GTMi

Solution – Service – Performance - Commitment

GT1214-120

125 Watts – 50V – 3mS, 30%

Op-Frequency: 1200 – 1400MHz

GaN Transistor Product – Key Features

MT1214-120 is an internally pre-matched GaN on SiC HEMT technology, common source, class AB that capable of providing over 19 dB power gain, 125 Watts Minimum of pulsed RF output power at 3mS pulse width, 30% duty factor across the 1200 to 1400 MHz band. This thermally enhanced hermetically sealed transistor is designed for L-Band Radar applications. It utilizes gold metallization and eutectic attach to provide highest reliability and superior ruggedness.

Market Application

L-band Pulsed Radar, Communication, and Medical

CASE OUTLINE

Warranty RF Performances

Symbol	Description	Test Condition	Min	Typical	Max	Units
Po	Output Power	Pin=2.5W Op-Freq=1.2, 1.3, 1.4GHz	125	140		Watts
Gp	Power Gain	Pin=2.5W Op-Freq=1.2, 1.3, 1.4GHz	19	19.5		dB
n_d	Drain Efficiency	Pin=2.5W Op-Freq=1.2, 1.3, 1.4GHz	60	70		%
WSWR-T	Mismatch Tolerance	Pin=2.5W Op-Freq=1.3, 100µS, 10%			5:1	
D_r	Pulse Droop	Pin=2.5W Op-Freq=1.2, 1.3, 1.4GHz		.4	.7	dB
θ_{jc}	Thermal Resistance	Pulse=300µS, DF=10%			.14	℃/W
IRL	Input Return Loss	Pin=2.5W Op-Freq=1.2, 1.3, 1.4GHz			-7	dB

Warranty DC Performances

Symbol	Description	Test Condition	Min	Typical	Max	Units
$I_{D(off)}$	Drain Leakage Current	V_{GS}= -8V, V_{DD}= 50V			2	mA
$I_{G(off)}$	Gate Leakage Current	V_{GS}= -8V, V_{DD}= 50V			1	mA
$I_{G(off)}$	Gate Leakage Current	V_{GS}= -8V, I_D= 4mA		150	1	V

Product Classification

EAR-99

information.

