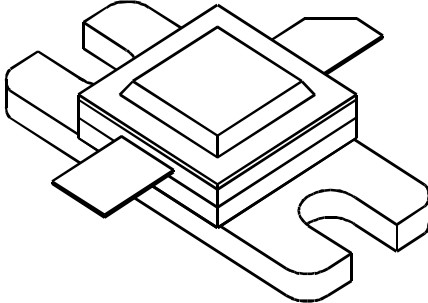


# 1618-35

35 Watt - 28 Volts, Class C  
Microwave 1600 - 1800 MHz

<p><b>GENERAL DESCRIPTION</b></p> <p>The 1618-35 is a COMMON BASE transistor capable of providing 35 Watts of Class C, RF output power over the band 1600-1800 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes Input and Output prematching and utilizes Gold metalization and diffused ballasting 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>55AW, STYLE 1</b></p> 													
<p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C <span style="float: right;">135 Watts</span></p> <p><b>Maximum Voltage and Current</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 45%;">Collector to Emitter Voltage</td> <td style="width: 40%; text-align: right;">45 Volts</td> </tr> <tr> <td>BVebo</td> <td>Emitter to Base Voltage</td> <td style="text-align: right;">3.5 Volts</td> </tr> <tr> <td>Ic</td> <td>Collector Current</td> <td style="text-align: right;">12 A</td> </tr> </table> <p><b>Maximum Temperatures</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 45%;">Storage Temperature</td> <td style="text-align: right;">- 65 to + 200°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+ 200°C</td> </tr> </table>	BVces	Collector to Emitter Voltage	45 Volts	BVebo	Emitter to Base Voltage	3.5 Volts	Ic	Collector Current	12 A	Storage Temperature	- 65 to + 200°C	Operating Junction Temperature	+ 200°C	
BVces	Collector to Emitter Voltage	45 Volts												
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Ic	Collector Current	12 A												
Storage Temperature	- 65 to + 200°C													
Operating Junction Temperature	+ 200°C													

## ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>P<sub>out</sub></b>	Power Out	F = 1600-1800 MHz	35			Watt
<b>P<sub>in</sub></b>	Power Input	V <sub>cb</sub> = 28 Volts			7	Watt
<b>P<sub>g</sub></b>	Power Gain	P <sub>in</sub> = 7 Watts		7.0		dB
<b>η<sub>c</sub></b>	Collector Efficiency	As Above		40		%
<b>VSWR<sub>1</sub></b>	Load Mismatch Tolerance	F = 1.1 GHz, P <sub>in</sub> = 7 W			10:1	

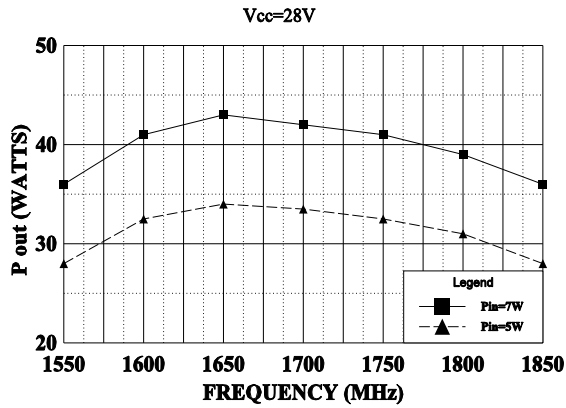
<b>BVces</b>	Collector to Emitter Breakdown	I <sub>c</sub> = 20 mA	45			Volts
<b>BVebo</b>	Emitter to Base Breakdown	I <sub>e</sub> = 15 mA	3.5			Volts
<b>H<sub>FE</sub></b>	Current Gain	V <sub>ce</sub> = 5 V, I <sub>c</sub> = 1 A	10		100	
<b>Cob</b>	Output Capacitance	F = 1 MHz, V <sub>cb</sub> = 28V				pF
<b>θ<sub>jc</sub></b>	Thermal Resistance				1.3	°C/W

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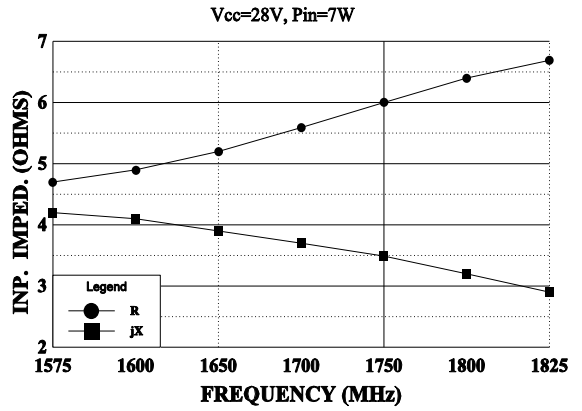
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GHZ Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

