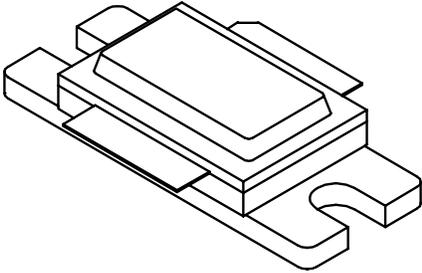




1214 – 370V

370 Watts - 50 Volts, 330 μ s, 10%
Radar 1200 - 1400 MHz

<p>GENERAL DESCRIPTION The 1214-370V is an internally matched, COMMON BASE transistor capable of providing 370 Watts of pulsed RF output power at 330 microseconds pulse width, ten percent duty factor across the band 1200 to 1400 MHz. This hermetically solder-sealed transistor is specifically designed for L-Band radar applications. It utilizes gold metallization and diffused emitter ballasting to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55ST, STYLE 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C¹ 530 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 75 Volts BVebo Emitter to Base Voltage 3.0 Volts Ic Collector Current 25 Amps</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to + 200°C Operating Junction Temperature + 200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out Pulsed	F = 1200-1400 MHz Vcc = 50 Volts,	370		460	Watts
Pg	Power Gain	Pin=50W	8.7	9.0		dB
η_c	Collector Efficiency	Pulse Width = 330 μ S	50			%
RI	Input return loss	Duty = 10 %	10			dB
Pd	Pulse Amplitude Droop				0.5	dB
Flatness	Output Power Flatness				1.0	dB
VSWR-S	Load Mismatch Stability				1.5:1	
VSWR-T	Load Mismatch Tolerance	Tested @Pout=370W			2.5:1	

Note: Test @ 1.2, 1.3, and 1.4 GHz.

FUNCTIONAL CHARACTERISTICS @ 25°C

Bvces	Collector to Emitter Breakdown	Ic = 100 mA	75			Volts
Ices	Collector to Emitter Leakage	Vce = 50 Volts			10	mA
θ_{jc}^1	Thermal Resistance	Rated Pulse Condition			0.29	°C/W

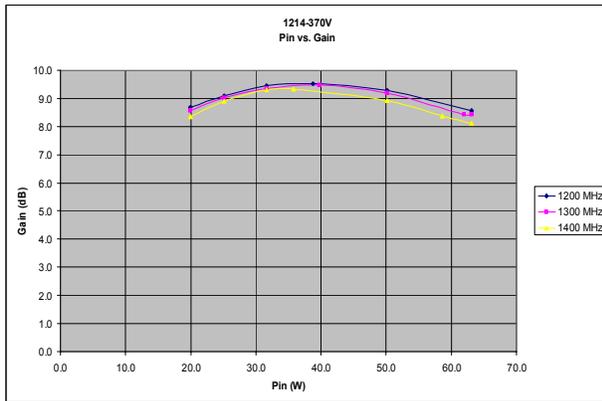
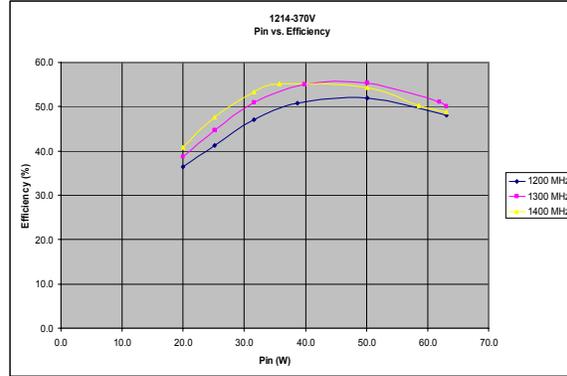
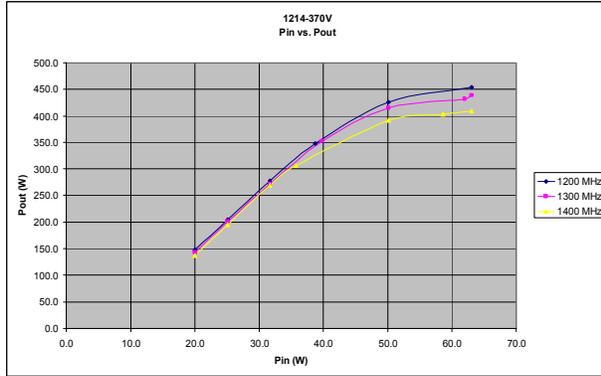
MSC Corp., reserves the right to make changes without further notice. MSC recommends that before the product(s) described herein are written into specifications, or used in critical applications, that the performance characteristics be verified by contacting the factory.

