

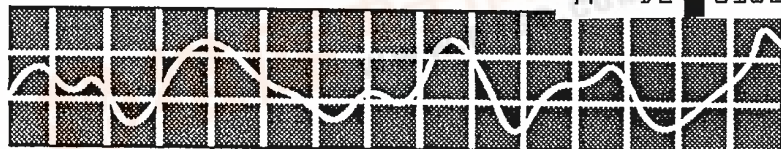
0182998 ACRIAN INC

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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

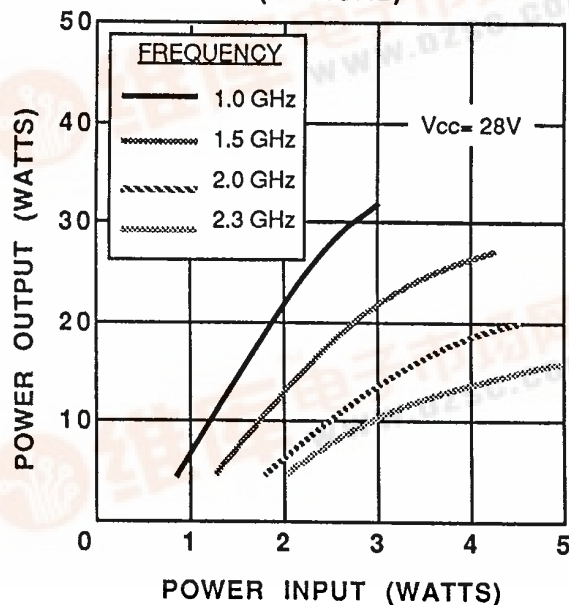
BVebo Emitter to Base Voltage 3.5 V

Ic Collector Current 3.0 A

Maximum Temperatures

Storage Temperature -65 to +150 °C

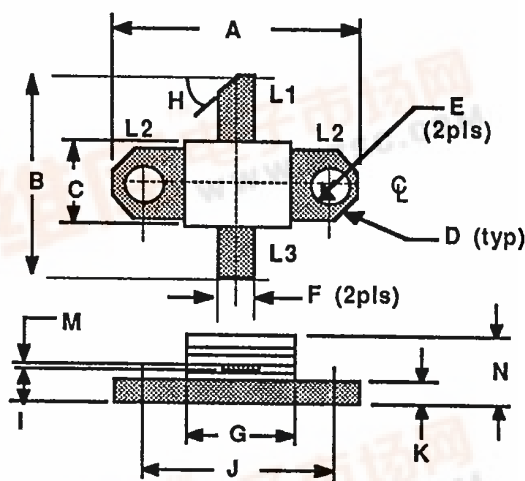
Operating Junction Temperature +200 °C

POWER OUTPUT VS POWER INPUT
(TYPICAL)

2015M

15 WATTS - 28 VOLTS
2 GHz

MICROWAVE - BIPOLAR



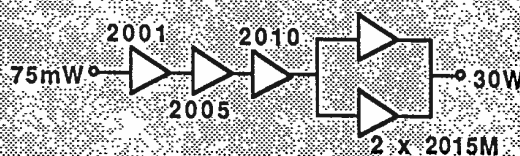
L1 : C
L2 : B
L3 : E

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

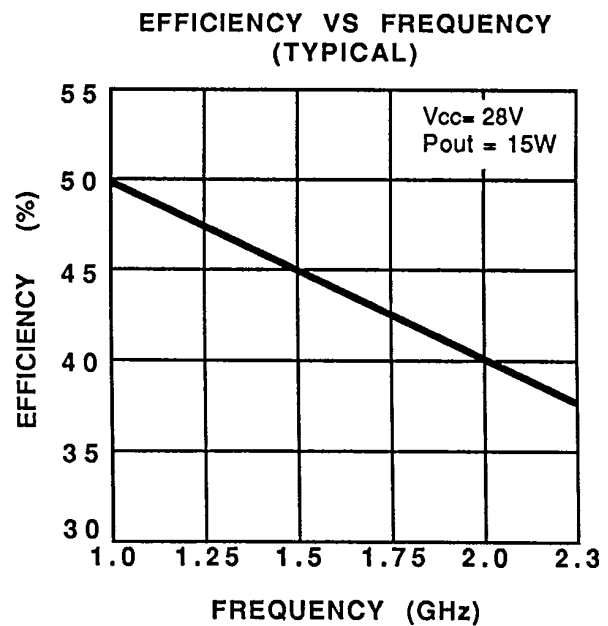
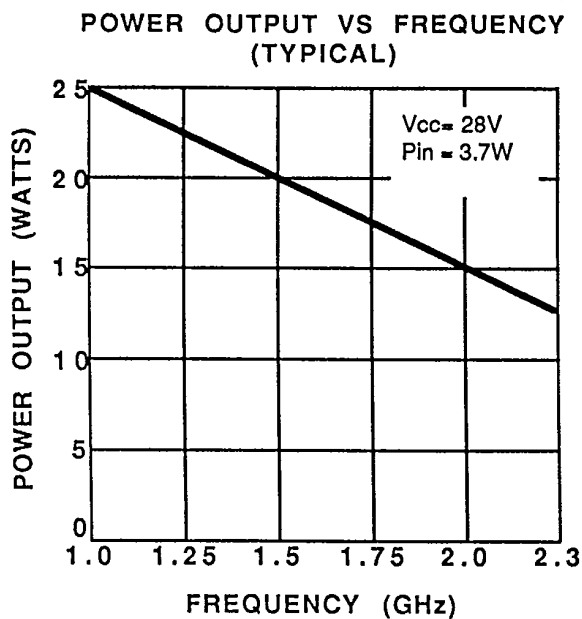
Frequency Range= 2000 MHz



