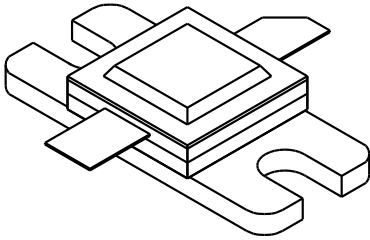


# 2324-20

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

<p><b>GENERAL DESCRIPTION</b></p> <p>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.</p>	<p><b>CASE OUTLINE</b> <b>55AW, STYLE 1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C 58 Watts</p> <p><b>Maximum Voltage and Current</b></p> <p>BVces Collector to Emitter Voltage 40 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 3.0 Amps</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature - 65 to + 200°C Operating Junction Temperature + 200°C</p>	

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 2.3 - 2.4 GHz Vcc = 24 Volts	20			Watts
Pin	Power Input				4.0	Watts
Pg	Power Gain		7.0			dB
ηc	Efficiency				40	%
VSWR	Load Mismatch Tolerance					10:1

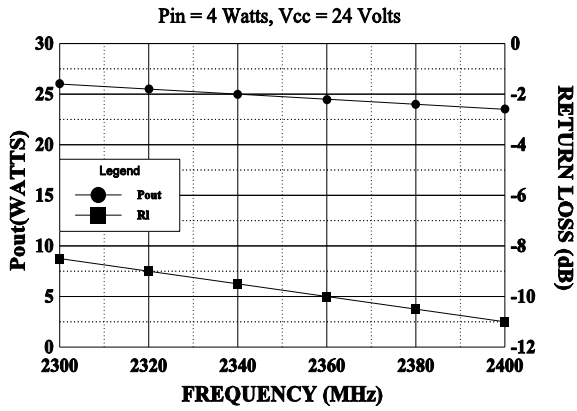
BVebo	Emitter to Base Breakdown	Ie = 25 mA	3.5			Volts
BVces	Collector to Emitter Breakdown	I = 160 mA	40			Volts
Hfe	DC Current Gain	Vce = 5 V, Ic = 160mA	10		100	
Cob	Capacitance*					pF
θjc	Thermal Resistance				3.0	°C/W

\* Not measurable due to internal prematch network

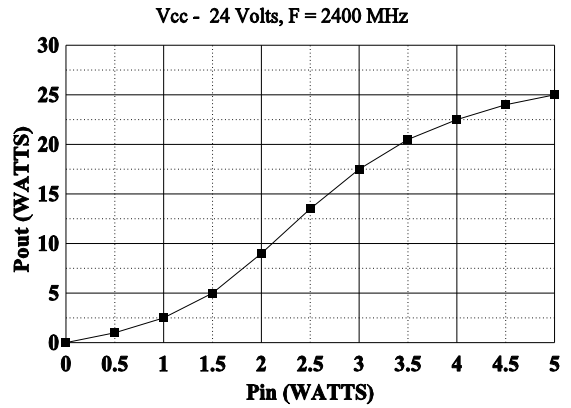
Issue August 1996

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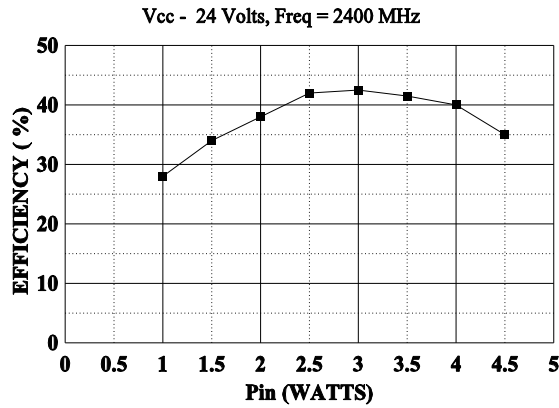
**BROADBAND POWER OUTPUT & RETURN LOSS**



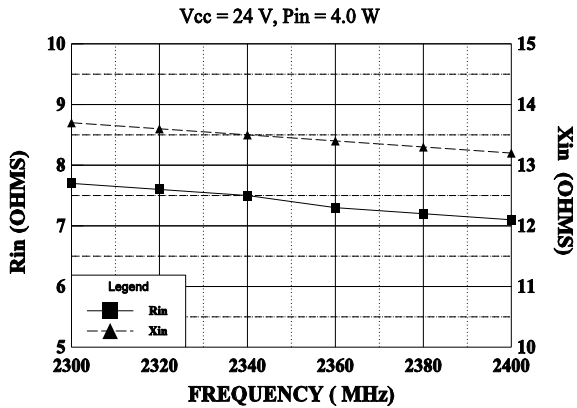
**POWER OUTPUT vs POWER INPUT**



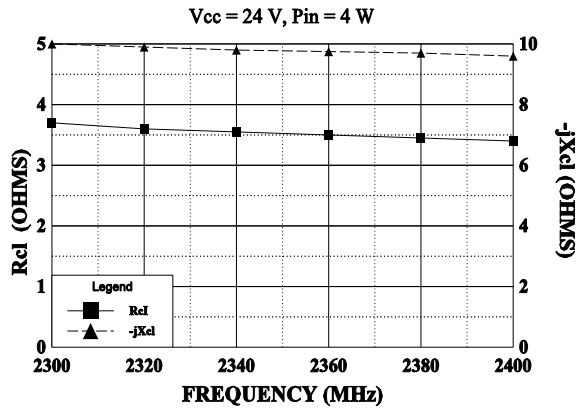
**EFFICIENCY vs POWER IN**



**INPUT IMPEDANCE**

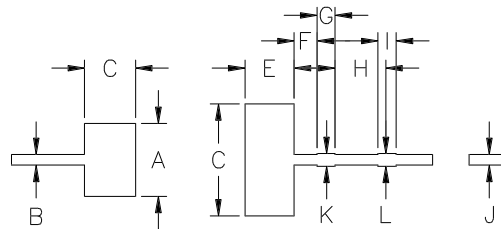


**LOAD IMPEDANCE**



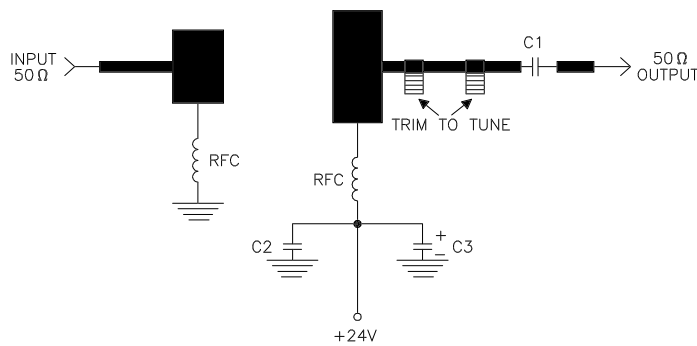
REVISIONS

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, Er=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