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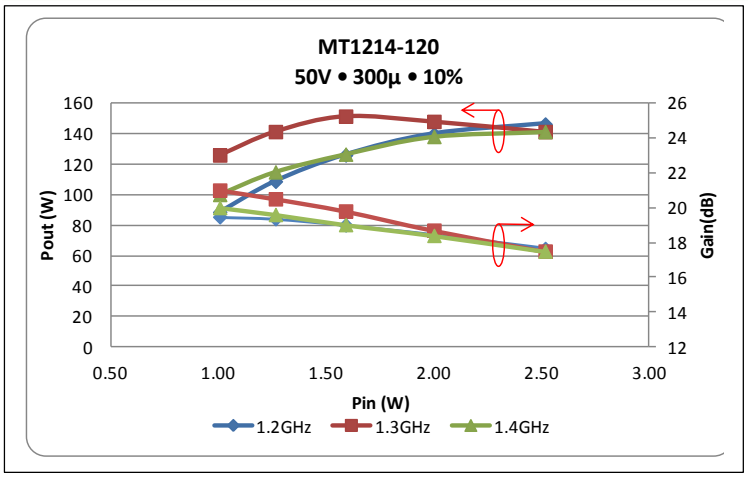
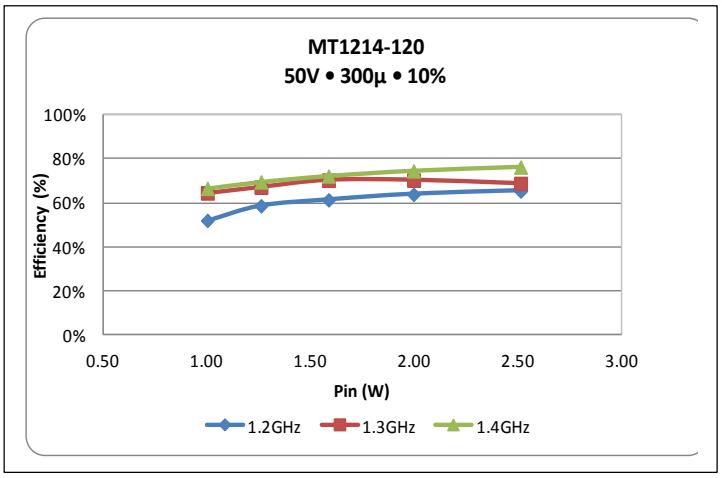
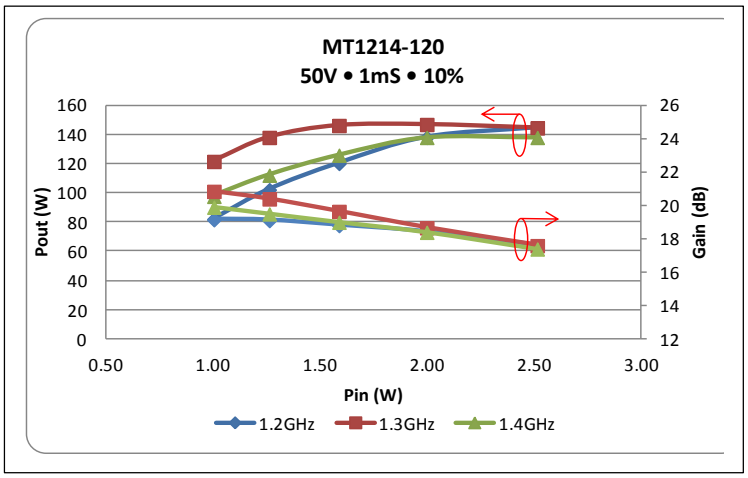
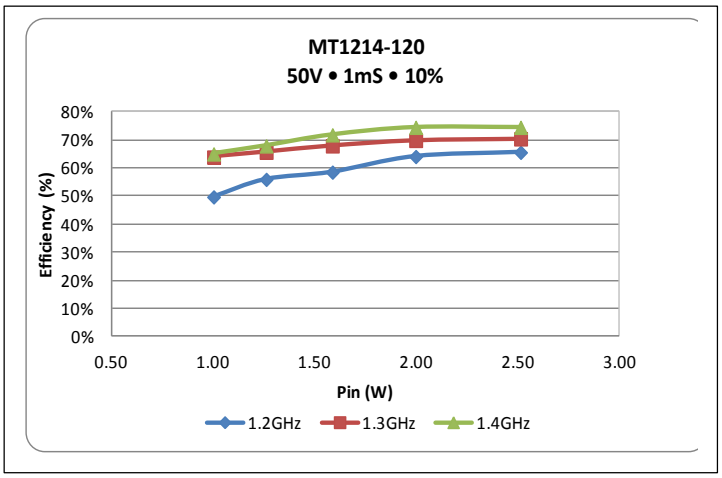
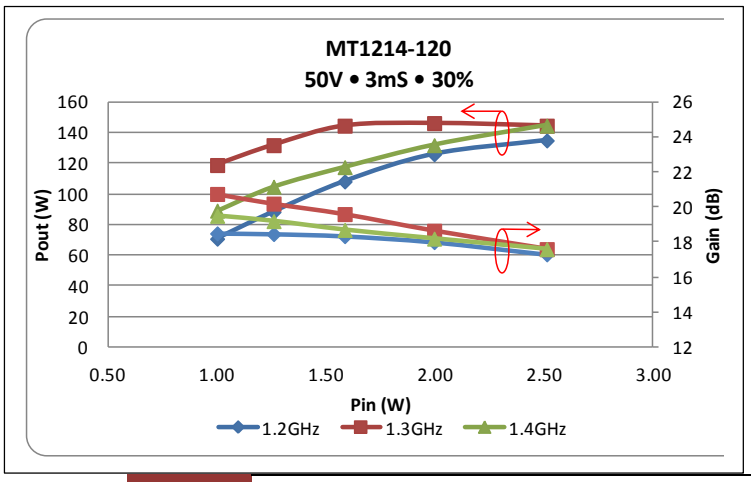
Typical RF Performances

