

GENERAL DESCRIPTION

The 2005 is a common base transistor capable of providing 5 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.

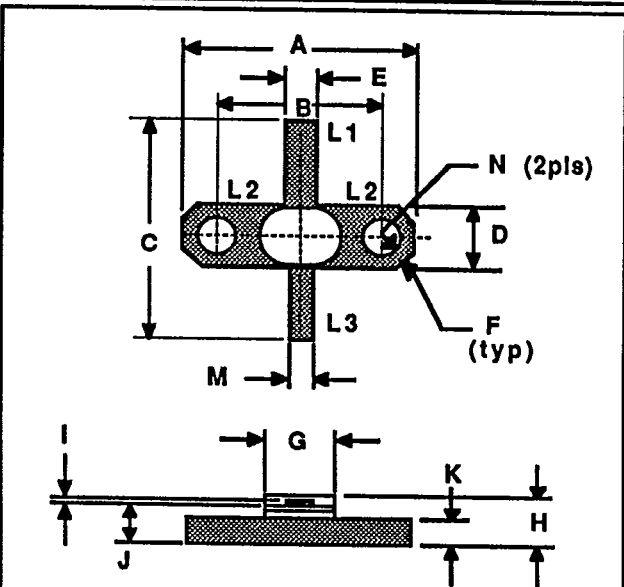
2005
5.0 WATTS - 28 VOLTS
2000 MHz

MICROWAVE CW BIPOLAR

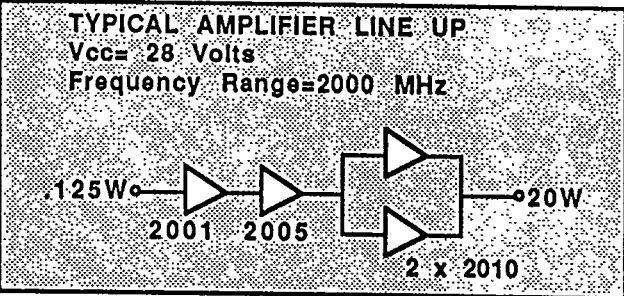
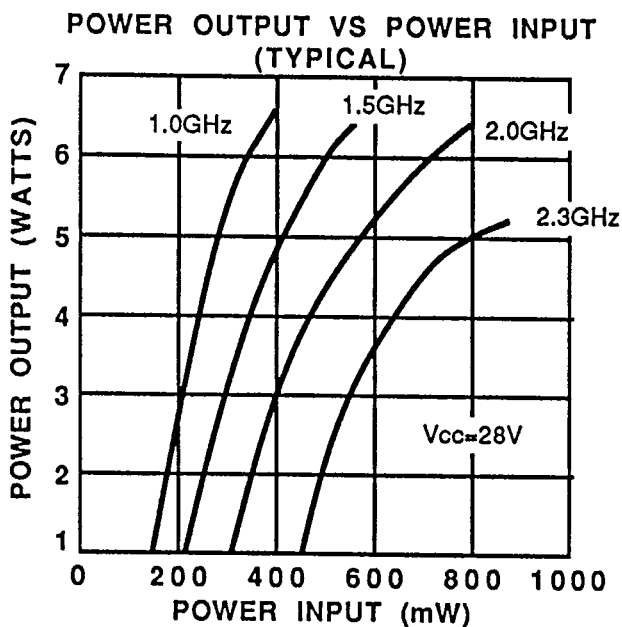
ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C Case Temperature	20 W
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	50 V
BVebo Emitter to Base Voltage	3.5 V
lc Collector Current	1.0 A

Maximum Temperatures	
Storage Temperature	-65 to +200°C
Operating Junction Temperature	+200°C



DIM	Millimeter	TOL	Inches	TOL
L1 : B	A	.13	.800	.005
L2 : E	B	.13	.562	.005
L3 : C	C	MIN	.710	MIN
	D	.13	.230	.005
	E	.13	.120	.005
	F	45°	5°	45°
	G	.13	.230	.005
	H	REF	.180	REF
	I	.02	.005	.001
	J	.13	.150	.005
	K	.13	.060	.005
	M	.13	.050	.005
	N	.13	.130	.005



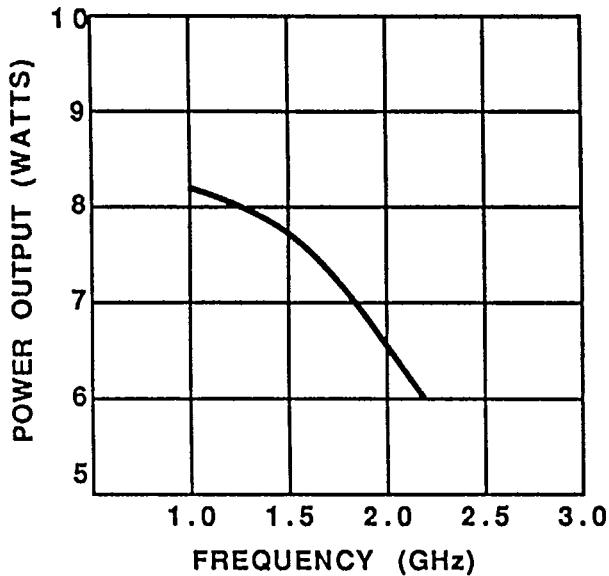
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ELECTRICAL CHARACTERISTICS¹

