GHz TECHNOLOGY
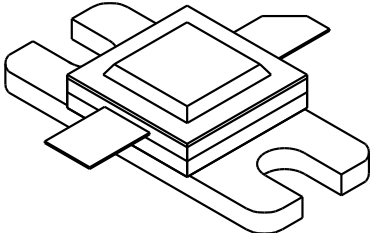RF·MICROWAVE SILICON POWER TRANSISTORS

1819-35
35 Watt - 28 Volts, Class C
Microwave 1750 - 1850 MHz

GENERAL DESCRIPTION
The 1819-35 is a COMMON BASE transistor capable of providing 35 Watts of Class C, RF output power over the band 1750-1850 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.

ABSOLUTE MAXIMUM RATINGS
Maximum Power Dissipation @ 25ºC   135 Watts

Maximum Voltage and Current
BVces   Collector to Emitter Voltage   50 Volts
BVebo   Emitter to Base Voltage   3.5 Volts
Ic   Collector Current   12 A

Maximum Temperatures
Storage Temperature   - 65 to + 200ºC
Operating Junction Temperature   + 200ºC

CASE OUTLINE
55AW, STYLE 1

ELECTRICAL CHARACTERISTICS @ 25 ºC

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1750-1850 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 = 1850MHz, Pin = 7 W			10:1	

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
BVces	Collector to Emitter Breakdown	Ic = 20 mA	50			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
θjc	Thermal Resistance				1.3	ºC/W

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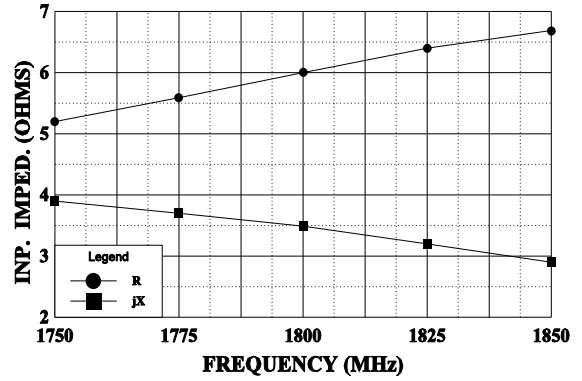RF·MICROWAVE SILICON POWER TRANSISTORS

POWER OUTPUT vs FREQUENCY
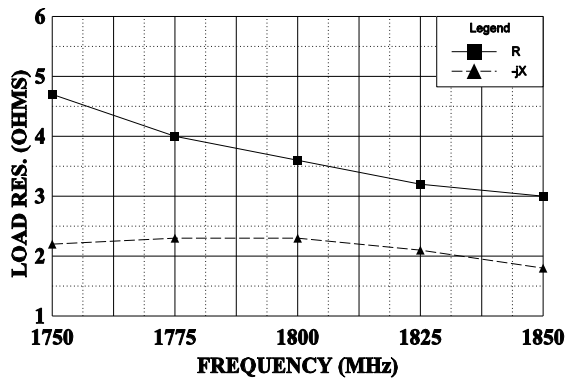
Vcc=28V
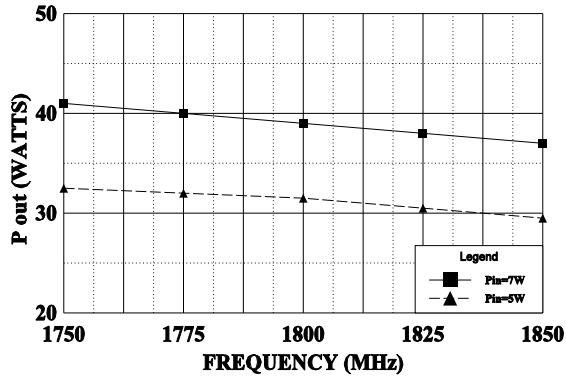
SERIES INPUT IMPEDANCE VS FREQUENCY

Vcc=28V, Pin=7W

SERIES LOAD IMPEDANCE vs FREQUENCY

Vcc=28V, Pin=7W

THERMAL RESISTANCE vs CASE TEMPERATURE

Pout=35W, Vcc=28V

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