

UMIL 80

80 Watts, 28 Volts, Class AB
Defcom 200 - 500 MHz

GENERAL DESCRIPTION

The UMIL80 is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 200-500 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 220 Watts

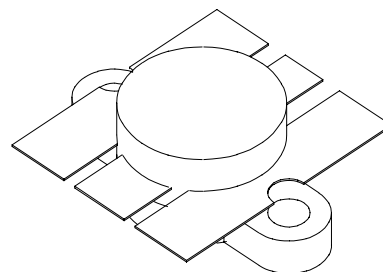
Maximum Voltage and Current

BVces	Collector to Emitter Voltage	65 Volts
BVebo	Emitter to Base Voltage	4.0 Volts
Ic	Collector Current	12 A

Maximum Temperatures

Storage Temperature	- 65 to +150°C
Operating Junction Temperature	+200°C

CASE OUTLINE 55HV, Style 2



ELECTRICAL CHARACTERISTICS @ 25 °C

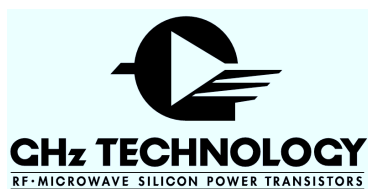
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P_{out}	Power Output	F = 400 MHz	80			Watts
P_{in}	Power Input	V _{cc} = 28 Volts			10	Watts
P_g	Power Gain		9.0	9.5		dB
η_c	Efficiency		55			%
VSWR	Load Mismatch Tolerance				5:1	

BVebo	Emitter to Base Breakdown	I _e = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	I _c = 20 mA	60			Volts
BVceo	Collector to Emitter Breakdown	I _e = 20 mA	31			Volts
BVcbo	Collector to Base Breakdown	I _c = 20 mA	60			Volts
C_{ob}	Output Capacitance	V _{cb} =28 V, F= 1 MHz		80		pF
h_{FE}	DC - Current Gain	V _{ce} = 5 V, I _c = 1 A	10			
θ_{jc}	Thermal Resistance				0.8	°C/W

Issue October 1998 : Correct Case from Hu to HV

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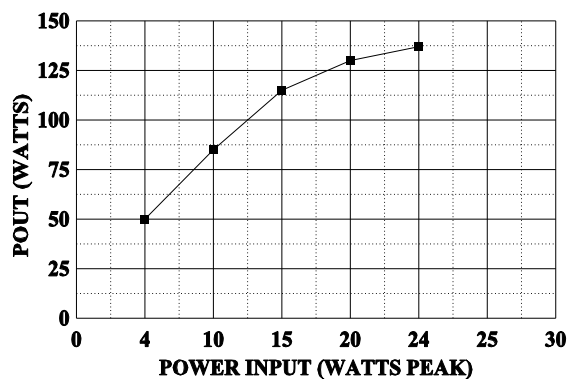
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UMIL80

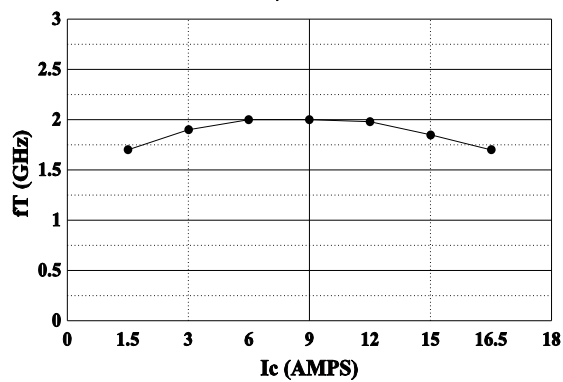
POWER OUTPUT vs POWER INPUT

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

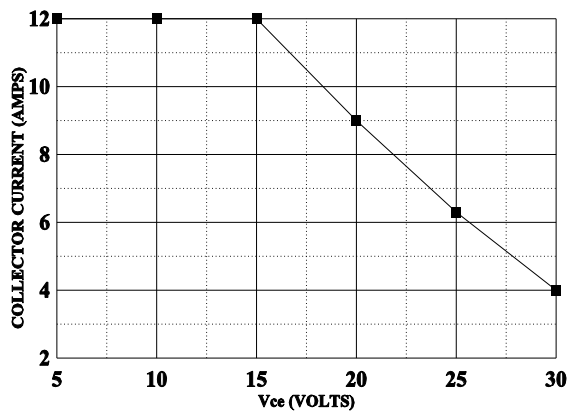


fT vs I_c

$V_{CC}=5V$, $T_c=25^\circ C$



DC SAFE OPERATING AREA



August 1996