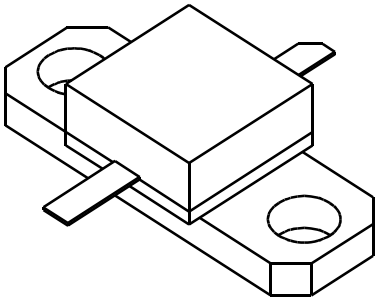


1014 - 2

2 Watt - 28 Volts, Class C
Microwave 1000 - 1400 MHz

<p>GENERAL DESCRIPTION The 1014-2 is a COMMON BASE transistor capable of providing 2 Watts of Class C, RF Output Power over the band 1000-1400 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes Input prematching and utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness.</p>	<p>CASE OUTLINE 55LT, STYLE 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 9.7 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 50 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 0.5 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1000-1400 MHz	2			Watt
Pin	Power Input	Vcb = 28 Volts			0.35	Watt
Pg	Power Gain		7.5	45		dB
η_c	Collector Efficiency	As Above				%
VSWR₁	Load Mismatch Tolerance	Pout = 2 Watts			10:1	

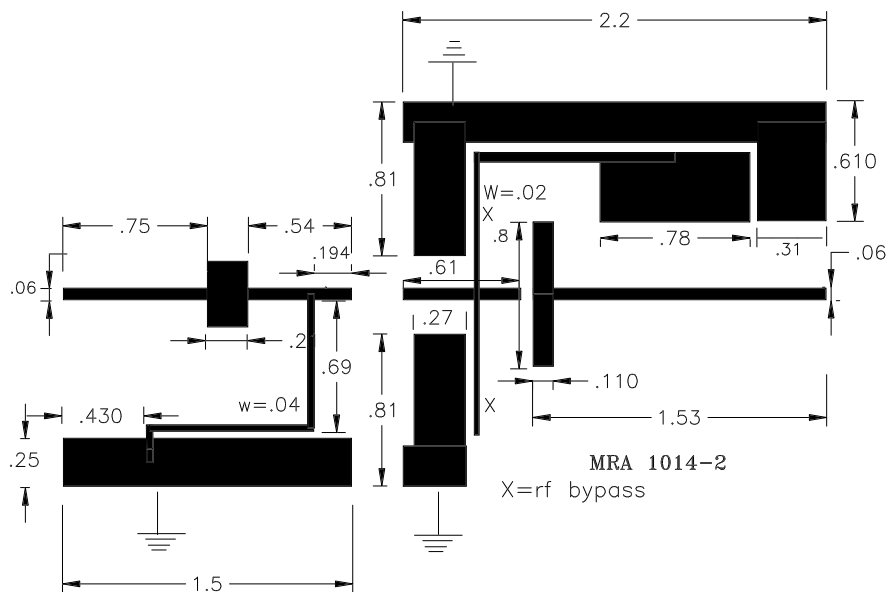
BVces	Collector to Emitter Breakdown	Ic = 20 mA	50			Volts
BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			0.5	mA
h_{FE}	Current Gain	Vce = 28 V, Ic = 100 mA	10		100	
Cob	Output Capacitance	Vcb = 25 V, f = 1 MHz			4.5	pF
θ_{jc}	Thermal Resistance	Tc = 25°C			18	°C/W

Rev A, Feb 1997

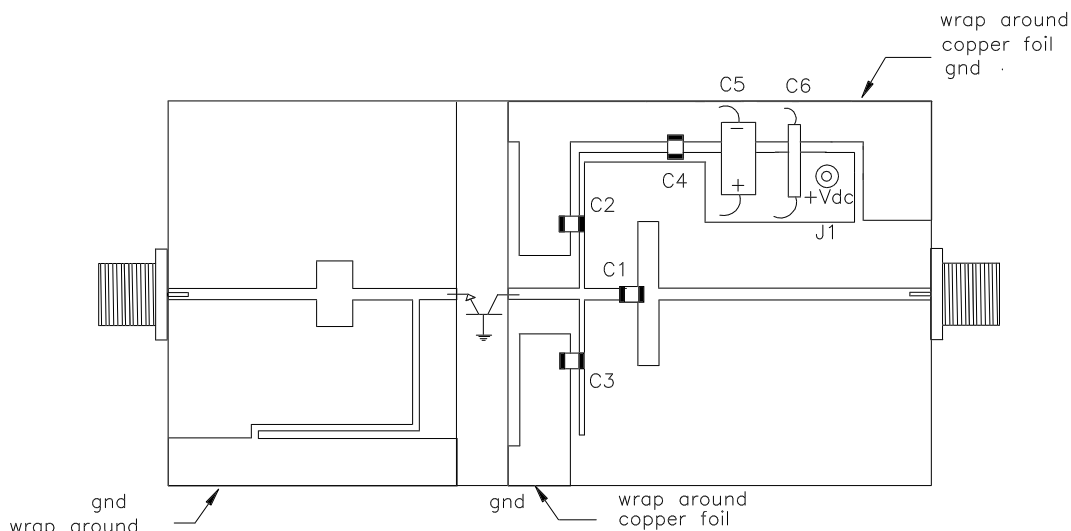
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REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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1014-2 TEST CIRCUIT



DIELECTRIC = 20 MIL THICK TFE, $\epsilon_r=2.55$

- C1= 32 pF, chip "TRW"
- C2=150 pF, chip
- C3=150 pF, chip
- C4=150 pF, chip
- C5=1.0 uF, electrolytic, 50v
- C6=.01 uF, disc ceramic