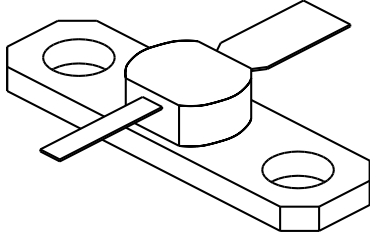


<p>GENERAL DESCRIPTION The 2010 is a COMMON BASE transistor capable of providing 10 Watts Class C, RF output power at 2000 MHz. Gold metalization and diffused ballasting are used to provide high reliability and supreme ruggedness. The transistor uses a fully hermetic High Temperature Solder Sealed package.</p>	<p>CASE OUTLINE 55BT-1, Style</p> 																
<p>ABSOLUTE MAXIMUM RATINGS</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">Maximum Power Dissipation @ 25°C</td> <td style="text-align: right;">30 Watts</td> </tr> <tr> <td colspan="2">Maximum Voltage and Current</td> </tr> <tr> <td>BVces Collector to Emitter Voltage</td> <td style="text-align: right;">50 Volts</td> </tr> <tr> <td>BVebo Emitter to Base Voltage</td> <td style="text-align: right;">3.5 Volts</td> </tr> <tr> <td>Ic Collector Current</td> <td style="text-align: right;">2.0 A</td> </tr> <tr> <td colspan="2">Maximum Temperatures</td> </tr> <tr> <td>Storage Temperature</td> <td style="text-align: right;">- 65 to + 200°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 200°C</td> </tr> </table>	Maximum Power Dissipation @ 25°C	30 Watts	Maximum Voltage and Current		BVces Collector to Emitter Voltage	50 Volts	BVebo Emitter to Base Voltage	3.5 Volts	Ic Collector Current	2.0 A	Maximum Temperatures		Storage Temperature	- 65 to + 200°C	Operating Junction Temperature	+ 200°C	
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ELECTRICAL CHARACTERISTICS @ 25 °C

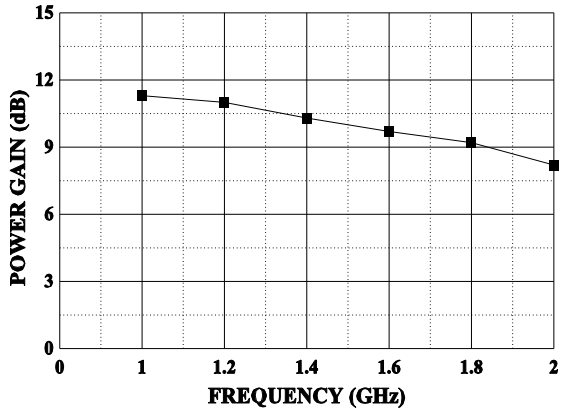
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 2 GHz	10			Watt
Pin	Power Input	Vcb = 28 Volts			2	Watt
Pg	Power Gain	Po = 10 Watts	7.0	8.0		dB
η_c	Collector Efficiency	As Above		40		%
VSWR₁	Load Mismatch Tolerance	F = 2 GHz, Po = 10 W			20:1	

BVces	Collector to Emitter Breakdown	Ic = 20 mA	50			Volts
BVcbo	Collector to Base Breakdown	Ic = 4 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 4 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			4.0	mA
h_{FE}	Current Gain	Vce = 5 V, Ic = 400 mA	20			
Cob	Output Capacitance	F = 1 MHz, Vcb = 28 V				pF
θ_{jc}	Thermal Resistance				6.0	°C/W

