

**GENERAL DESCRIPTION**

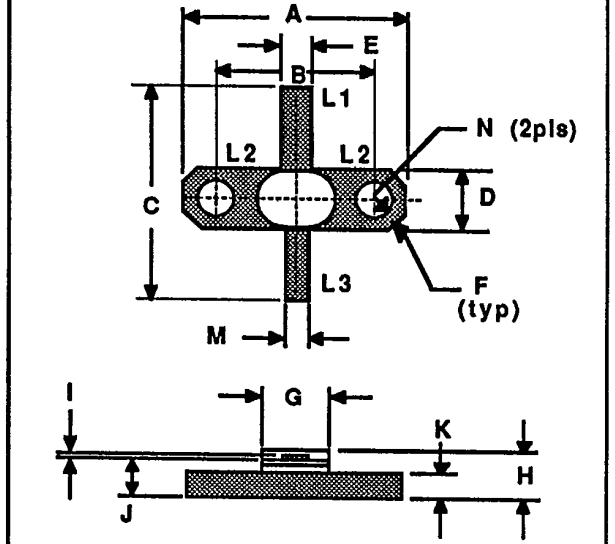
The 2001 is a common base transistor capable of providing 1.0 Watts of CW RF output power at 2000 MHz. This hermetically sealed transistor is specifically designed for Class C amplifier applications. It utilizes gold metallization and diffused ballasting to provide high reliability and supreme ruggedness.

**2001**  
**1.0 WATTS - 28 VOLTS**  
**2000 MHz**

**MICROWAVE CW BIPOLAR**

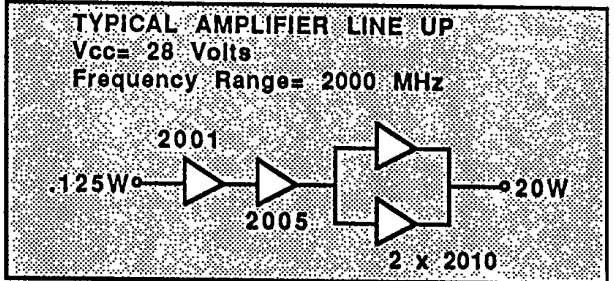
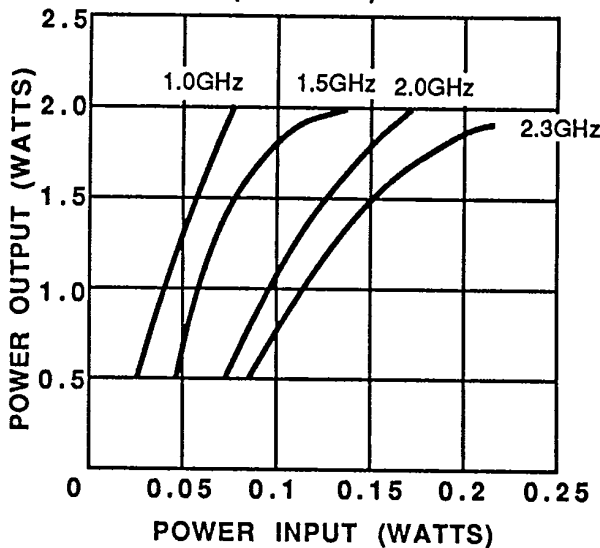
**ABSOLUTE MAXIMUM RATINGS**

Maximum Power Dissipation @ 25°C Case Temperature	5.0 W
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	50 V
BVebo Emitter to Base Voltage	3.5 V
Ic Collector Current	0.25 A
Maximum Temperatures	
Storage Temperature	-65 to +200°C
Operating Junction Temperature	+200°C



DIM	Millimeter	TOL	Inches	TOL	
L1 : B	A	20.32	.13	.800	.005
L2 : E	B	14.27	.13	.562	.005
L3 : C	C	18.03	MIN	.710	MIN
	D	5.84	.13	.230	.005
	E	3.05	.13	.120	.005
	F	45°	5°	45°	5°
	G	5.84	.13	.230	.005
	H	4.57	REF	.180	REF
	I	0.13	.02	.005	.001
	J	3.81	.13	.150	.005
	K	1.52	.13	.060	.005
	M	1.27	.13	.050	.005
	N	3.30	.13	.130	.005

