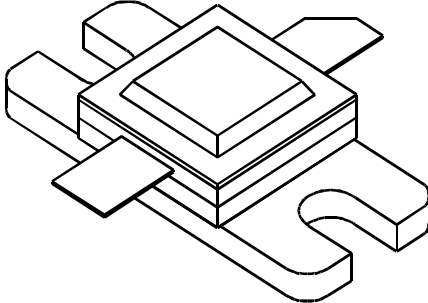


| | |
|--|---|
| <p>GENERAL DESCRIPTION</p> <p>The 1618-35 is a COMMON BASE transistor capable of providing 35 Watts of Class C, RF output power over the band 1600-1800 MHz. This transistor is designed for Microwave Broadband Class C amplifier applications. It includes Input and Output prematching and 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>CASE OUTLINE 55AW, STYLE 1</p>  |
| <p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 135 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 45 Volts BVebo Emitter to Base Voltage 3.5 Volts Ic Collector Current 12 A</p> <p>Maximum Temperatures</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 |
|-------------------|-------------------------|------------------------------------|-----|-----|------|-------|
| P _{out} | Power Out | F = 1600-1800 MHz | 35 | | | Watt |
| P _{in} | Power Input | V _{cb} = 28 Volts | | | 7 | Watt |
| P _g | Power Gain | P _{in} = 7 Watts | | 7.0 | | dB |
| η _c | Collector Efficiency | As Above | | 40 | | % |
| VSWR ₁ | Load Mismatch Tolerance | F = 1.1 GHz, P _{in} = 7 W | | | 10:1 | |

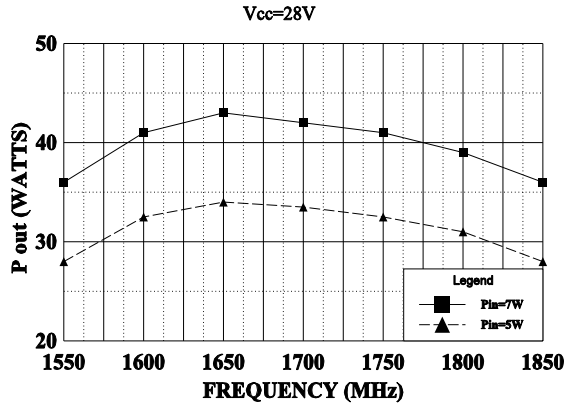
| | | | | | | |
|-----------------|--------------------------------|---|-----|--|-----|-------|
| BVces | Collector to Emitter Breakdown | I _c = 20 mA | 45 | | | Volts |
| BVebo | Emitter to Base Breakdown | I _e = 15 mA | 3.5 | | | Volts |
| H _{FE} | Current Gain | V _{ce} = 5 V, I _c = 1 A | 10 | | 100 | |
| Cob | Output Capacitance | F = 1 MHz, V _{cb} = 28V | | | | pF |
| θ _{jc} | Thermal Resistance | | | | 1.3 | °C/W |

Issue A, July 1997

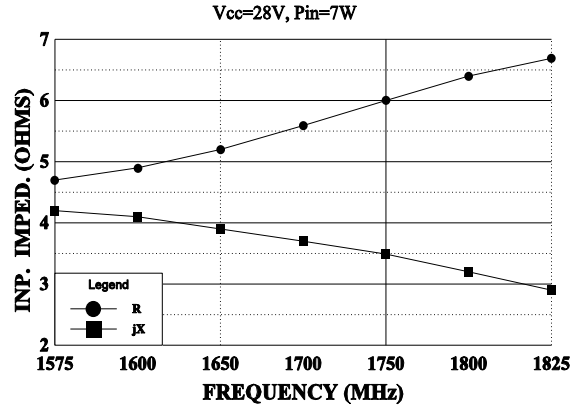
GHZ TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHZ RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