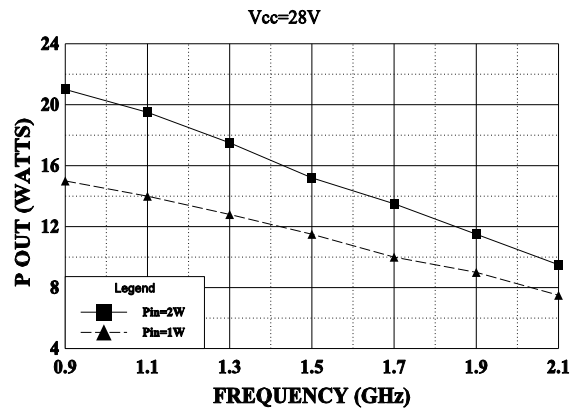
Issue August 1996

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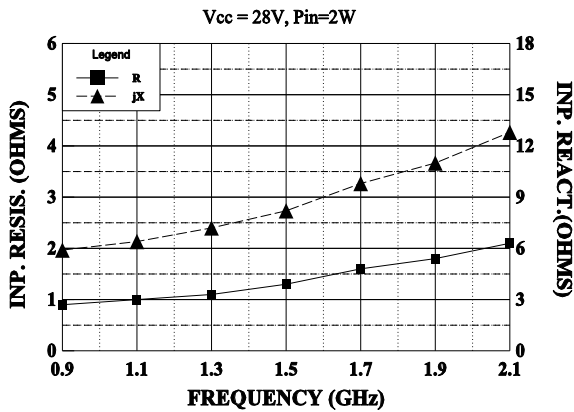
POWER GAIN VS FREQUENCY



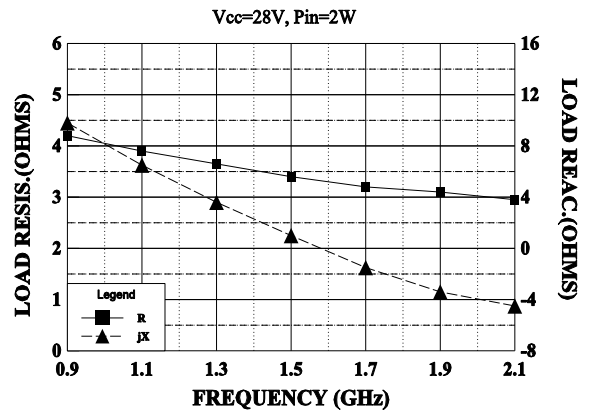
POWER OUTPUT VS FREQUENCY



SERIES INPUT IMPEDANCE VS FREQUENCY

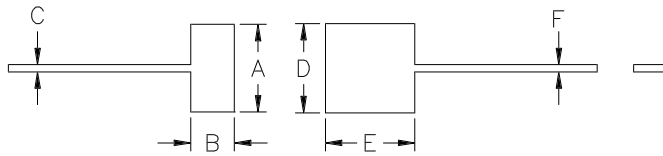


SERIES LOAD IMPEDANCE VS FREQUENCY



REVISIONS

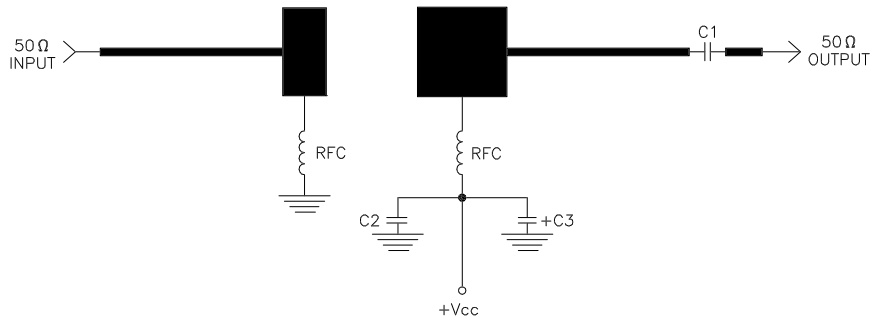
ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.480
B	.240
C	.040
D	.490
E	.490
F	.040

2000 MHz TEST AMPLIFIER

Vcc = 28V



NOTE 1. Under the normal operating conditions as specified, junction temperature to be 200° maximum as measured by I.R. scan of the chip. Thermal Resistance = 6° C/W Junction to Case.

— = Microstrip on 0.020" Teflon Fiberglass, Er=2.55
 C1,C2 = 47 pf chip cap
 C3 = 10µfd @ 35 VOLTS



CAGE	DWG NO.	REV
OPJR2	2010	A
SCALE	1/1	SHEET