GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

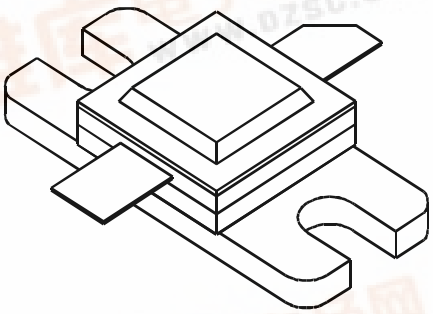
1618-35

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

GENERAL DESCRIPTION

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.

CASE OUTLINE
55AW, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 135 Watts

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	45 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	12 A

Maximum Temperatures

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

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1600-1800 MHz	35			Watt
Pin	Power Input	Vcb = 28 Volts			7	Watt
Pg	Power Gain	Pin = 7 Watts		7.0		dB
η_c	Collector Efficiency	As Above		40		%
VSWR$_1$	Load Mismatch Tolerance	F = 1.1 GHz, Pin = 7 W			10:1	

BVces	Collector to Emitter Breakdown	Ic = 20 mA	45			Volts
BVebo	Emitter to Base Breakdown	Ie = 15 mA	3.5			Volts
H_{FE}	Current Gain	Vce = 5 V, Ic = 1 A	10		100	
Cob	Output Capacitance	F = 1 MHz, Vcb = 28V				pF
θ**jc**	Thermal Resistance				1.3	°C/W

Issue A, July 1997

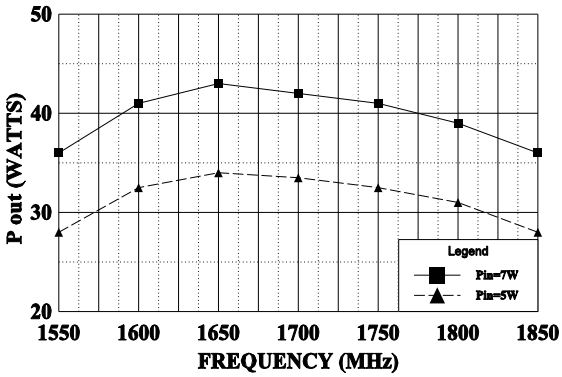
GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

CHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

1618-35

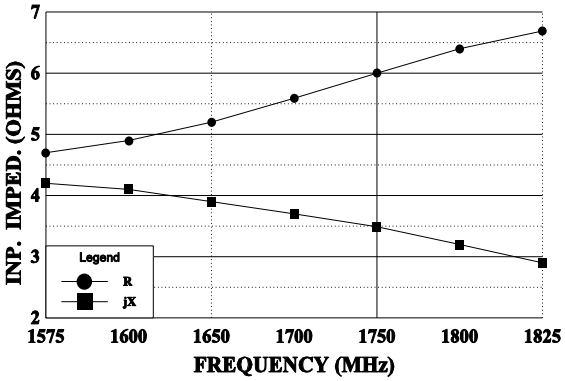
POWER OUTPUT vs FREQUENCY

Vcc=28V



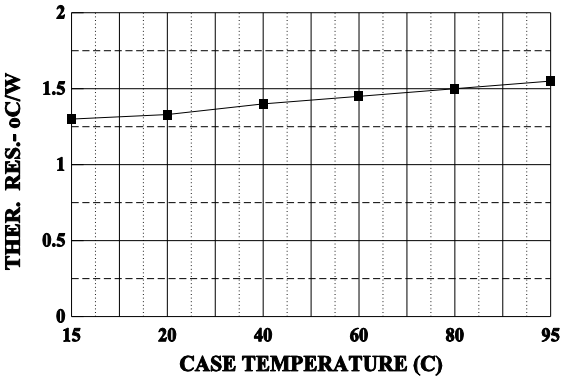
SERIES INPUT IMPEDANCE VS FREQUENCY

Vcc=28V, Pin=7W



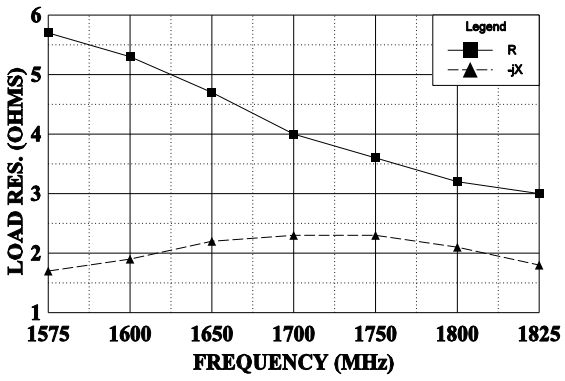
THERMAL RESISTANCE vs CASE TEMPERATURE

Pout=35W, Vcc=28V

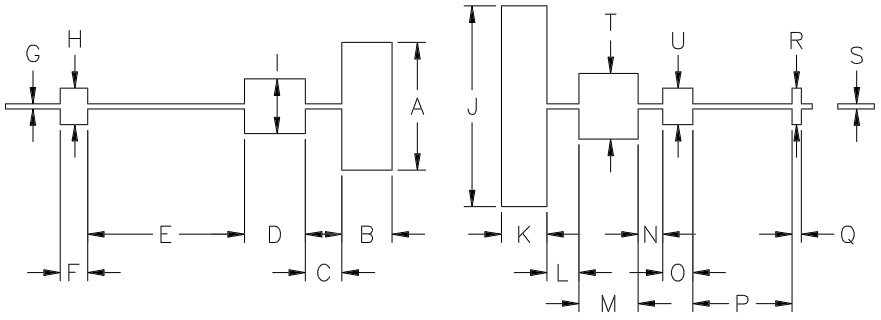


SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc=28V, Pin=7W



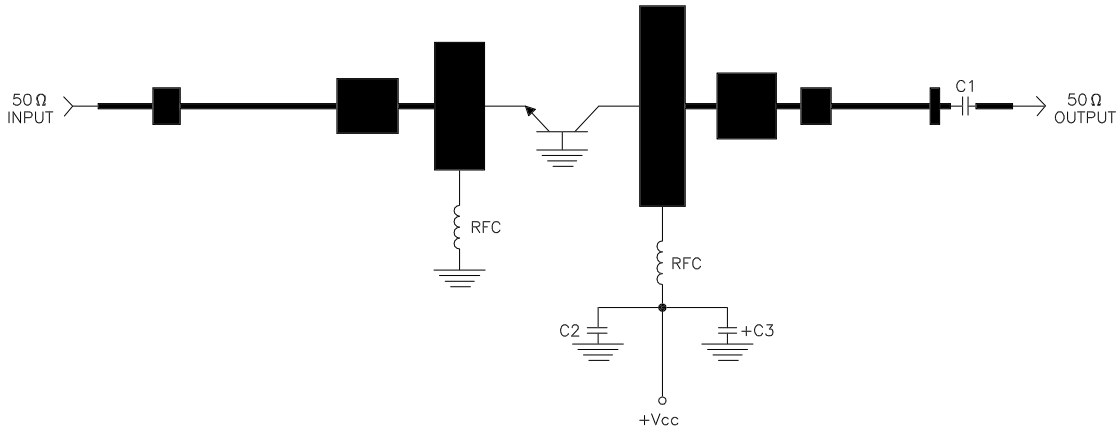
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



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	DWG NO.	REV
GHz TECHNOLOGY	0PJR2	1618-35	A