MSC Corp. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 TEL. 408-986-8031 FAX 408-869-2324

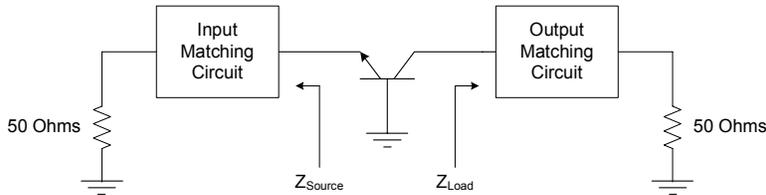


1214-370V

Performance Curves



Impedance Information



Impedance		
Freq	Zs	Zl
1200	1.75-j2.23	1.52-j2.11
1300	1.75-j1.63	1.36-j1.97
1400	1.76-j1.19	1.13-j1.77

Board Material RT 6010.2 LM 25 Mil
TRL Measurement

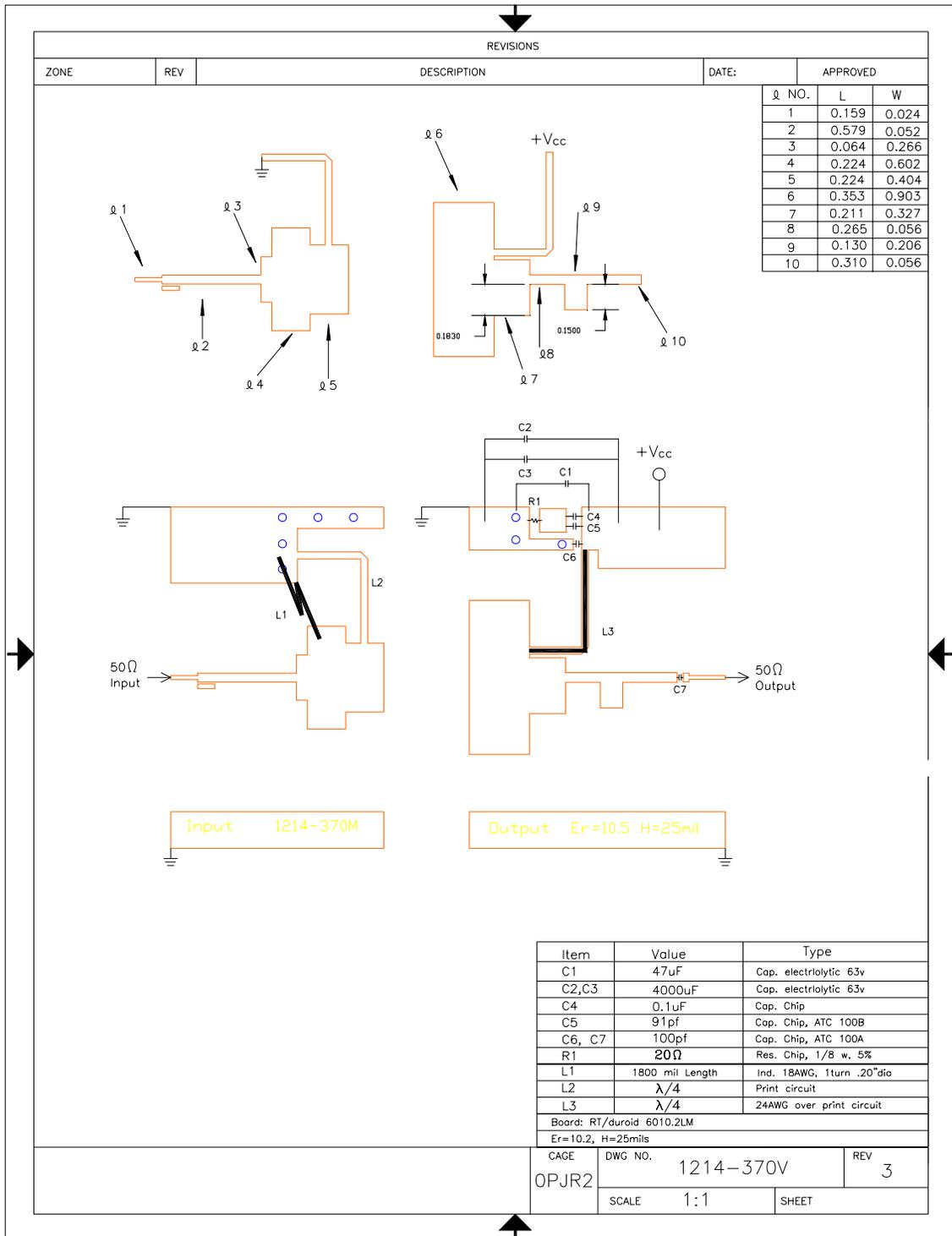
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1214-370V

