

0105-100

100 Watts, 28 Volts, Class AB

Defcom 100 - 500 MHz

GENERAL DESCRIPTION

The 0105-100 is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 100-500 MHz frequency band. It may be operated in Class AB or C. Gold metallization and silicon diffused resistors ensure ruggedness and high reliability.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 270 Watts

Maximum Voltage and Current

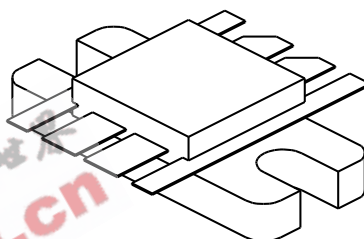
BVces Collector to Emitter Voltage 65 Volts
BVebo Emitter to Base Voltage 4.0 Volts
Ic Collector Current 16 A

Maximum Temperatures

Storage Temperature - 40 to +150°C
Operating Junction Temperature +200°C

CASE OUTLINE

55JT, Style 2



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 500 MHz	100			Watts
Pin	Power Input	Vcc = 28 Volts		18	24	Watts
Pg	Power Gain		6.2	7.5		dB
η_c	Efficiency			50		%
VSWR	Load Mismatch Tolerance				5:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 100 mA	60			Volts
BVceo	Collector to Emitter Breakdown	Ie = 50 mA	31			Volts
Cob ²	Output Capacitance	Vcb = 28 V, F = 1 MHz		140		pF
h _{FE}	DC - Current Gain	Vce = 5 V, Ic = 500 mA	10			
θ_{jc}	Thermal Resistance				0.65	°C/W

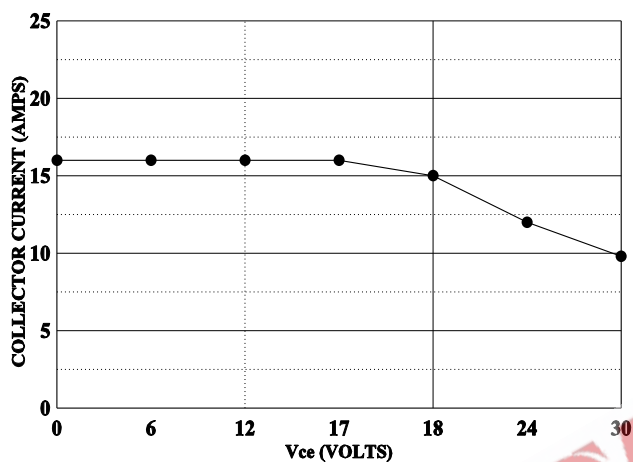
Note 2: Both sides together, all other specifications each side tested separately

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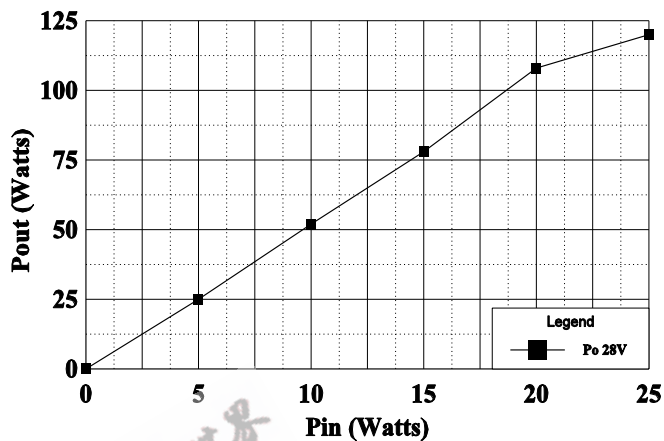
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DC SAFE OPERATING AREA



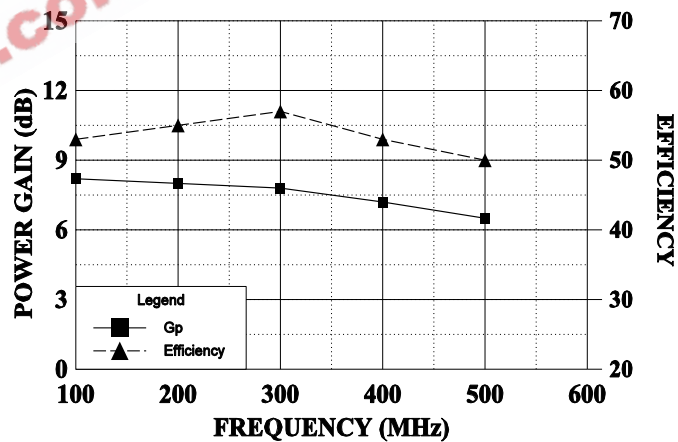
POWER OUTPUT vs POWER INPUT

Vcc=28V, f=500MHz

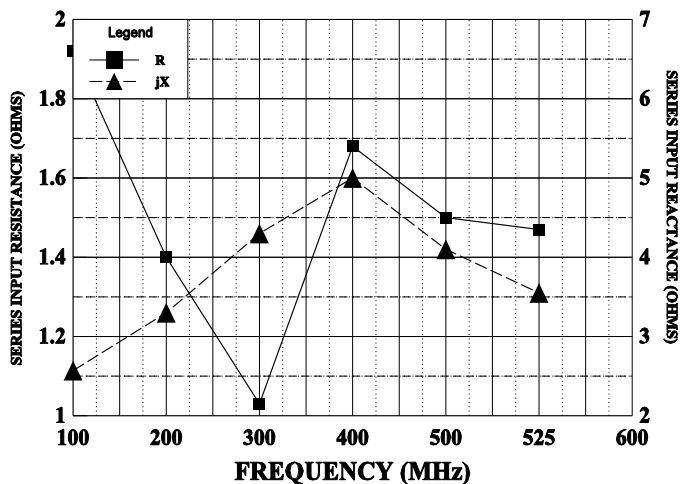


PERFORMANCE VS FREQUENCY

Vcc=28V, Pout=100W, Class AB



SERIES INPUT IMPEDANCE vs FREQUENCY



SERIES LOAD IMPEDANCE vs FREQUENCY