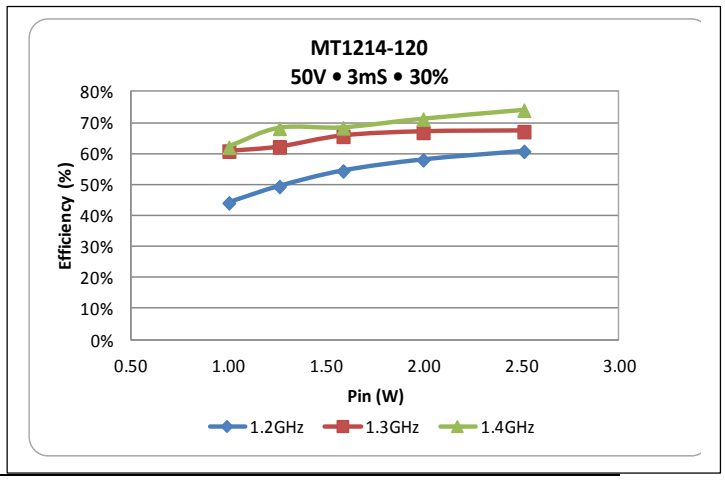












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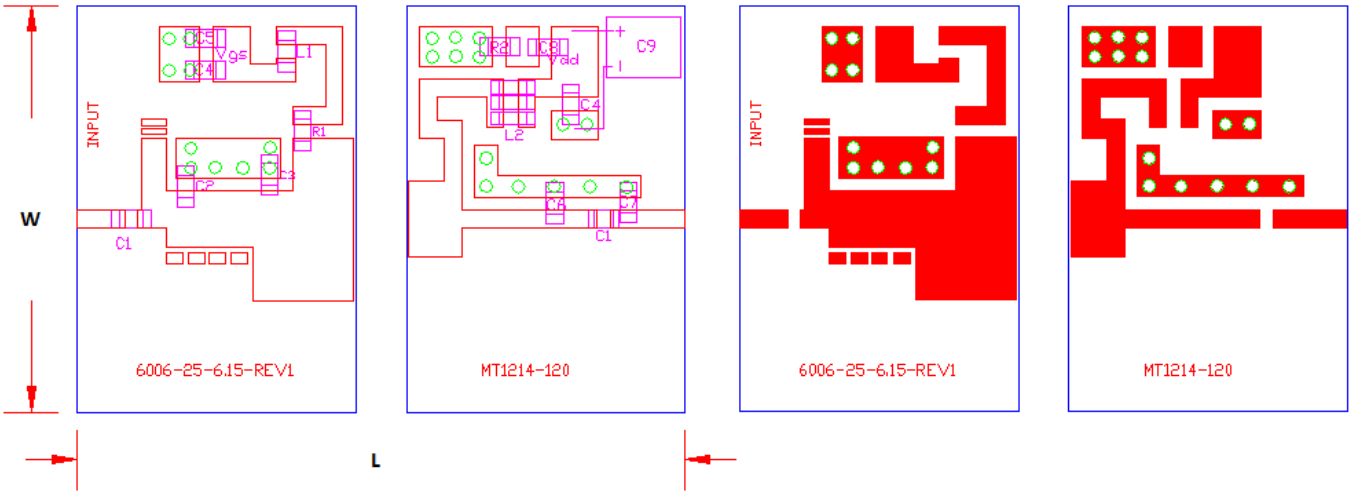
Test Circuit Information



Circuit Impedance Information

Op-Frequencies	Input Z_S	Output Z_L
1.2GHz		
1.3GHz		
1.4GHz		

Circuit Bill of Material

Components	Value	Digikey P/N

Contact Information

www.GTMii.com
Tel:
Email:

Contact Information

Revision History

Revision Level / Date	Para. Affected	Description
	-	Initial Preliminary Release