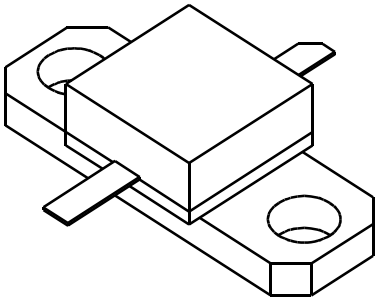


1014 - 2

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

<p>GENERAL DESCRIPTION</p> <p>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	

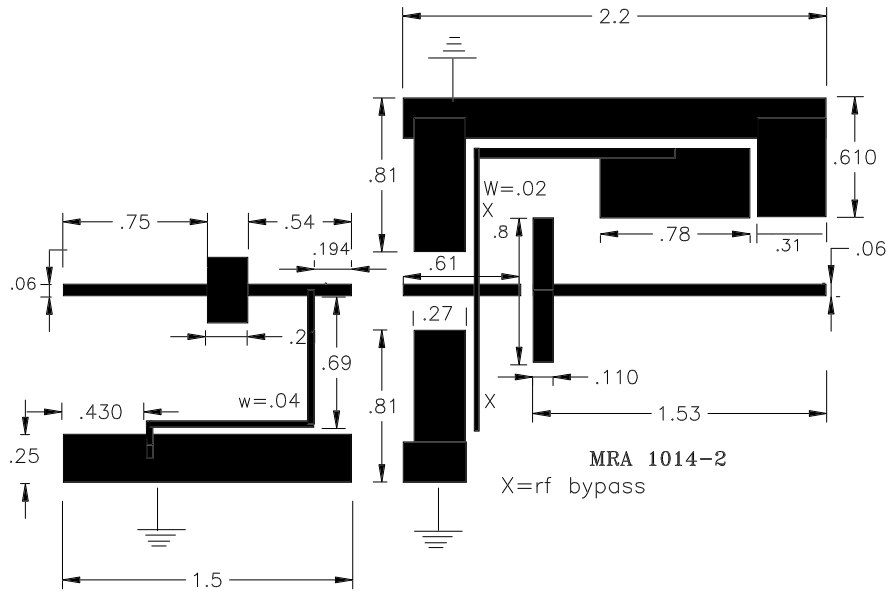
BVces	Collector to Emitter Breakdown	Ic = 20 mA	50			Volts
BVebo	Emitter to Base Breakdown	Ie = 5 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			0.5	mA
h_{FE}	Current Gain	Vce = 28 V, Ic = 100 mA	10		100	
Cob	Output Capacitance	Vcb = 25 V, f = 1 MHz			4.5	pF
θ_{jc}	Thermal Resistance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

Rev A, Feb 1997

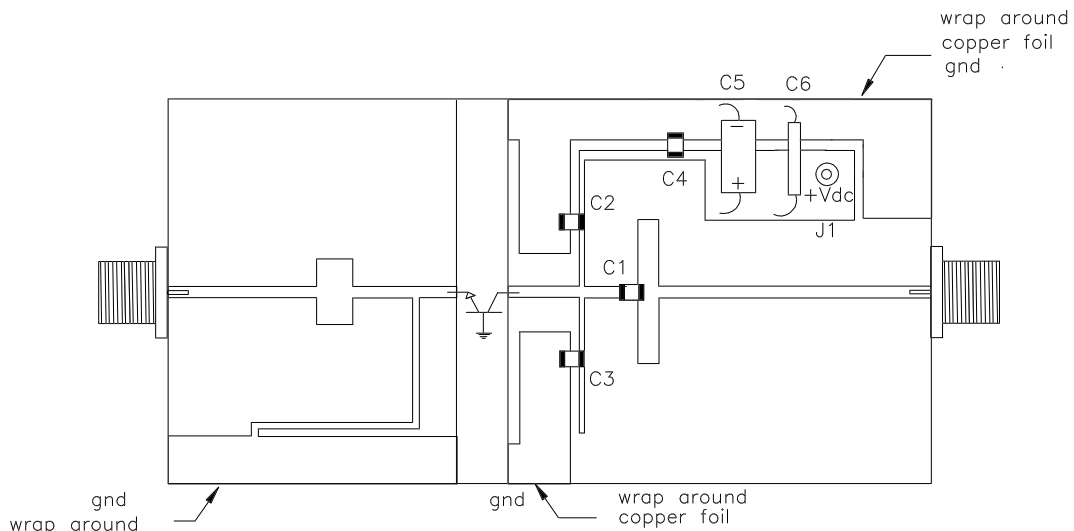
GHZ TECHNOLOGY, INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHZ RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
------	-----	-------------	------	----------



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