2015M

15 WATTS - 28 VOLTS 2 GHz

MICROWAVE - BIPOLAR

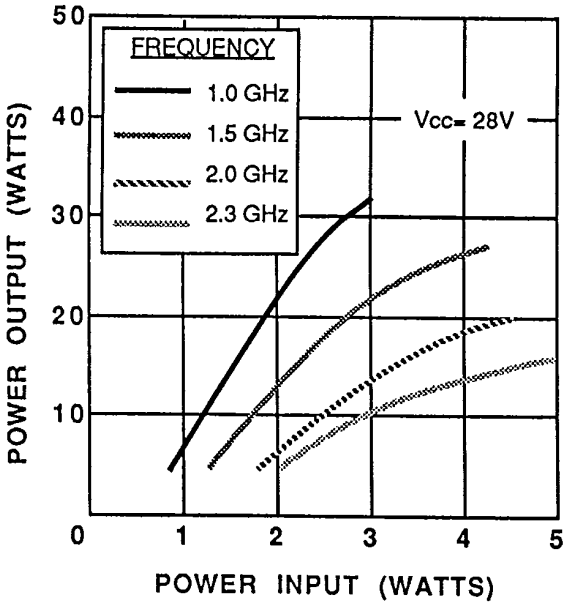
GENERAL DESCRIPTION

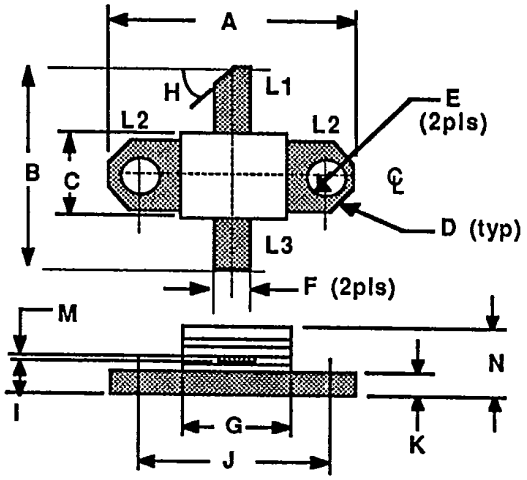
The 2015M is an internally matched, common base transistor capable of providing 15 Watts of CW RF output power across the 1000-2000 MHz band. This transistor is specifically designed for telecommunication and microwave amplifier applications. It utilizes gold metallization and diffused ballasting to provide high reliability and supreme ruggedness.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25 °C Case Temperature		50 W
Maximum Voltage and Current		
BVces	Collector to Emitter Voltage	50 V
BVebo	Emitter to Base Voltage	3.5 V
Ic	Collector Current	3.0 A
Maximum Temperatures		
Storage Temperature		-65 to +150 °C
Operating JunctionTemperature		+200 °C

POWER OUTPUT VS POWER INPUT (TYPICAL)



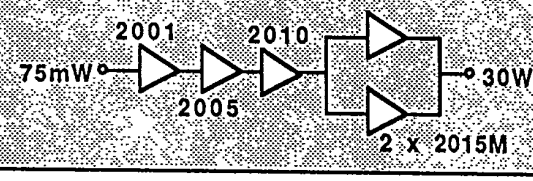


L1 : C
L2 : B
L3 : E

DIM	Millimeter	TOL	Inches	TOL
A	18.90	.13	.744	.005
B	15.00	.76	.590	.030
C	7.37	.13	.290	.005
D	1.27x45°	.13	.050x45 °	.005
E	3.30 DIA	.13	.130 DIA	.005
F	2.54	.13	.100	.005
G	8.13	.13	.320	.005
H	45 °	5°	45 °	5°
I	2.54	.13	.100	.005
J	14.22	.13	.560	.005
K	1.52	.13	.060	.005
M	0.13	.02	.005	.001
N	3.81	REF	.150	REF

TYPICAL AMPLIFIER LINE UP

Vcc= 28 Volts
Frequency Range= 2000 MHz



490 Race Street, San Jose, CA 95126 Phone (408) 294-4200, TWX (910) 338-2172
Ewenny Rd., Bridgend, Mid Glamorgan, CF31 3LQ, United Kingdom, Phone (0656) 68021

REV A AUG 1987
Printed in USA

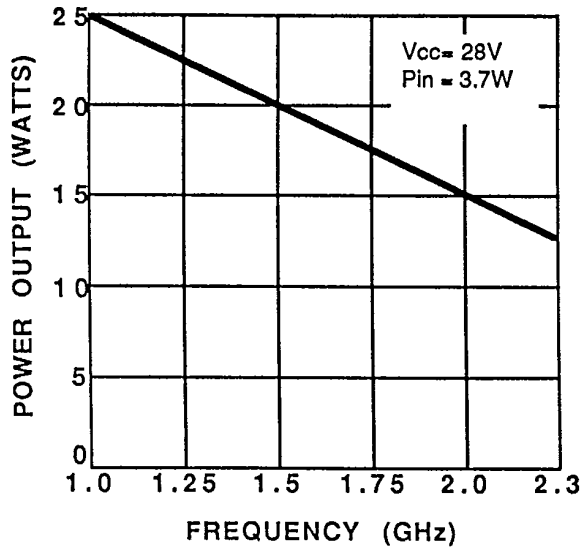
2015M-2

ELECTRICAL CHARACTERISTICS[1]