2015M-2

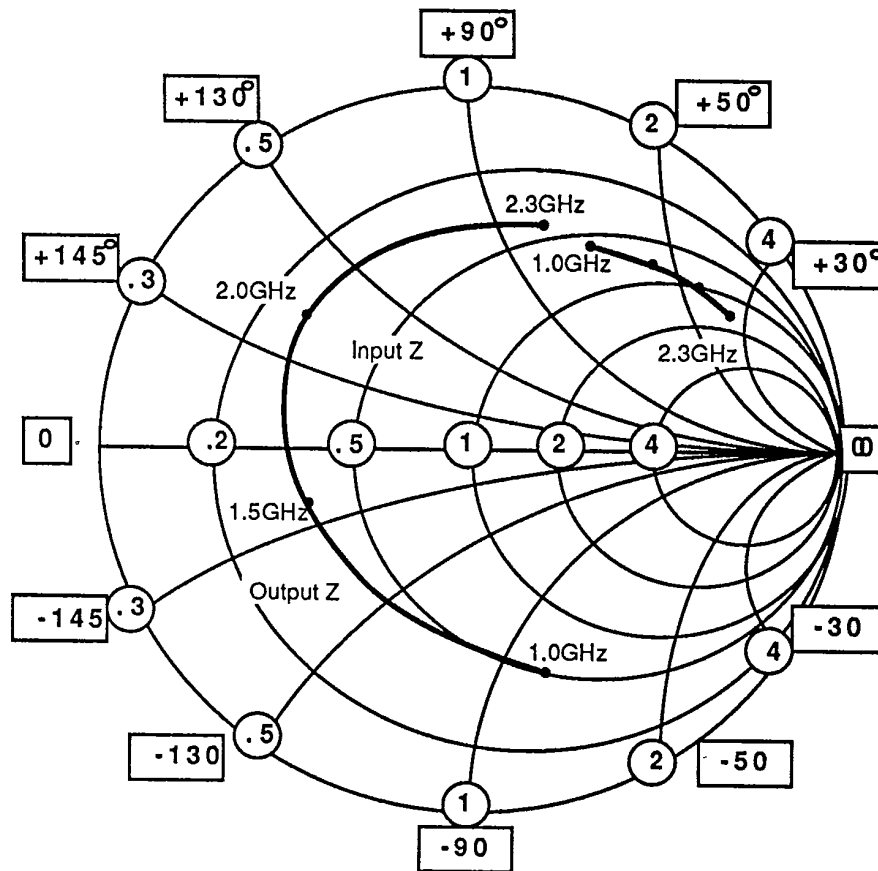
ELECTRICAL CHARACTERISTICS¹

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 2000 MHz V _{cc} = 28V	15.0			Watts
P _{in}	Power Input				3.75	Watts
P _g	Power Gain			7.0		dB
η_c	Collector Efficiency		35			%
VSWR	Load Mismatch Tolerance				$\infty:1$	
BV _{ebo}	Breakdown Voltage (Emitter to Base)	I _c = 0A, I _e = 6mA	3.5			Volts
BV _{ces}	Breakdown Voltage (Collector to Emitter)	V _{be} = 0A, I _c = 60mA	50			Volts
BV _{cbo}	Breakdown Voltage (Collector - Base)	I _e = 0A, I _c = 6mA	45			Volts
I _{cbo}	Collector Leakage Current	I _e = 0A, V _{cb} = 28V			3	mA
C _{ob}	Capacitance- Collector to Base	V _{cb} = 28V, f = 1MHz		22		pF
h _{FE}	DC-Current Gain	V _{ce} = 5V, I _c = 600mA	10			
θ_{jc}	Thermal Resistance				3.5	°C/W

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

SMITH CHART
2015M

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES
 $V_{CC} = 28V$



NORMALIZED TO A 5 OHM SYSTEM.