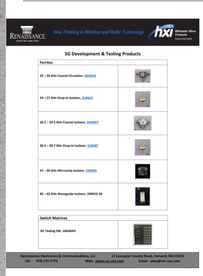
HXI offers an integrated X-Band Receiver Protector for Space Applications. The assembly includes a Waveguide Ferrite Circulator, waveguide-to-coax adapter and a SPST PIN Diode-Based Switch; the switch runs off a hermetic power supply/control module that utilize S-Level power conditioning IC's. Insertion loss of the assembly is 4.5 dB and the isolation with the switch off is 90 dB. Power handling of the assembly is 700W CW.

94 GHz Ferrite Circulator Space Applications

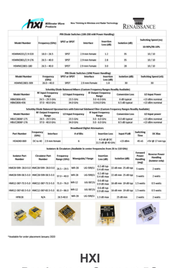
HXI offers a 94 GHz Ferrite Circulator for Space Applications. The circulator has typical insertion loss of 0.5 dB and 21 dB isolation over the -55ºC to +85ºC temperature range. VSWR is 1.35:1.



For more information about Renaissance/HXI products contact us at 978-772-7774 or visit www.rec-usa.com / www.hxi.com



REC
5G Development & Testing



HXI
Products to Support 5G Development & Testing



Space Qualified Products



Integrated Assemblies



HXI Low Latency Radios



REC / HXI Product Lines