GHz TECHNOLOGY
RF·MICROWAVE SILICON POWER TRANSISTORS

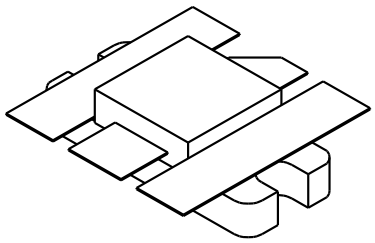
UMIL 100A

100 Watts, 28 Volts, Class AB
Defcom 225 - 400 MHz

GENERAL DESCRIPTION

The UMIL100A is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 225-400 MHz frequency band. It may be operated in Class AB or C. Gold metallization and silicon diffused resistors ensure ruggedness and high reliability.

CASE OUTLINE
55JU, Style 2



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25ºC 270 Watts

Maximum Voltage and Current

BVces	Collector to Emiter Voltage	65 Volts
BVebo	Emitter to Base Voltage	4.0 Volts
Ic	Collector Current	20 A

Maximum Temperatures

Storage Temperature	- 65 to +150ºC
Operating Junction Temperature	+150ºC

ELECTRICAL CHARACTERISTICS @ 25 ºC

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	100			Watts
Pin	Power Input	Vcc = 28 Volts			19	Watts
Pg	Power Gain		7.2	8.5		dB
ηc	Efficiency			55		%
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
BVcbo	Collector to Base Breakdown	Ic =100 mA	60			Volts
Icbo	Collector to Base Current	Vc = 30 Volts			50	mA
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz		120		pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 1 A	10			
θjc	Thermal Resistance				0.7	ºC/W

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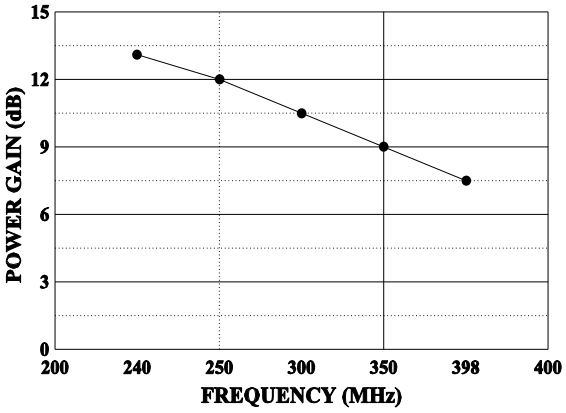
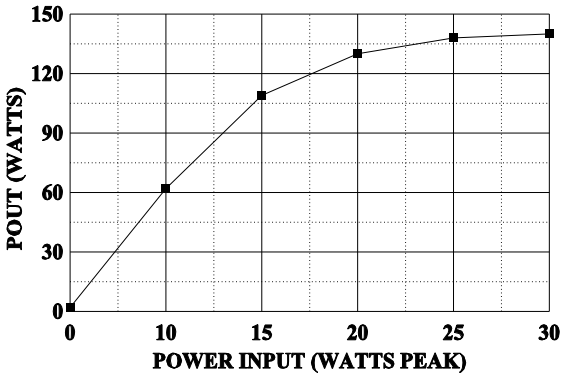
POWER GAIN VS FREQUENCY

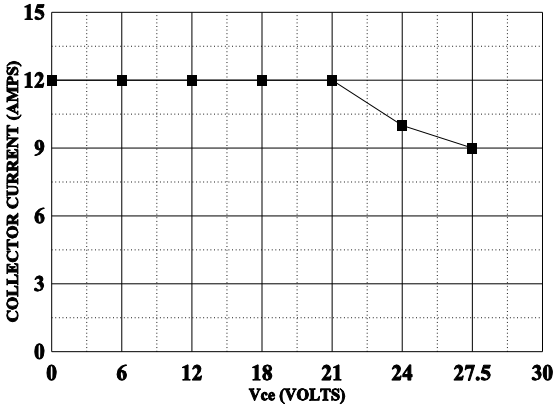


POWER OUTPUT vs POWER INPUT

Vcc= 28V f=400MHz



DC SAFE OPERATING AREA



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