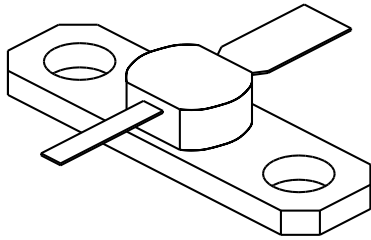


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# 2302

2.0 Watt - 20 Volts, Class C  
Microwave 2300 MHz

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<p><b>GENERAL DESCRIPTION</b> The 2302 is a COMMON BASE transistor capable of providing 2 Watts Class C, RF output power at 2300 MHz. Gold metalization and diffused ballasting are used to provide high reliability and supreme ruggedness. The transistor uses a fully hermetic High Temperature Solder Sealed package.</p>	<p><b>CASE OUTLINE</b> <b>55 BT- Style 1</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">7.0 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <p>BVces Collector to Emitter Voltage <span style="float: right;">45 Volts</span>          BVebo Emitter to Base Voltage <span style="float: right;">3.5 Volts</span>          Ic Collector Current <span style="float: right;">0.5 Amps</span></p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature <span style="float: right;">- 65 to + 200°C</span>          Operating Junction Temperature <span style="float: right;">+ 200°C</span></p>	

### ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Out	F = 2.3 GHz	2.0			Watt
<b>Pin</b>	Power Input	Vcb = 20 Volts			0.3	Watt
<b>Pg</b>	Power Gain	Po = 2.0Watts	8.0			dB
$\eta_c$	Collector Efficiency	As Above		40		%
<b>VSWR<sub>1</sub></b>	Load Mismatch Tolerance	F = 2.3 GHz, Po = 2.0W			20:1	

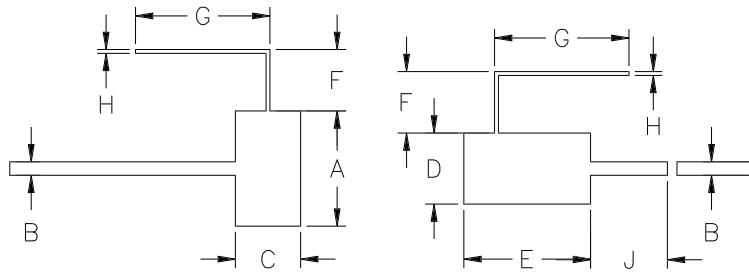
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 10 mA	45			Volts
<b>BVebo</b>	Emitter to Base Breakdown	Ie = 1.0 mA	3.5			Volts
<b>h<sub>FE</sub></b>	Current Gain	Vce = 5 V, Ic = 100 mA	10			
<b>Cob</b>	Output Capacitance	F = 1.0 MHz, Vcb = 22 V		4.0		pF
$\theta_{jc}$	Thermal Resistance				25	°C/W

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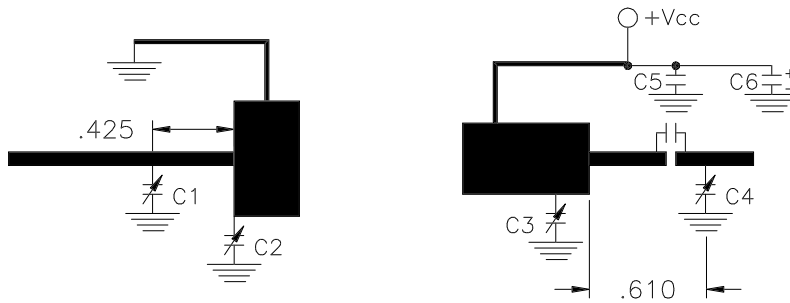
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.600
B	.070
C	.340
D	.370
E	.650
F	.320
G	.700
H	.020
J	.400

2302 TEST CIRCUIT



MICROSTRIP  $t = 0.020''$   
 $C1, C2, C3, C4 = 0.3-3.5Pf$   
 $C5 = 0.1\mu fd$   
 $C6 = 4.7\mu fd 50V$