GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

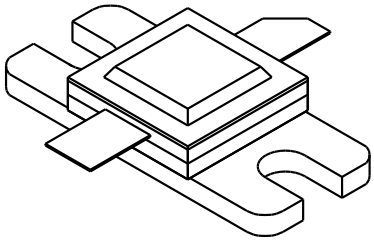
1719 - 20

20 Watt - 28 Volts, Class C
Microwave 1700 - 1900 MHz

GENERAL DESCRIPTION

The 1719-20 is a COMMON BASE transistor capable of providing 20 Watts of Class C, RF output power over the band 1700-1900 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 67 Watts

Maximum Voltage and Current

BVces	Collector to Emitter Voltage	50 Volts
BVebo	Emitter to Base Voltage	3.5 Volts
Ic	Collector Current	6.0 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 = 1900 MHz	20			Watt
Pin	Power Input	Vcb = 28 Volts			5.0	Watt
Pg	Power Gain	Pin = 5.0 Watts	6.0	6.5		dB
η_c	Collector Efficiency	As Above		38		%
$VSWR_1$	Load Mismatch Tolerance	F = 1.7 GHz, Pin = 5.0			4:1	

BVces	Collector to Emitter Breakdown	Ic = 10 mA	50			Volts
BVebo	Emitter to Base Breakdown	Ie = 10 mA	3.5			Volts
Icbo	Collector to Base Current	Vcb = 28 Volts			4.0	mA
h_{FE}	Current Gain	Vce = 5 V, Ic = 1.2 A	20			
Cob	Output Capacitance *	F =1 MHz, Vcb = 28 V				pF
θ_{jc}	Thermal Resistance				2.6	°C/W

* Not measureable due to Output Match

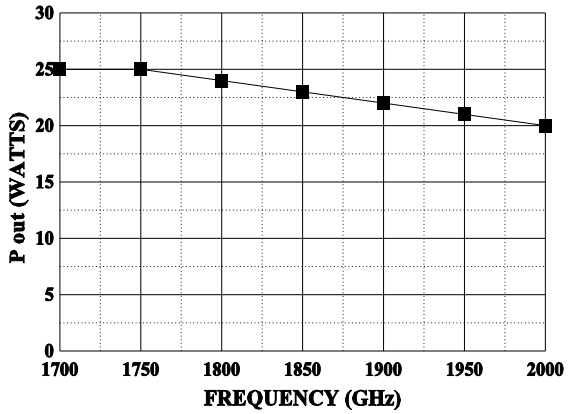
Issue August 1996

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

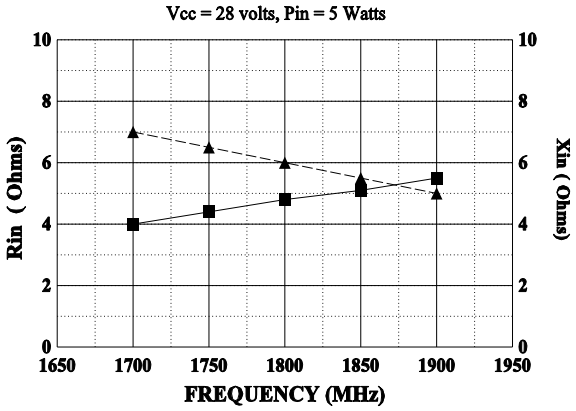
CHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

1719-20

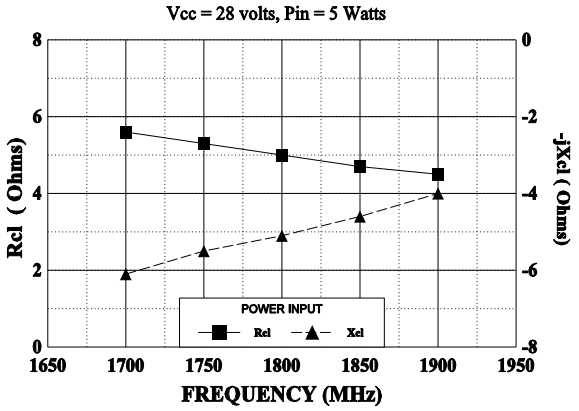
POWER OUTPUT vs FREQUENCY



SERIES INPUT IMPEDANCE VS FREQUENCY



SERIES LOAD IMPEDANCE VS FREQUENCY



August 1996