

# 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

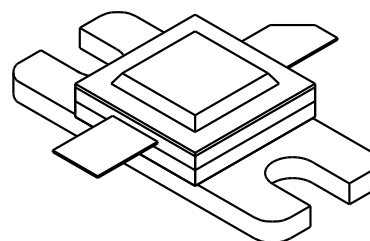
### Maximum Voltage and Current

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
<b>Pout</b>	Power Out	F = 1750-1850 MHz	35			Watt
<b>Pin</b>	Power Input	Vcb = 28 Volts			7	Watt
<b>Pg</b>	Power Gain	Pin = 7 Watts		7.0		dB
$\eta_c$	Collector Efficiency	As Above		40		%
<b>VSWR<sub>1</sub></b>	Load Mismatch Tolerance	F = 1850MHz, Pin = 7 W			10:1	

<b>BVces</b>	Collector to Emitter Breakdown	Ic = 20 mA	50			Volts
<b>BVebo</b>	Emitter to Base Breakdown	Ie = 15 mA	3.5			Volts
<b>H<sub>FE</sub></b>	Current Gain	Vce = 5 V, Ic = 1 A	10		100	
<b>Cob</b>	Output Capacitance	F = 1 MHz, Vcb = 28V			1.3	pF
$\theta_{jc}$	Thermal Resistance					°C/W

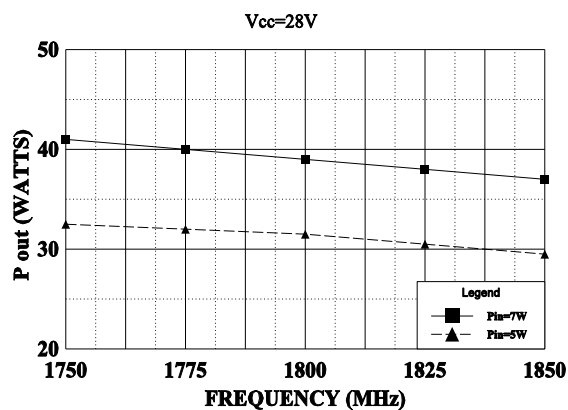
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Issue August 1996

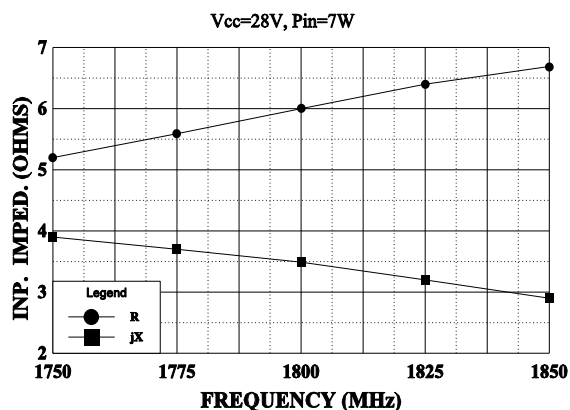
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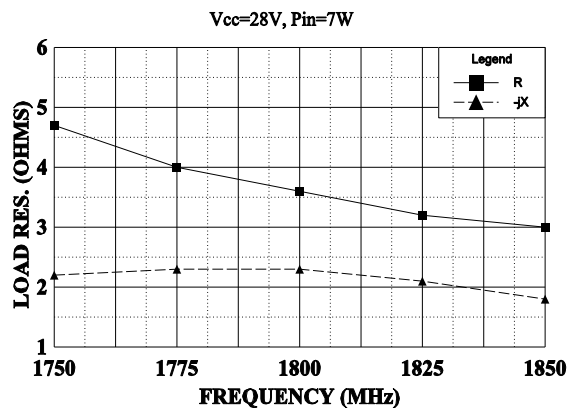
**POWER OUTPUT vs FREQUENCY**



**SERIES INPUT IMPEDANCE vs FREQUENCY**



**SERIES LOAD IMPEDANCE vs FREQUENCY**



**THERMAL RESISTANCE vs CASE TEMPERATURE**