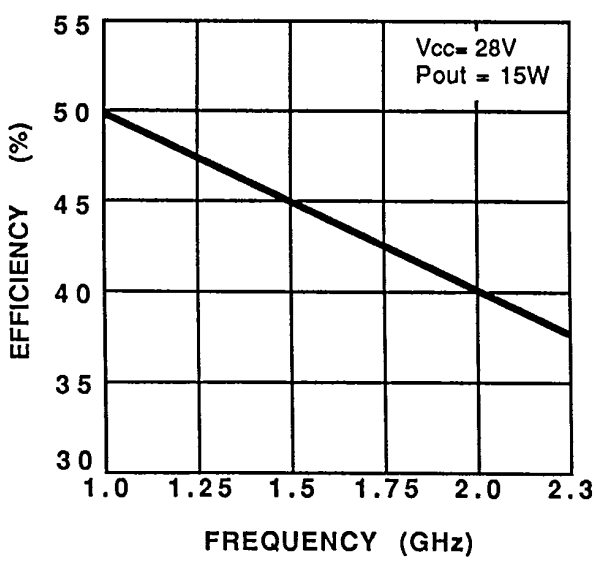
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Pout	Power Output	f= 2000 MHz Vcc= 28V	15.0			Watts
Pin	Power Input				3.75	Watts
Pg	Power Gain			7.0		dB
η_c	Collector Efficiency		35			%
VSWR	Load Mismatch Tolerance				∞:1	
BVebo	Breakdown Voltage (Emitter to Base)	Ic= 0A, Ie= 6mA	3.5			Volts
BVces	Breakdown Voltage (Collector to Emitter)	Vbe= 0A, Ic= 60mA	50			Volts
BVcbo	Breakdown Voltage (Collector - Base)	Ie= 0A, Ic= 6mA	45			Volts
Icbo	Collector Leakage Current	Ie= 0A, Vcb= 28V			3	mA
Cob	Capacitance- Collector to Base	Vcb= 28V, f= 1MHz		22		pF
h_{FE}	DC-Current Gain	Vce= 5V, Ic= 600mA	10			
θjc	Thermal Resistance				3.5	°C/W

Note 1: Tc = +25°C unless otherwise specified

POWER OUTPUT VS FREQUENCY (TYPICAL)



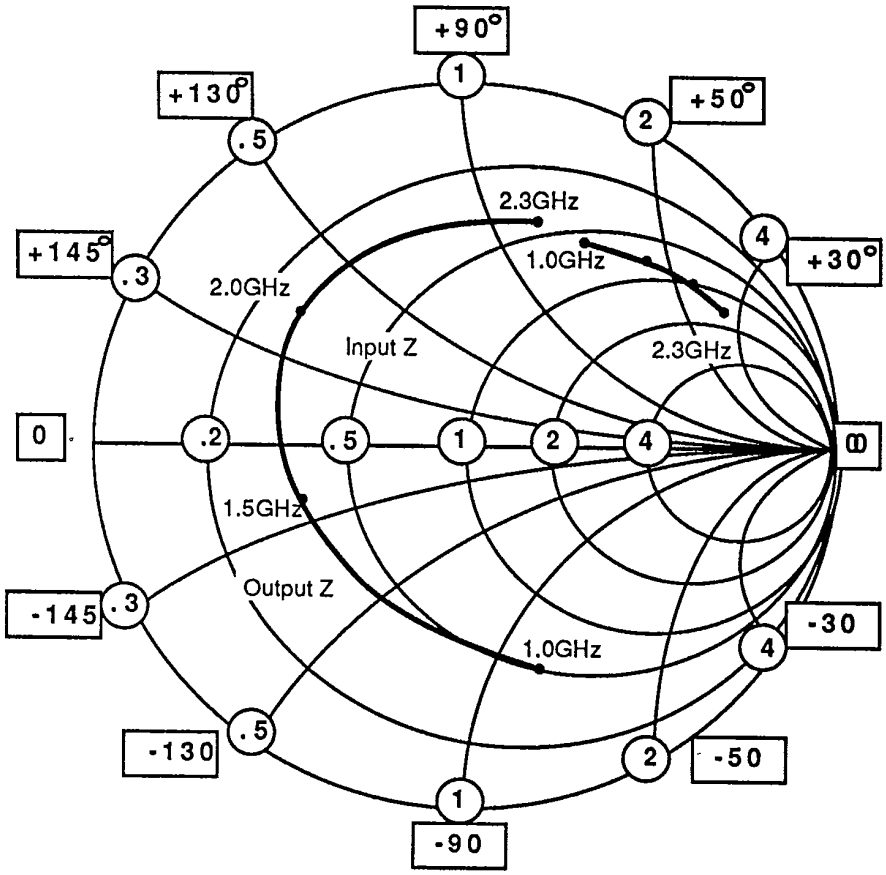
EFFICIENCY VS FREQUENCY (TYPICAL)



SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

SMITH CHART 2015M

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES
Vcc= 28V



NORMALIZED TO A 5 OHM SYSTEM.