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

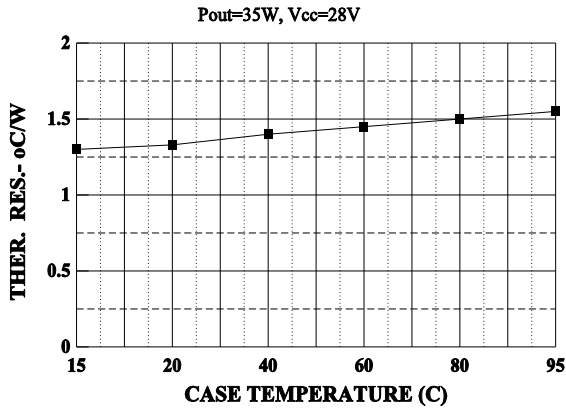
POWER OUTPUT vs FREQUENCY



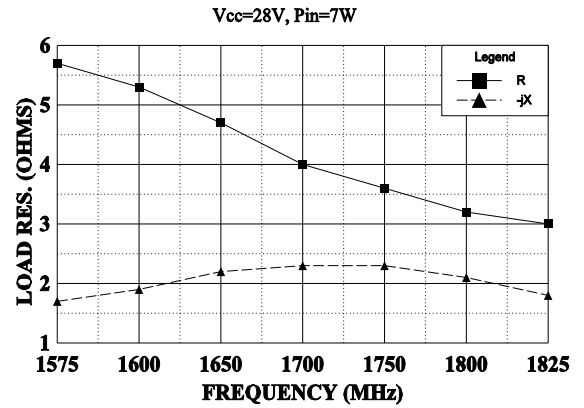
SERIES INPUT IMPEDANCE vs FREQUENCY



THERMAL RESISTANCE vs CASE TEMPERATURE



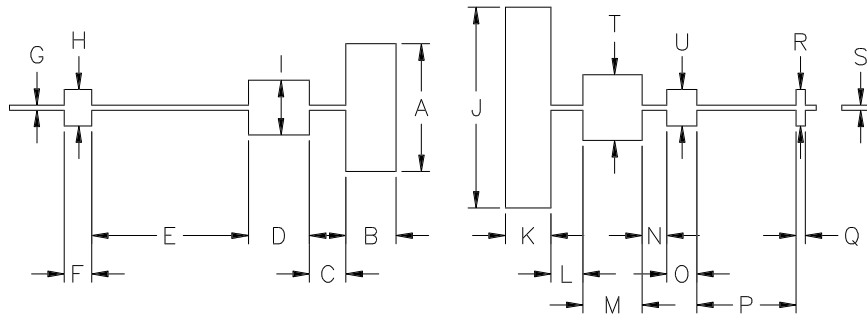
SERIES LOAD IMPEDANCE vs FREQUENCY



REVISIONS

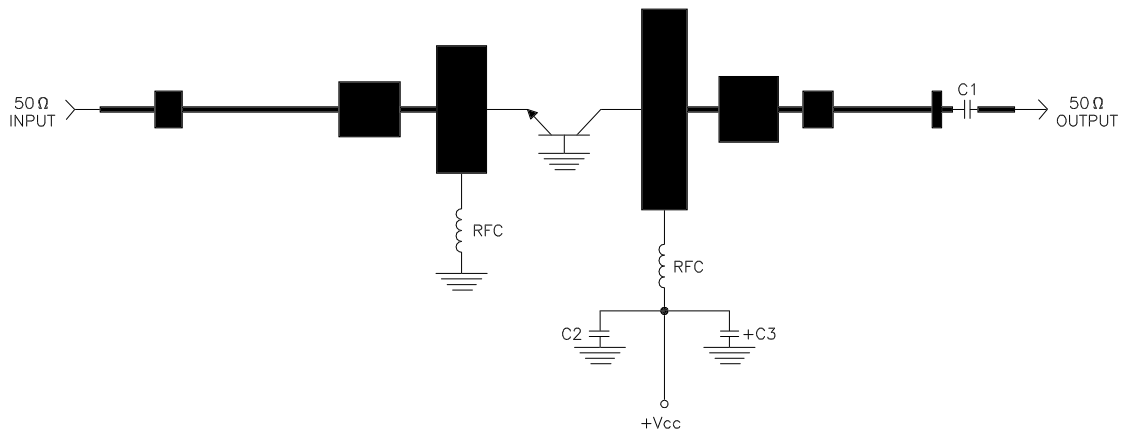
| ZONE | REV | DESCRIPTION | DATE | APPROVED |
|------|-----|-------------|------|----------|
|------|-----|-------------|------|----------|

| 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 |