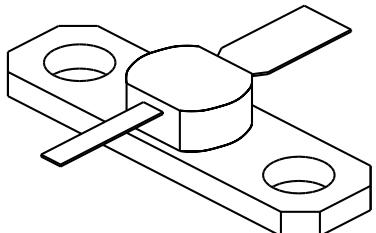


2001
1.0 Watt - 28 Volts, Class C
Microwave 2000 MHz

<p>GENERAL DESCRIPTION The 2001 is a COMMON BASE transistor capable of providing 1 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 1</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 5.0 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 0.25 A</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	F = 2 GHz	1.0			Watt
Pin	Power Input	Vcb = 28 Volts			0.125	Watt
Pg	Power Gain	Po = 1.0 Watts	9.0	9.5		dB
η_c	Collector Efficiency	As Above		40		%
VSWR₁	Load Mismatch Tolerance	F = 2 GHz, Po = 1.0 W			30:1	

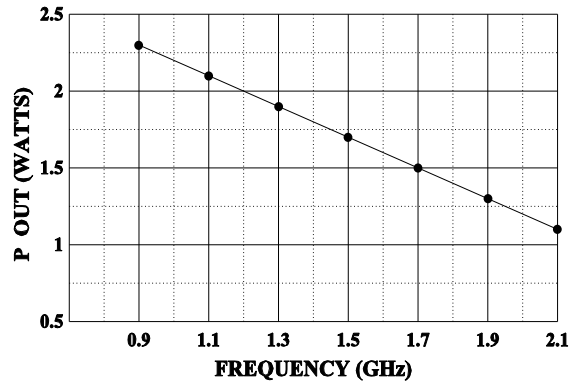
BVces	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
BVcbo	Collector to Base Breakdown	Ic = 1 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 1.0 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			500	µA
h_{FE}	Current Gain	Vce = 5 V, Ic = 100 mA	20			
Cob	Output Capacitance	F = 1 MHz, Vcb = 28 V		4.0		pF
θ_{jc}	Thermal Resistance				35	°C/W

Issue August 1996

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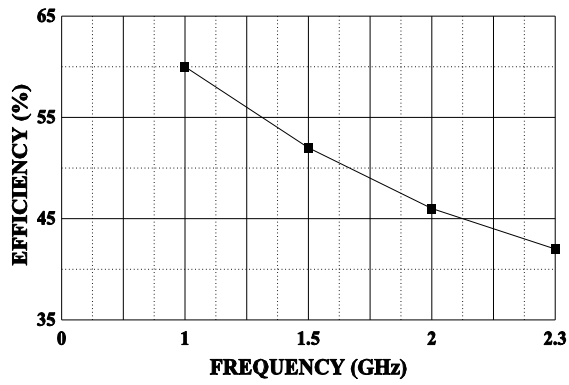
POWER OUTPUT VS FREQUENCY

V_{cc}=28V, P_{in}=0.125W



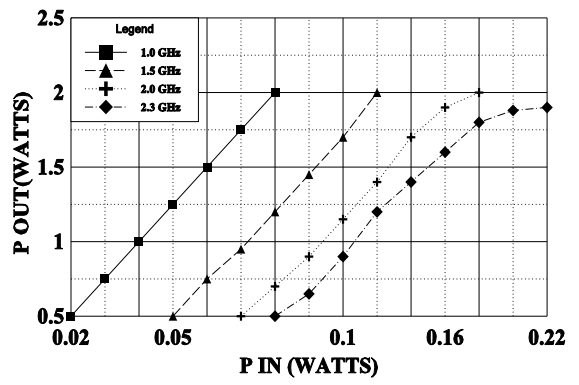
EFFICIENCY VS FREQUENCY

V_{cc}=28V



POWER OUTPUT VS POWER INPUT

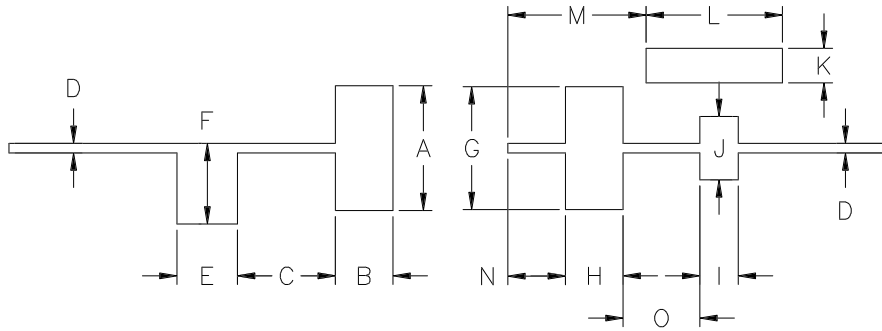
V_{cc}=28V



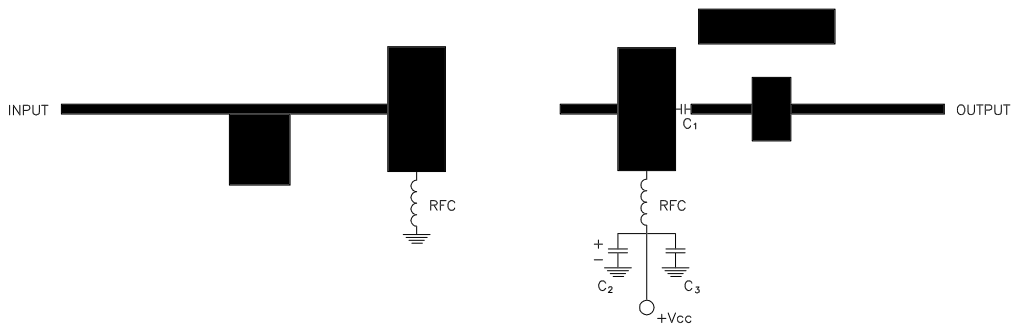
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.650
B	.300
C	.510
D	.050
E	.315
F	.420
G	.640
H	.300
I	.200
J	.330
K	.180
L	.710
M	.720
N	.300
O	.400



2001 TEST AMPLIFIER
F = 2.0 GHz



- = MICROSTRIP ON 15 MIL DUROID Er = 2.3
- C₁ = 3.6 ATC A CHIP
- C₂ = 180pf ATC B CHIP
- C₃ = 10 MFD 50V