

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.

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 270 Watts

Maximum Voltage and Current

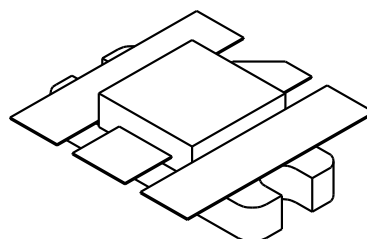
BVces	Collector to Emitter Voltage	65 Volts
BVebo	Emitter to Base Voltage	4.0 Volts
Ic	Collector Current	20 A

Maximum Temperatures

Storage Temperature	- 65 to +150°C
Operating Junction Temperature	+150°C

CASE OUTLINE

55JU, Style 2



ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F = 400 MHz	100			Watts
P_{in}	Power Input	V _{cc} = 28 Volts			19	Watts
P_g	Power Gain		7.2	8.5		dB
η_c	Efficiency			55		%
VSWR	Load Mismatch Tolerance				5:1	

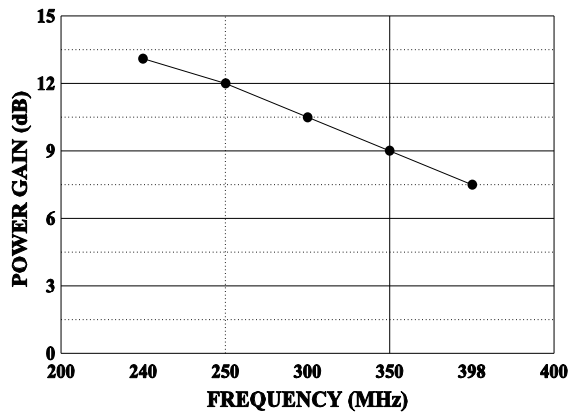
BVebo	Emitter to Base Breakdown	I _e = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	I _c = 100 mA	60			Volts
BVceo	Collector to Emitter Breakdown	I _e = 50 mA	31			Volts
BVcbo	Collector to Base Breakdown	I _c = 100 mA	60			Volts
Icbo	Collector to Base Current	V _c = 30 Volts			50	mA
Cob	Output Capacitance	V _{cb} = 28 V, F = 1 MHz		120		pF
h_{FE}	DC - Current Gain	V _{ce} = 5 V, I _c = 1 A	10			
θ_{jc}	Thermal Resistance				0.7	°C/W

Issue August 1996

GHz TECHNOLOGY INC. RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE. GHz RECOMMENDS THAT BEFORE THE PRODUCT(S) DESCRIBED HEREIN ARE WRITTEN INTO SPECIFICATIONS, OR USED IN CRITICAL APPLICATIONS, THAT THE PERFORMANCE CHARACTERISTICS BE VERIFIED BY CONTACTING THE FACTORY.

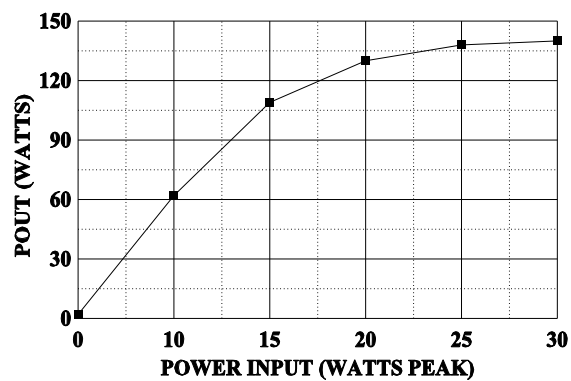
GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

POWER GAIN VS FREQUENCY



POWER OUTPUT vs POWER INPUT

$V_{cc} = 28V$ $f = 400MHz$



DC SAFE OPERATING AREA

