

2324-20

20 Watts, 24 Volts, Class C
Microwave 2300-2400 MHz

GENERAL DESCRIPTION

The 2324-20 is a COMMON BASE transistor capable of providing 20 Watts of Class C, RF output power over the band 2300-2400 MHz. This transistor is specifically designed for Microwave Broadband Class C amplifier applications. It includes input and output pre matching and utilizes gold metalization and diffused ballasting to provide high reliability and supreme ruggedness. This transistor uses a fully hermetic High Temperature Solder Sealed package.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 58 Watts

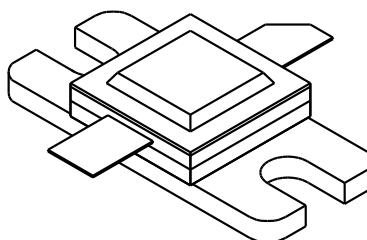
Maximum Voltage and Current

BVces	Collector to Emitter Voltage	40 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	3.0 Amps

Maximum Temperatures

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

CASE OUTLINE 55AW, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Out	F = 2.3 - 2.4 GHz V _{cc} = 24 Volts	20	40	4.0	Watts
P_{in}	Power Input					
P_g	Power Gain					
η_c	Efficiency					
VSWR	Load Mismatch Tolerance					
			7.0		10:1	dB %

BVebo	Emitter to Base Breakdown	I _e = 25 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	I = 160 mA	40			Volts
H_{fe}	DC Current Gain	V _{ce} = 5 V, I _c = 160mA	10		100	
C_{ob}	Capacitance*					pF
θ_{jc}	Thermal Resistance				3.0	°C/W

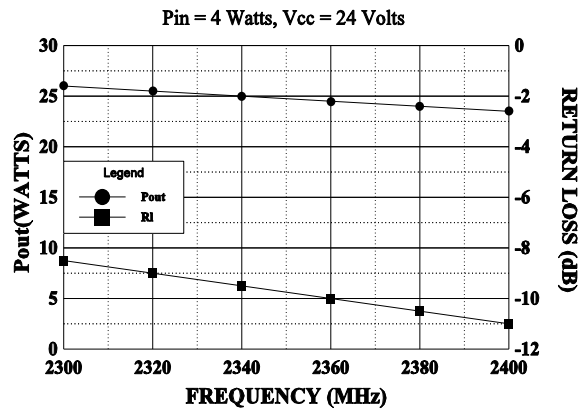
* Not measurable due to internal prematch network

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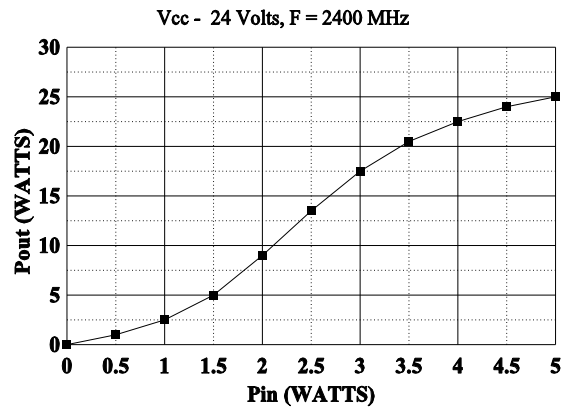
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GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

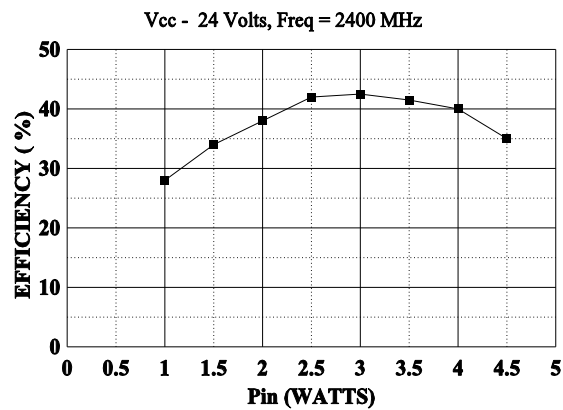
BROADBAND POWER OUTPUT & RETURN LOSS



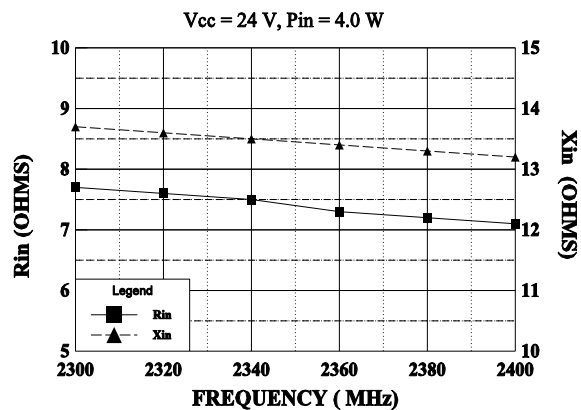
POWER OUTPUT vs POWER INPUT



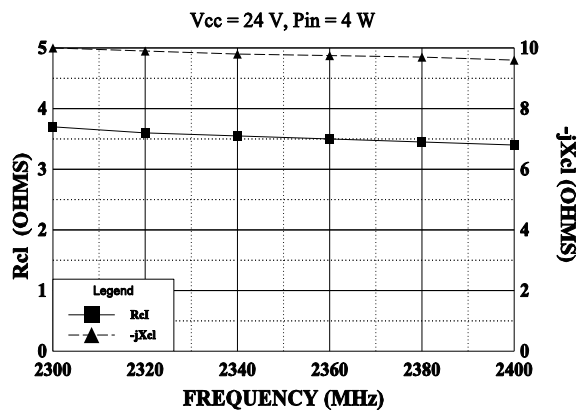
EFFICIENCY vs POWER IN



INPUT IMPEDANCE

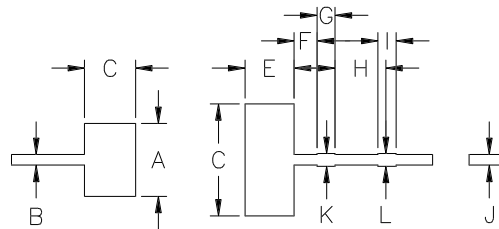


LOAD IMPEDANCE



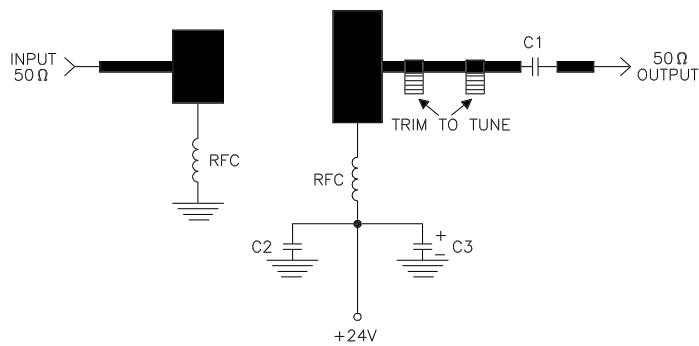
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.400
B	.058
C	.280
D	.615
E	.270
F	.125
G	.100
H	.235
I	.100
J	.058
K	.070
L	.070

2324-20 TEST CIRCUIT



- = Microstrip on 0.0186" Teflon Fiberglass, $\epsilon_r=2.55$
 C1 = ATC 68pF B-CASE
 C2 = ATC 68pF A-CASE
 C3 = 1.0 MFD 35V
 RFC = 4 turns #22 wire 1/16" I.D.



CAGE OPJR2	DWG NO. 2324-20	REV A
SCALE	1/1	SHEET