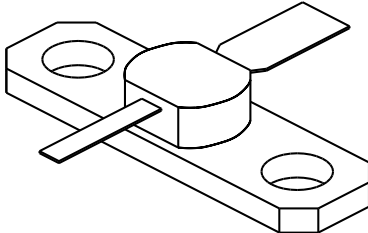


2003

3 Watt - 28 Volts, Class C
Microwave 2000 MHz

<p>GENERAL DESCRIPTION The 2003 is a COMMON BASE transistor capable of providing 3 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 is 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 12 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 + 200°C Operating Junction Temperature + 200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 2000 MHz	3.0			Watt
Pin	Power Input	Vcb = 28 Volts			0.47	Watt
Pg	Power Gain	Po = 3.0 Watts	8.1	8.5		dB
η_c	Collector Efficiency	As Above		40		%
VSWR₁	Load Mismatch Tolerance	F = 2 GHz, Po = 3 W			30:1	

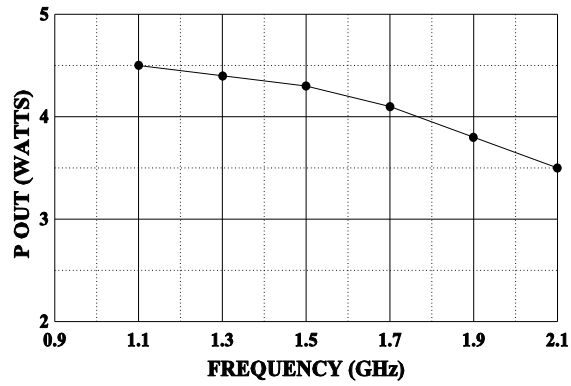
BVces	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
BVcbo	Collector to Base Breakdown	Ic = 1 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 1.0 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			500	µA
h_{FE}	Current Gain	Vce = 5 V, Ic = 100 mA	10			
Cob	Output Capacitance	F = 1 MHz, Vcb = 28 V		5.0		pF
θ_{jc}	Thermal Resistance				15	°C/W

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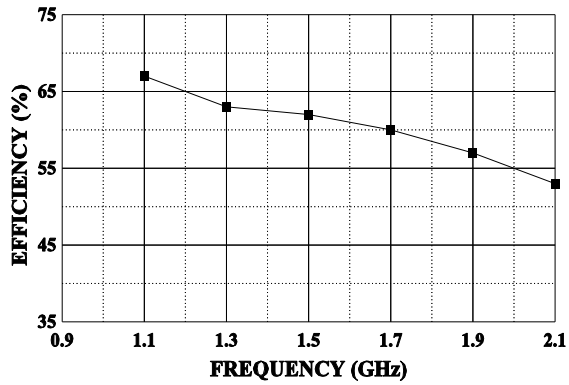
POWER OUTPUT VS FREQUENCY

V_{cc}=28V, Pin = .47 Watts



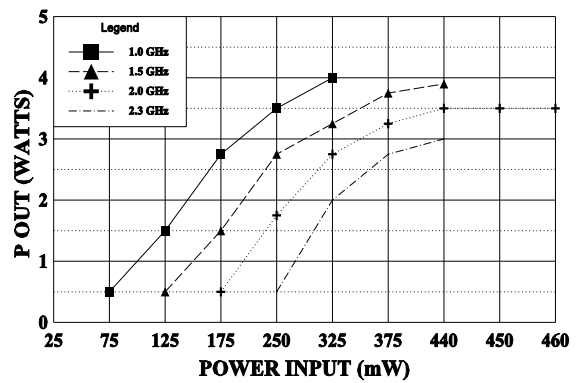
EFFICIENCY VS FREQUENCY

V_{cc}=28V



POWER OUTPUT VS POWER INPUT

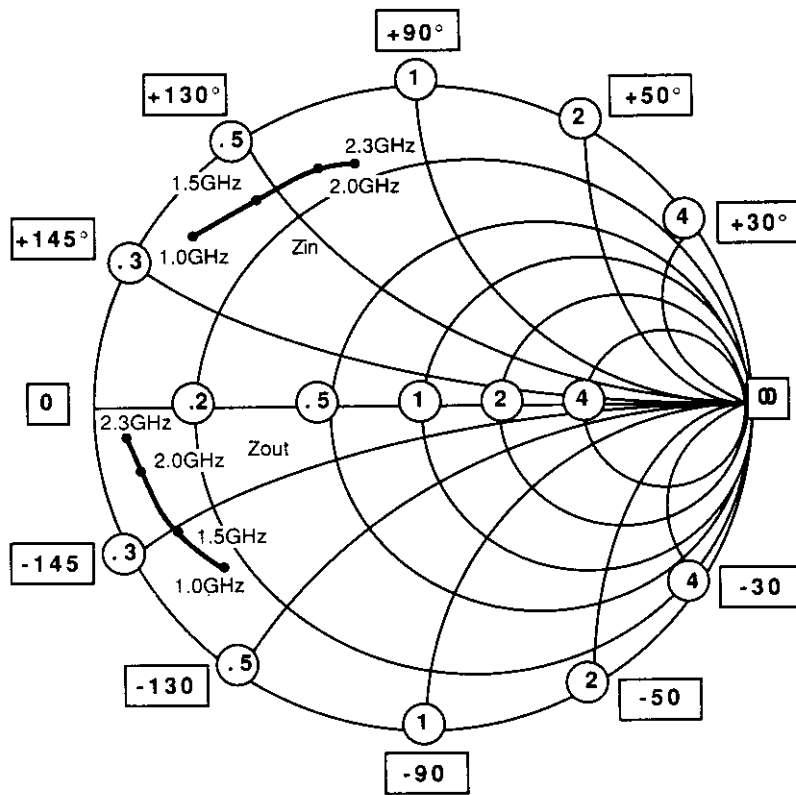
V_{cc}=28V



SMITH CHART

2003

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 50 OHM SYSTEM.