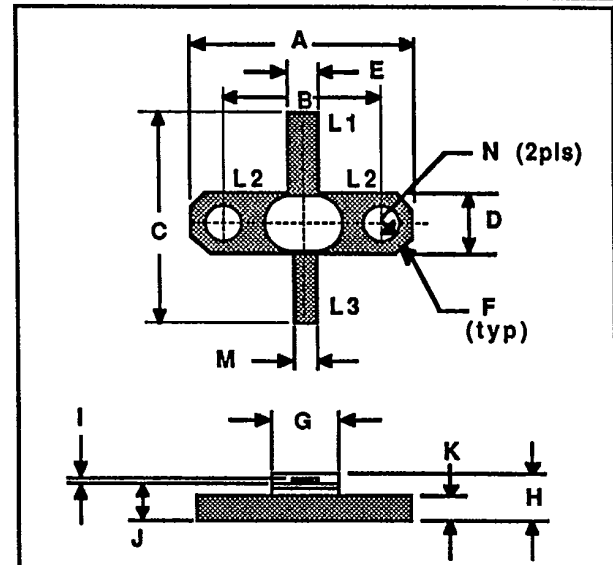


**GENERAL DESCRIPTION**

The 2010 is a common base transistor capable of providing 10 watts of CW RF output power in the 2000 MHz band. This hermetically sealed transistor is specifically designed for Class C amplifier applications. It utilizes gold metallization and diffused balasting to provide high reliability and supreme ruggedness.

**2010**  
**10 WATT - 28 VOLTS**  
**2000 MHz**

**MICROWAVE CW BIPOLAR**



**ABSOLUTE MAXIMUM RATINGS**

Maximum Power Dissipation @ 25°C Case Temperature 30 W

**Maximum Voltage and Current**

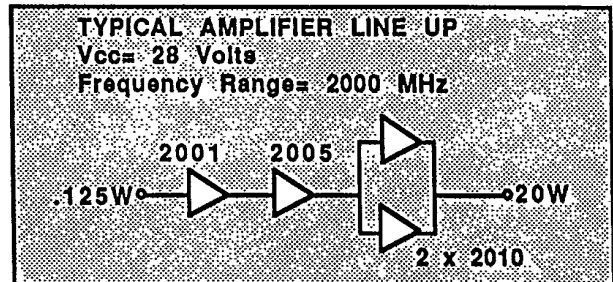
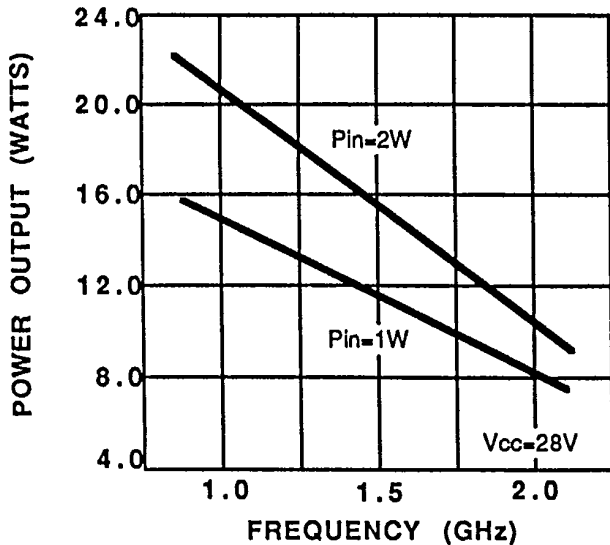
BVces Collector to Emitter Voltage 50 V  
 BVebo Emitter to Base Voltage 3.5 V  
 Ic Collector Current 2.0 A

**Maximum Temperatures**

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

L1 : B	DIM	Millimeter	TOL	Inches	TOL
L2 : E	A	20.32	.13	.800	.005
L3 : C	B	14.27	.13	.562	.005
	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 FREQUENCY (TYPICAL)**



