

## 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

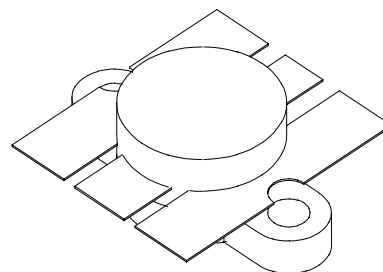
#### Maximum Voltage and Current

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
<b>P<sub>out</sub></b>	Power Output	F = 400 MHz	80			Watts
<b>P<sub>in</sub></b>	Power Input	V <sub>cc</sub> = 28 Volts			10	Watts
<b>P<sub>g</sub></b>	Power Gain		9.0	9.5		dB
<b>η<sub>c</sub></b>	Efficiency		55			%
<b>VSWR</b>	Load Mismatch Tolerance				5:1	

<b>BVebo</b>	Emitter to Base Breakdown	I <sub>e</sub> = 5 mA	4.0			Volts
<b>BVces</b>	Collector to Emitter Breakdown	I <sub>c</sub> = 20 mA	60			Volts
<b>BVceo</b>	Collector to Emitter Breakdown	I <sub>e</sub> = 20 mA	31			Volts
<b>BVcbo</b>	Collector to Base Breakdown	I <sub>c</sub> = 20 mA	60			Volts
<b>Cob</b>	Output Capacitance	V <sub>cb</sub> =28 V, F= 1 MHz		80		pF
<b>h<sub>FE</sub></b>	DC - Current Gain	V <sub>ce</sub> = 5 V, I <sub>c</sub> = 1 A	10			
<b>θ<sub>jc</sub></b>	Thermal Resistance				0.8	°C/W

Issue October 1998 : Correct Case from Hu to HV

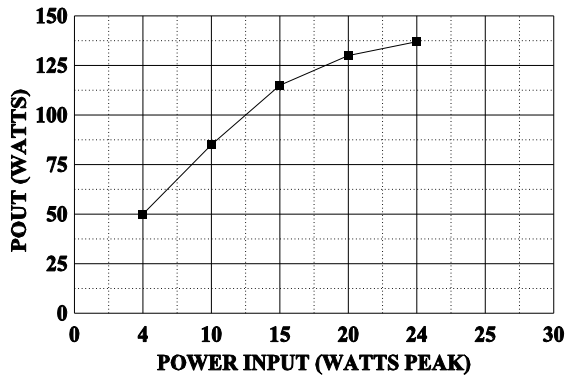
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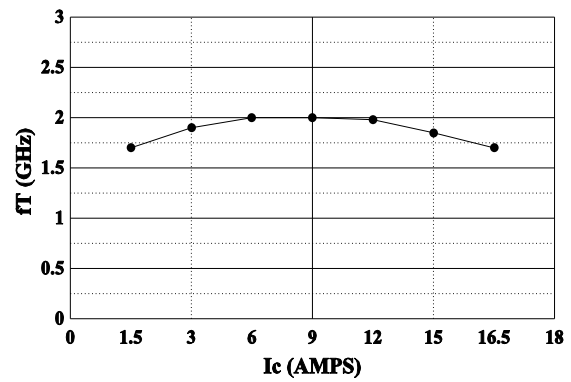
**POWER OUTPUT vs POWER INPUT**

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



***fT vs Ic***

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



**DC SAFE OPERATING AREA**

