



RFMD + TriQuint

QPA3240

**Product Qualification Report  
QPA3240-PQ030, Revision A****Description:** 1218MHz, 25dB, GaAs/GaN Power Doubler Hybrid**Package Type:** SOT-115J**Process Technology:** GaAs, GaN**Qualification Number:** N.A.**Date issued:** 08/31/2015

Test Name	Test Standard and Conditions	# Samples x # Lots	Test Results
<b>High Temperature Operating Lifetime (HTOL)</b>	JESD22-A108, 1000 hrs, 125°C heat-sink	80x1 79x1 80x1	Passed QBS to RFCM3316 (GaAs pHEMT)
	JESD22-A108, 1000 hrs, 110°C heat-sink	40x1 80x1 80x1	Passed QBS to TAT8888 (GaN HEMT)
<b>Temperature Humidity with Bias (THB)</b>	JESD22-A101, 85%RH / 85°C, connected to V+ = 24V, 1000 hours	20x1 lot	Passed QBS to RFCM3316 (GaAs pHEMT) Passed QBS to RFPD2580 (Hybrid package and GaAs pHEMT) Passed QBS to RFPD3210 (GaN HEMT)
<b>ESD Human Body Model, DUT unbiased</b>	JESD22-A114, three positive and negative pulses applied to each Pin 1 (RFIN), Pin 5 (V+) and Pin 9 (RFOUT). T <sub>A</sub> =25°C	5x1 lot	Passed QBS to RFPD3210: Passed 1100V
<b>ESD Human Body Model, DUT biased</b>	JESD22-A114, three positive and negative pulses applied to each Pin 1 (RFIN), Pin 5 (V+) and Pin 9 (RFOUT). T <sub>A</sub> =25°C	5x1 lot	Passed QBS to RFPD3210: Passed 1100V
<b>ESD Human Body Model, DUT unbiased</b>	JESD22-A114, three positive and negative pulses applied to Pin 4 (Current setting) T <sub>A</sub> =25°C	5x1 lot	Passed QBS to QPA3230: Passed 1100V
<b>ESD Human Body Model, DUT biased</b>	JESD22-A114, three positive and negative pulses applied to Pin 4 (Current setting) T <sub>A</sub> =25°C	5x1 lot	Passed QBS to QPA3230: Passed 1100V
<b>Temperature Cycling</b>	MIL-STD-883, 1010 (-40°C to +125°C), number of cycles 14, cycle time 2.5h, not connected to V+	5x1 lot	Passed QBS to RFPD3210
<b>Transient surge</b>	IEC1000-4-5, 10 times, 1 min intervals, positive and negative pulses applied to Pin 1(RF input), Pin 5 (V+) and Pin 9 (RF output). T <sub>A</sub> =25°C	5x1 lot	Passed QBS to RFPD3210: 100V (RF input) 200V (V+) 300V (RF output)

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QPA3240-PQ030, Revision A

Test Name	Test Standard and Conditions	# Samples x # Lots	Test Results
Transient surge	IEC1000-4-5, 10 times, 1 min intervals, positive and negative pulses applied to Pin 4(Current setting). $T_A=25^{\circ}\text{C}$	5x1 lot	Passed 250V with external ESD/surge diode Infineon ESD300_B1_02LRH connected between Pin 4 and GND
Thermal shock	TELCORDIA GR63-Core, section 5.1.1.1 DUT maintained at $-40^{\circ}\text{C}$ for 72h, not connected to V+ Thermal shock applied by removing DUT from chamber and connect to V+ = 24V	5x1 lot	Passed QBS to D10040230PH1 and TAT8888
Drop test	TELCORDIA GR63-CORE section 5.3 Test on surface S1 (bottom), Edges E1 and E3 and corners C1 and C2. Drop height: 100mm	5x1 lot	Passed QBS to RFPD3220
Vibration test	MIL-STD-883, 2007, condition A, 20 Hz – 2 kHz Sweep time: <4min Peak acceleration: 20g 4 cycles per orientation (x, y, z)	10x1 lot	Passed QBS to D10040230PH1
Mechanical shock	MIL-STD-883, 2002, Condition B Peak level: 1500g Duration of pulse: 0.5ms Orientation: +/-x, +/-y, +/- z 5 shock pulses per orientation layer	10x1 lot	Passed QBS to D10040230PH1
Single tone RF overdrive	Single tone CW signal applied on RF input for 60s, $T_A=25^{\circ}\text{C}$ , Test frequencies 50MHz, 500MHz, 1200MHz	5x1 lot	Passed QBS to RFPD3220: 80dBmV
Characterization over temperature	Datasheet, Test temperatures $-30^{\circ}\text{C}$ , $+30^{\circ}\text{C}$ , $+100^{\circ}\text{C}$	3x1 lot	Passed
Conclusion	This part meets Qorvo's product qualification requirements.		

Sample size and lot quantities reported are the minimum required for this qualification.

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