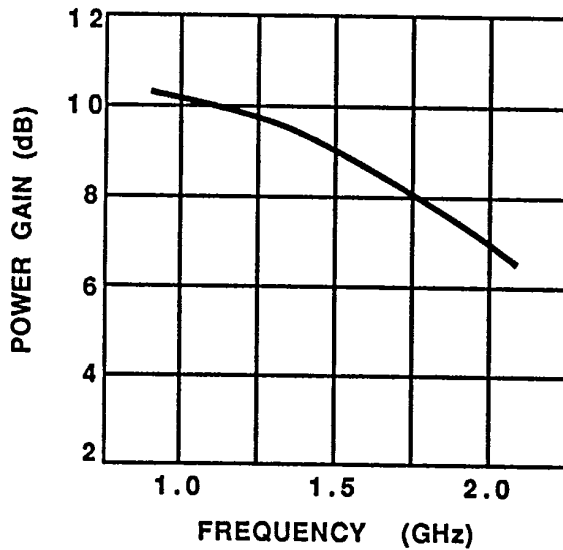
2010-2

**ELECTRICAL CHARACTERISTICS**

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output	f= 2GHz Vcc= 28V	10			Watts
Pin	Power Input				2	Watts
Pg	Power Gain			8.0		dB
$\eta_c$	Collector Efficiency				40	%
VSWR	Load Mismatch Tolerance				20:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ic= 0A, Ie= 4mA	3.5			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Vbe= 0A, Ic= 20mA	50			Volts
BVcbo	Breakdown Voltage (Collector - Base)	Ie= 0A, Ic= 4mA	45			Volts
Icbo	Collector Leakage Current	Ie= 0A, Vcb= 28V			4.0	mA
h <sub>FE</sub>	DC-Current Gain	Ic= 400mA, Vce= 5V	20			
$\theta_{jc}$	Thermal Resistance	Tc = +25°C			6.0	°C/W

NOTE: Tc = +25 °C

**POWER GAIN VS FREQUENCY  
(TYPICAL)**



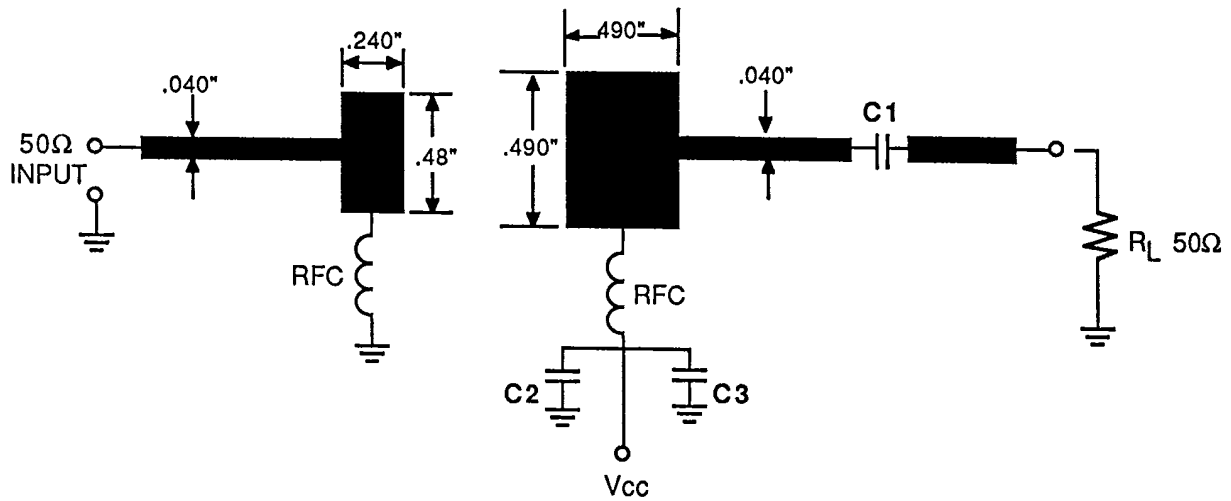
SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

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### 2010 TEST AMPLIFIER

f = 2.0 GHz  
Vcc = 28V



--- MICROSTRIP ON 0.020 TEFLON FIBERGLASS,  $\epsilon_r = 2.55$   
 C1, C2 --- 47 pf CHIP CAP  
 C3 --- 10 $\mu$ fd @ 35 Volts