GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

0510-50A

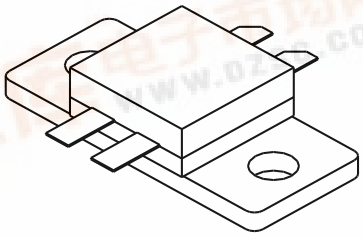
50 Watts, 28 Volts, Class AB
Defcom 500 - 1000 MHz

GENERAL DESCRIPTION

The 0510-50A is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 500-1000 MHz frequency band. It may be operated in Class AB or C. Gold metallization and silicon diffused resistors ensure improved ruggedness and high reliability.

CASE OUTLINE

55AV - Style 2



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC 125 Watts

Maximum Voltage and Current

BVces	Collector to Emiter Voltage	60 Volts
BVebo	Emitter to Base Voltage	4.0 Volts
Ic	Collector Current	3.7 A

Maximum Temperatures

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

ELECTRICAL CHARACTERISTICS @ 25 ^{O}C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 1000 MHz	50			Watts
Pin	Power Input	Vcc = 28 Volts			12.5	Watts
Pg	Power Gain			7.0		dB
ηc	Efficiency			50		%
VSWR	Load Mismatch Tolerance	Vcb = 28V, Po = 50W			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	27			Volts
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz		27		pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 500 mA	10			
θjc	Thermal Resistance				1.4	ºC/W

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CHz TECHNOLOGY
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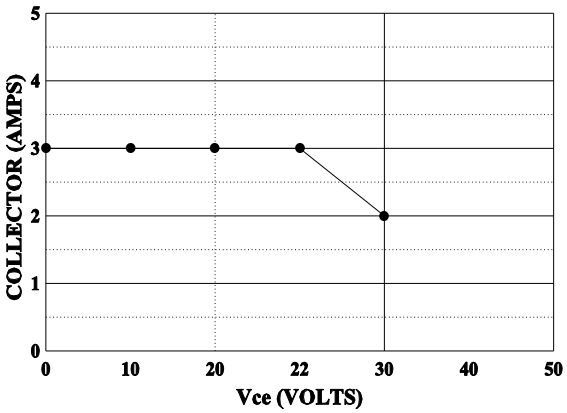
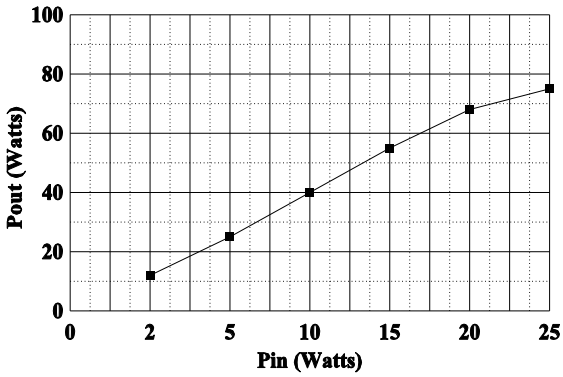
DC SAFE OPERATING AREA



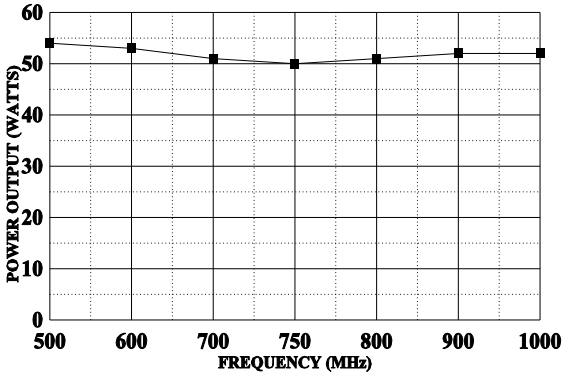
POWER OUTPUT vs POWER INPUT

f=1000MHz, Class C, Vcc=28V



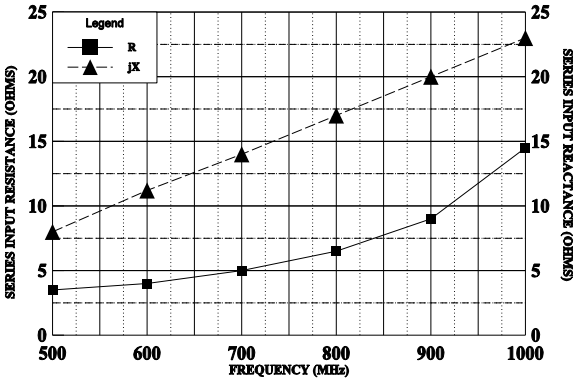
POWER OUTPUT VS FREQUENCY

Pin=12.5W, Vcc=28V, Icq=100mA



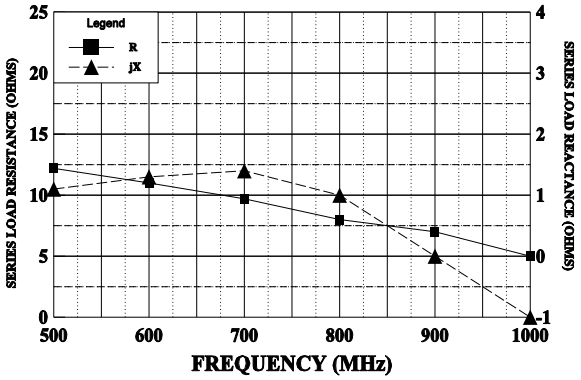
SERIES INPUT IMPEDANCE vs FREQUENCY

Pout = 50 Watts, Vcc = 28 V



SERIES LOAD IMPENDANCE vs FREQUENCY

Pout = 50 Watts, Vcc = 28 Volts



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