



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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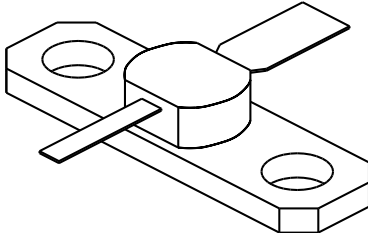
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# 2003

3 Watt - 28 Volts, Class C  
Microwave 2000 MHz

<p><b>GENERAL DESCRIPTION</b> 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><b>CASE OUTLINE</b> <b>55BT-1, Style 1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">12 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <p>BVces Collector to Emitter Voltage <span style="float: right;">50 Volts</span>          BVebo Emitter to Base Voltage <span style="float: right;">3.5 Volts</span>          Ic Collector Current <span style="float: right;">0.5 A</span></p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature <span style="float: right;">- 65 to + 200°C</span>          Operating Junction Temperature <span style="float: right;">+ 200°C</span></p>	

## ELECTRICAL CHARACTERISTICS @ 25 °C

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

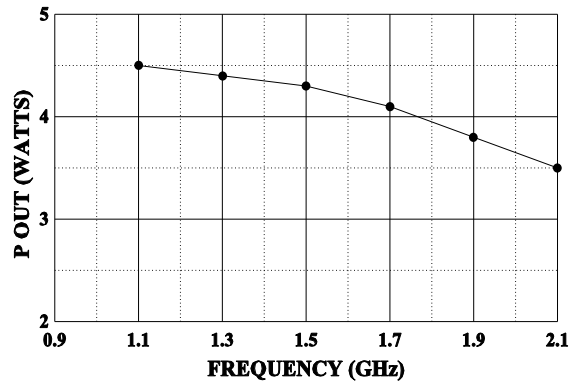
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
<b>BVcbo</b>	Collector to Base Breakdown	Ic = 1 mA	45			Volts
<b>BVebo</b>	Emitter to Base Breakdown	Ie = 1.0 mA	3.5			Volts
<b>Icbo</b>	Collector to Base Current	Vcb = 28 Volts			500	µA
<b>h<sub>FE</sub></b>	Current Gain	Vce = 5 V, Ic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

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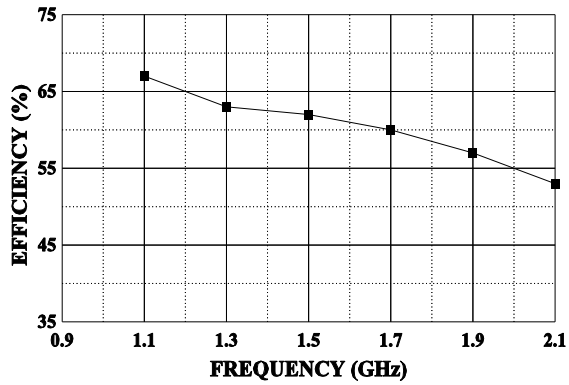
**POWER OUTPUT VS FREQUENCY**

V<sub>cc</sub>=28V, Pin = .47 Watts



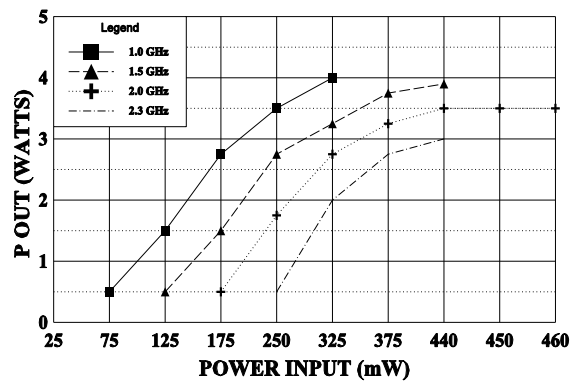
**EFFICIENCY VS FREQUENCY**

V<sub>cc</sub>=28V



**POWER OUTPUT VS POWER INPUT**

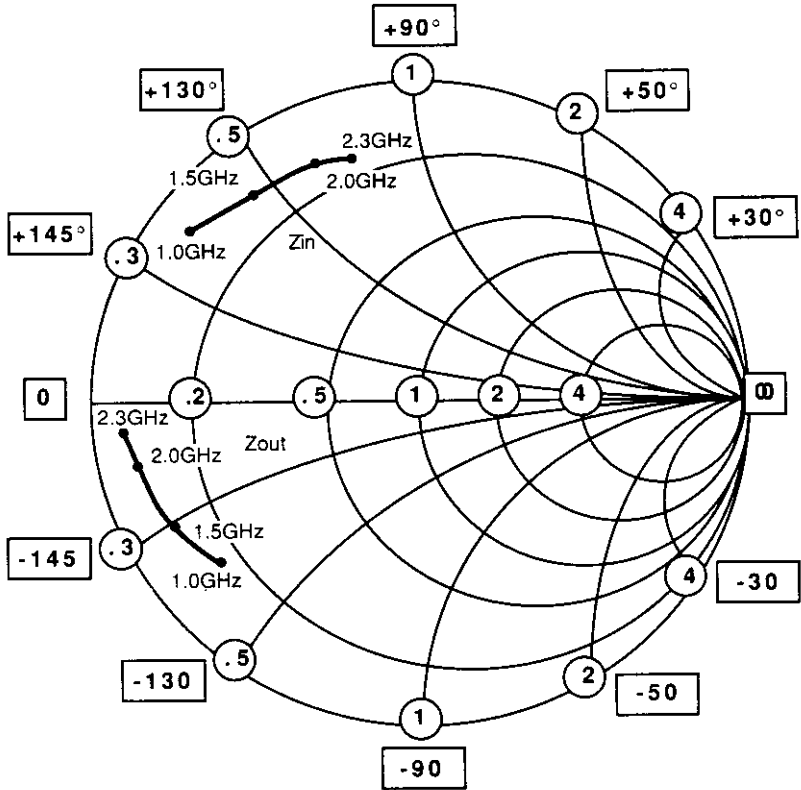
V<sub>cc</sub>=28V



# SMITH CHART

2003

## NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 50 OHM SYSTEM.