**POWER OUTPUT VS POWER INPUT (TYPICAL)**



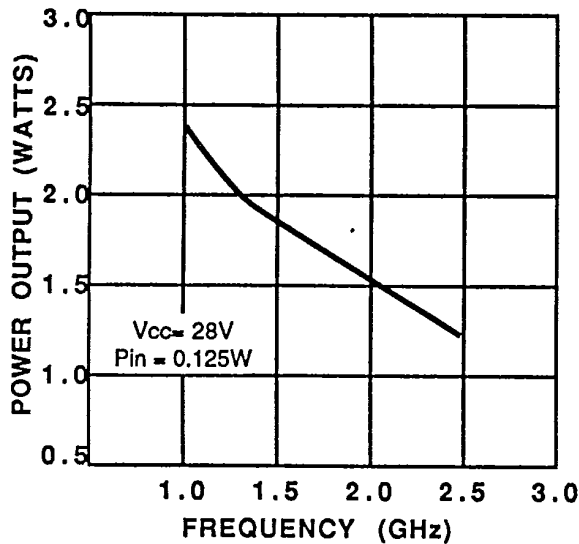
2001-2

ELECTRICAL CHARACTERISTICS<sup>1</sup>

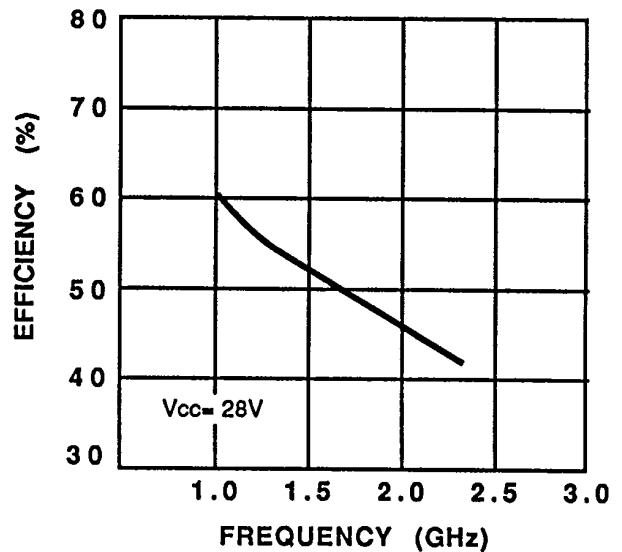
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P <sub>out</sub>	Power Output	P <sub>in</sub> = .125W f= 2000 MHz V <sub>cb</sub> = 28V	1.0			Watts
P <sub>in</sub>	Power Input				0.125	Watts
P <sub>g</sub>	Power Gain		9.0			dB
η <sub>c</sub>	Collector Efficiency			40		%
VSWR	Load Mismatch Tolerance				∞:1	
BV <sub>ebo</sub>	Breakdown Voltage (Emitter to Base)	I <sub>c</sub> = 0A, I <sub>e</sub> = 1.0mA	3.5			Volts
BV <sub>ces</sub>	Breakdown Voltage (Collector to Emitter)	V <sub>be</sub> = 0A, I <sub>c</sub> = 10mA	50			Volts
BV <sub>cb0</sub>	Breakdown Voltage (Collector - Base)	I <sub>e</sub> = 0A, I <sub>c</sub> = 1mA	45			Volts
I <sub>cbo</sub>	Collector Leakage Current	I <sub>e</sub> = 0A, V <sub>cb</sub> =28V			500	μA
C <sub>ob</sub>	Capacitance-Collector to Base	f= 1MHz, V <sub>cb</sub> = 28V		4.0		pF
h <sub>FE</sub>	DC-Current Gain	V <sub>ce</sub> = 5V, I <sub>c</sub> = 100mA	20			
θ <sub>jc</sub>	Thermal Resistance	T <sub>f</sub> = 25° C			35	°C/W

NOTE 1: T<sub>c</sub> = 25°C unless otherwise specified

POWER OUTPUT VS FREQUENCY (TYPICAL)



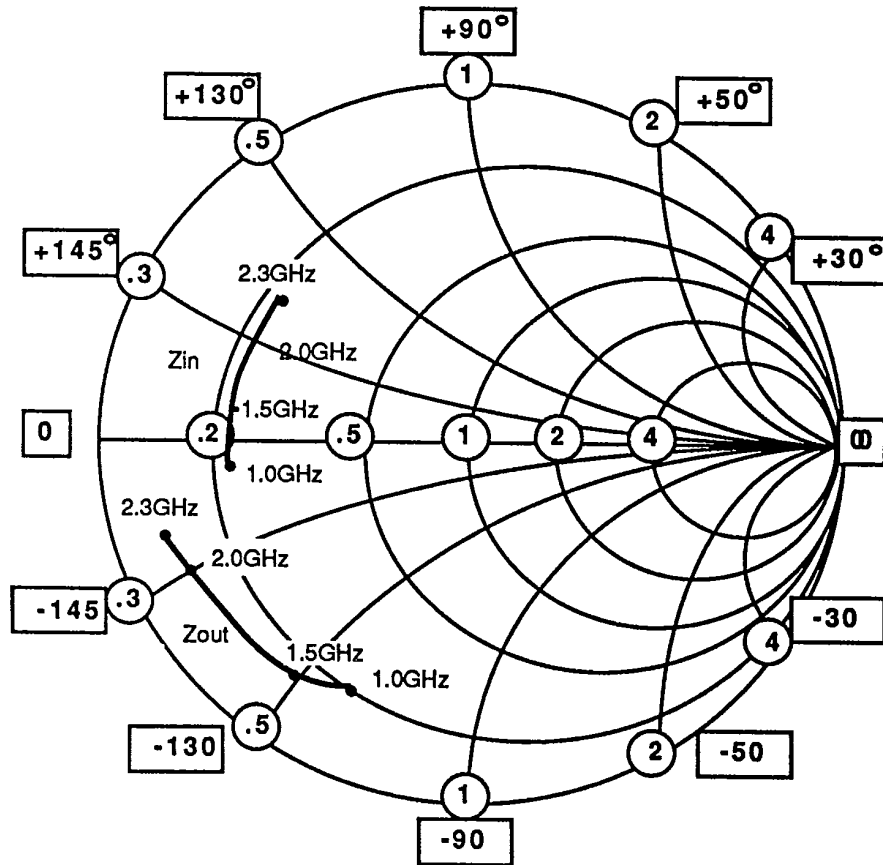
EFFICIENCY VS FREQUENCY (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

**SMITH CHART  
2001**

**NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES**



**NORMALIZED TO A 50 OHM SYSTEM.**

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