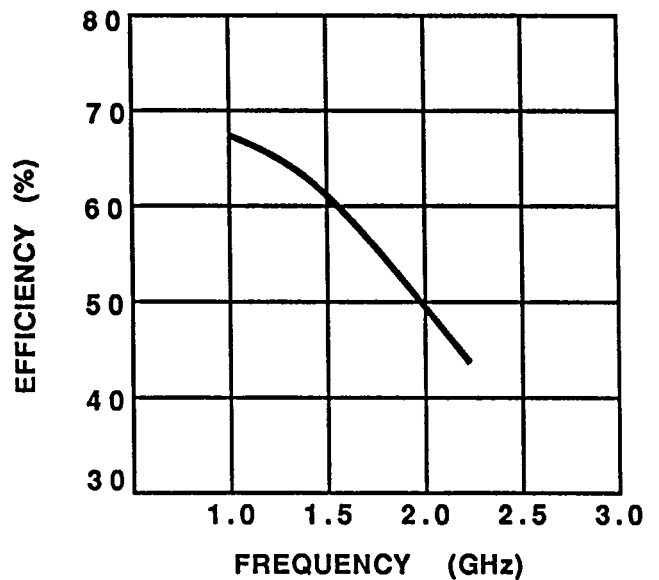
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f=2000 MHz V _{cb} = 28V P _{in} = 0.8W	5.0			Watts
P _{in}	Power Input				0.8	Watts
P _g	Power Gain		8.0			dB
η _c	Collector Efficiency		40			%
VSWR	Load Mismatch Tolerance				∞:1	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 2.0mA	3.5			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _b e= 0A, I _c = 20mA	50			Volts
BV _{cbo}	Breakdown Voltage (Collector - Base)	I _e = 0A, I _c = 2mA	45			Volts
I _{cbo}	Collector Leakage Current	I _e = 0A	1.0			μA
C _{ob}	Capacitance-Collector to Base	f= 1MHz, V _{cb} = 28V		7.5		pF
h _{FE}	DC-Current Gain	V _{ce} = 5V, I _c = 200mA	20			
θ _{jc}	Thermal Resistance	T _f = 25°C			8.5	°C/W

Note 1: T_c = 25°C unless otherwise specified

POWER OUTPUT VS FREQUENCY (TYPICAL)



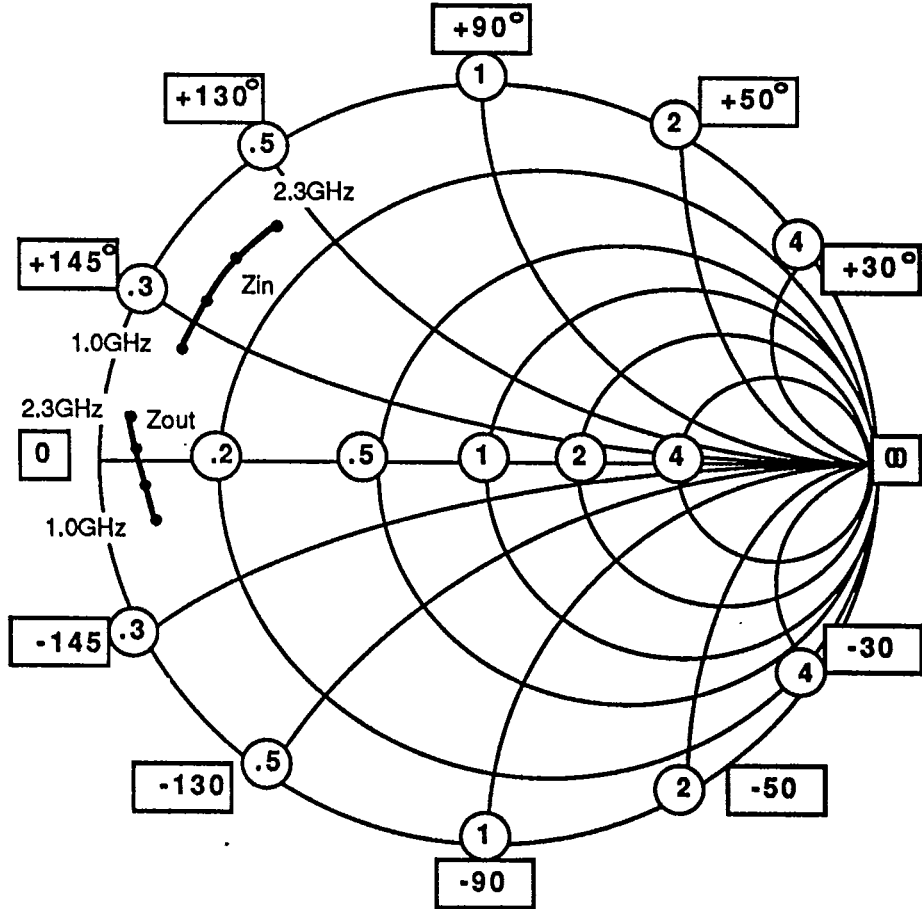
EFFICIENCY VS FREQUENCY (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

**SMITH CHART
2005**

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 50 OHM SYSTEM.