Broadband Test Fixture



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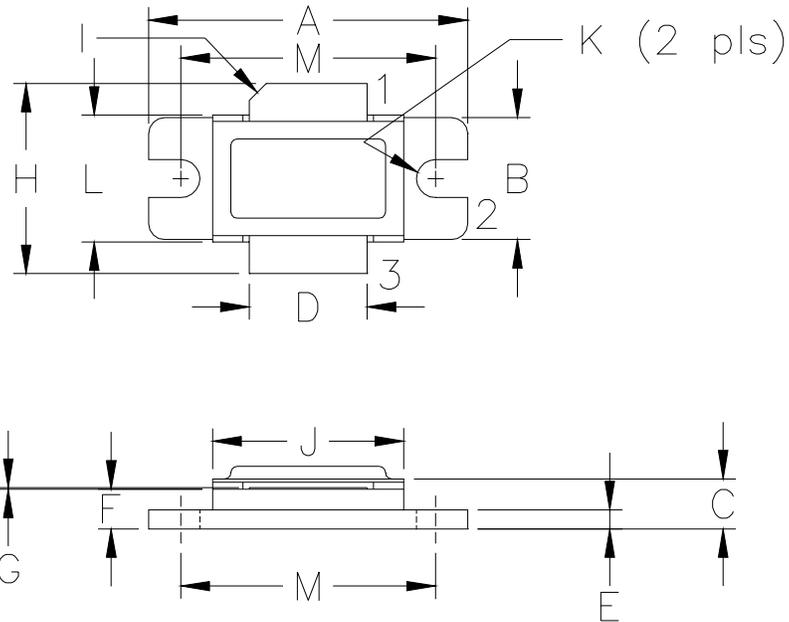


1214-370V R1

1214-370V

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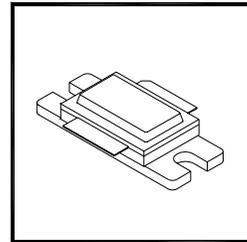
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DIM	MILLIMETER	±TOL	INCHES	±TOL
A	25.40	.25	1.000	.010
B	9.78	.25	.385	.010
C	4.00	.19	.142	.007
D	9.40	.13	.370	.005
E	1.53	.13	.060	.005
F	3.18	.13	.125	.005
G	0.08	+05/-00	.003	+002/ -.000
H	19.05	0.51	.750	.020
I	45°	5°	45°	5°
J	15.24	.25	.600	.010
K	3.05 DIA	.13	.120 DIA	.005
L	10.15	.13	.400	.005
M	20.32	.25	.800	.010

STYLE 1:
 PIN 1 = COLLECTOR
 2 = BASE
 3 = EMITTER

STYLE 2:
 PIN 1 = COLLECTOR
 2 = EMITTER
 3 = BASE



GHz TECHNOLOGY
 RF - MICROWAVE SILICON POWER TRANSISTORS

DWG NO.

55ST

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