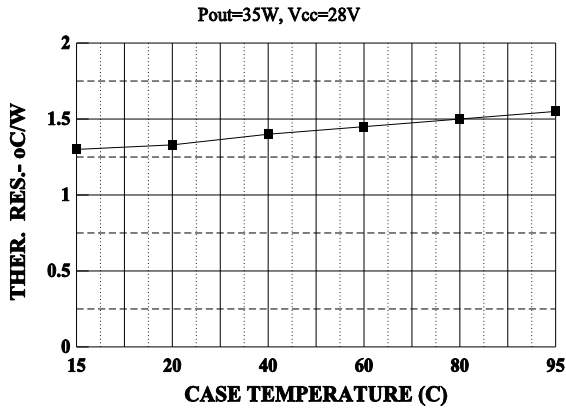
**POWER OUTPUT vs FREQUENCY**



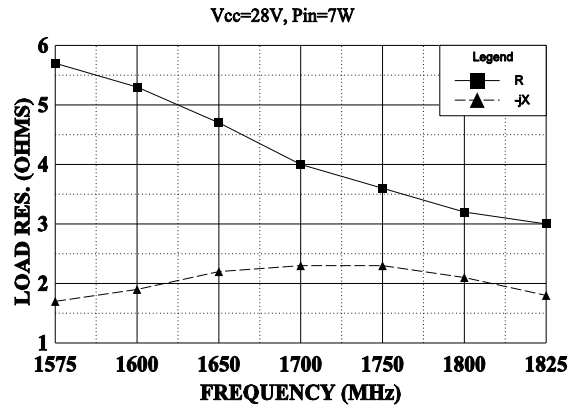
**SERIES INPUT IMPEDANCE vs FREQUENCY**



**THERMAL RESISTANCE vs CASE TEMPERATURE**



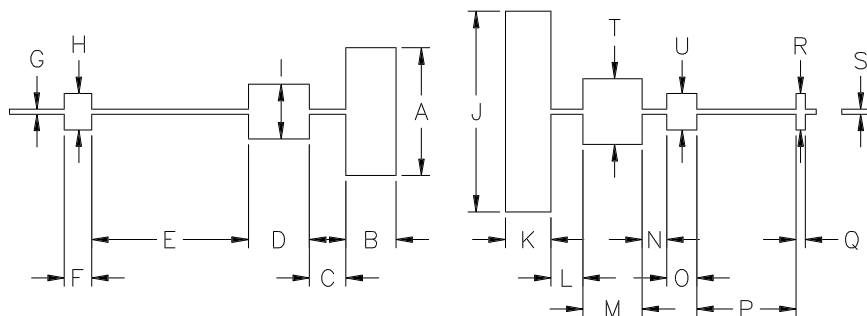
**SERIES LOAD IMPEDANCE vs FREQUENCY**



REVISIONS

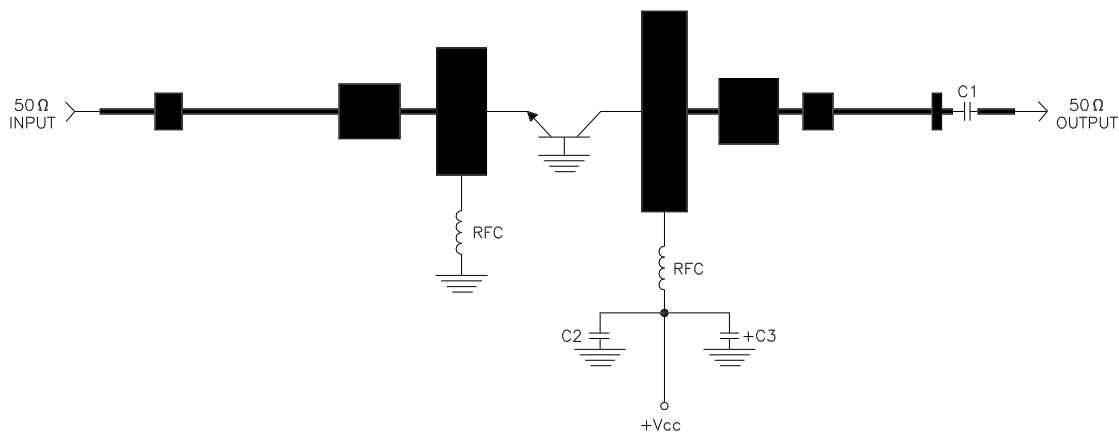
ZONE	REV	DESCRIPTION	DATE	APPROVED
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DIM	INCHES
A	.700
B	.275
C	.200
D	.335
E	.860
F	.150
G	.028
H	.200
I	.300
J	1.100
K	.250
L	.175
M	.325
N	.135
O	.165
P	.545
Q	.050
R	.200
S	.028
T	.360
U	.200



1618-35 TEST AMPLIFIER

f = 1.6-1.8 GHz



— = Microstrip on 0.010" Duroid, Er=2.3  
 C1,C2 = 82 pf CHIP CAP  
 C3 = 1μfd @ 35 Volts



CAGE OPJR2	DWG NO. 1618-35	REV A
	SCALE 1/1	SHEET