GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

1719-35

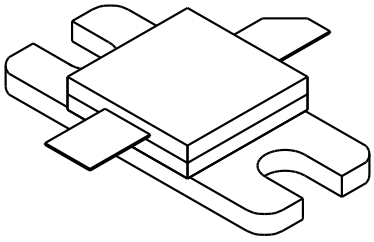
35 Watt - 28 Volts, Class C
Microwave 1725 - 1850 MHz

Preliminary Issue

GENERAL DESCRIPTION

The 1719-35 is a COMMON BASE transistor capable of providing 35 Watts of Class C, RF output power over the band 1725 -1850 MHz. This transistor is designed for Microwave Broadband Class C, HIGH EFFICIENCY 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 Low Inductance Flange Mount, Ceramic sealed package.

CASE OUTLINE
55AR, STYLE 1



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C		97 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 + 150°C
Operating Junction Temperature		+ 200°C

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Out	F = 1725 -1850 MHz	35			Watt
Pin	Power Input	Vcb = 28 Volts			6.23	Watt
Pg	Power Gain	Pin = 6.23 Watts	7.5	8.0		dB
η_c	Collector Efficiency	As Above	45	50		%
$VSWR_1$	Load Mismatch Tolerance	F = 1850MHz, Pin = 6.23W			4.5:1	

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
θ_{jc}	Thermal Resistance				1.8	°C/W

72045

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CHz TECHNOLOGY
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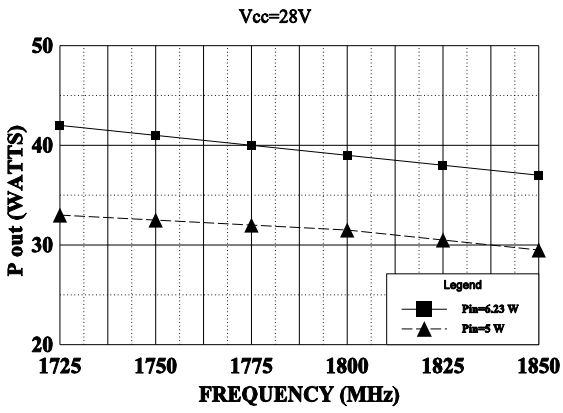
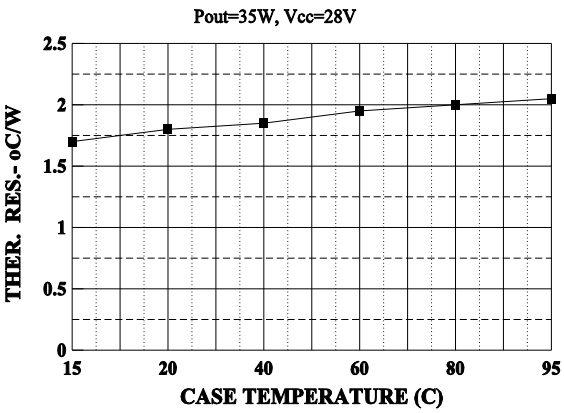
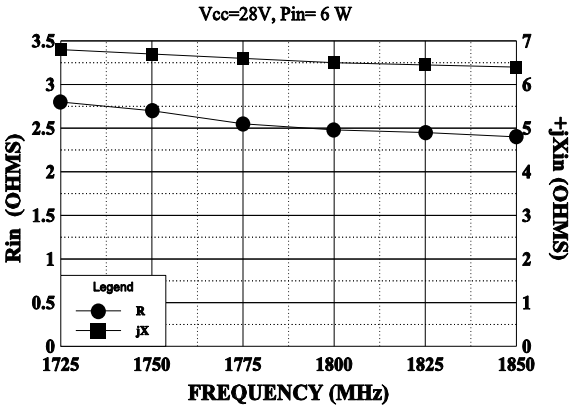
POWER OUTPUT vs FREQUENCY



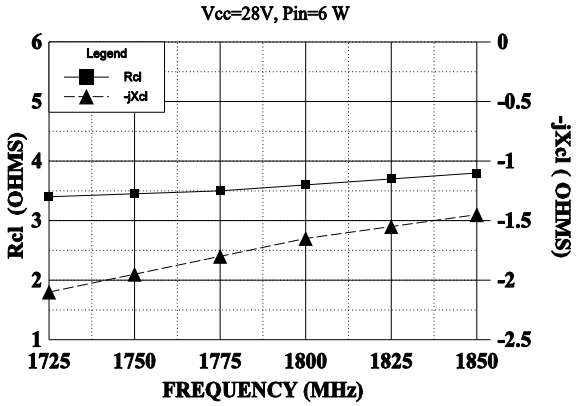
THERMAL RESISTANCE vs CASE TEMPERATURE



SERIES INPUT IMPEDANCE VS FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY



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