

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 @ 25°C 135 Watts

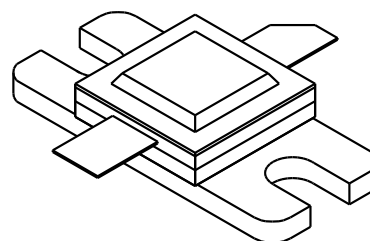
Maximum Voltage and Current

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 + 200°C
Operating Junction Temperature	+ 200°C

CASE OUTLINE 55AW, STYLE 1



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{out}	Power Out	F = 1750-1850 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 = 1850MHz, P _{in} = 7 W			10:1	

BVces	Collector to Emitter Breakdown	I _c = 20 mA	50			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	
C _{ob}	Output Capacitance	F = 1 MHz, V _{cb} = 28V				pF
θ _{jc}	Thermal Resistance				1.3	°C/W

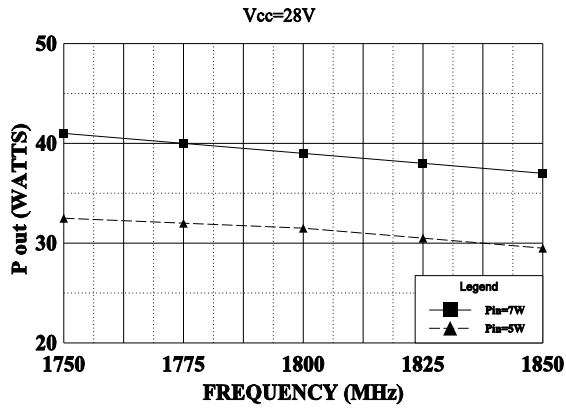
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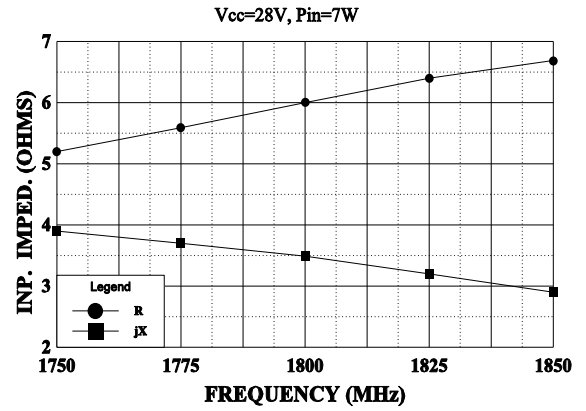
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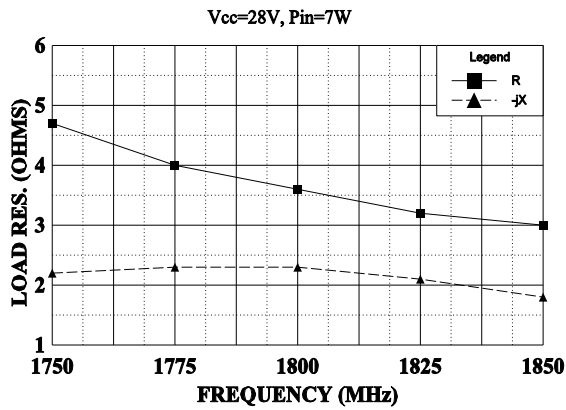
POWER OUTPUT vs FREQUENCY



SERIES INPUT IMPEDANCE vs FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY



THERMAL RESISTANCE vs CASE TEMPERATURE

