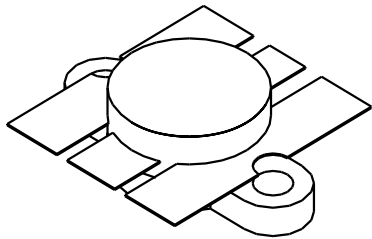

UMIL 25
25 Watts, 28 Volts, Class AB
Defcom 225 - 400 MHz

<p>GENERAL DESCRIPTION The UMIL 25 is an 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.</p>	<p>CASE OUTLINE 55HV, Style 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 70 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 60 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 3 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	25			Watts
Pin	Power Input	Vcc = 28 Volts			3.2	Watts
Pg	Power Gain		8.9	10		dB
η_c	Efficiency			50		%
VSWR	Load Mismatch Tolerance				5:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 50 mA	65			Volts
BVceo	Collector to Emitter Breakdown	Ie = 50 mA	33			Volts
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz		22	27	pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 500 A	10			
θ_{jc}	Thermal Resistance				2.5	°C/W

Issue August 1996

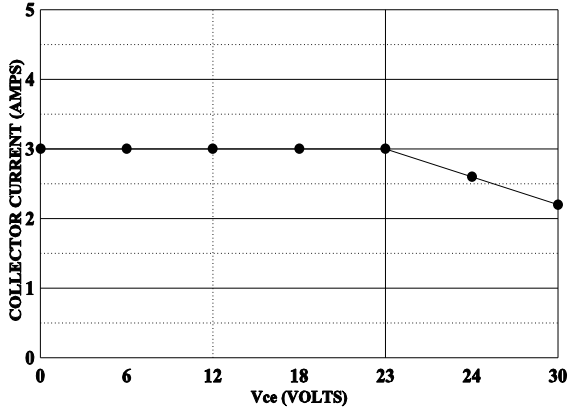
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GHZ TECHNOLOGY
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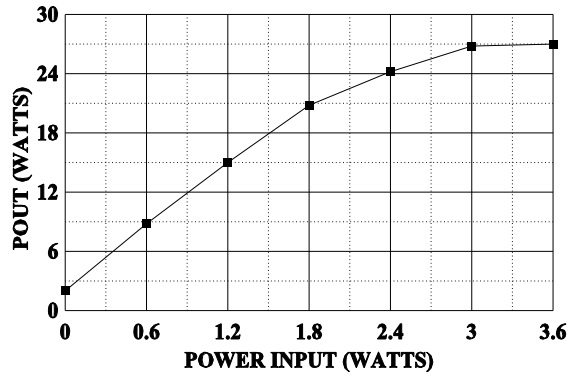
UMIL25

DC SAFE OPERATING AREA

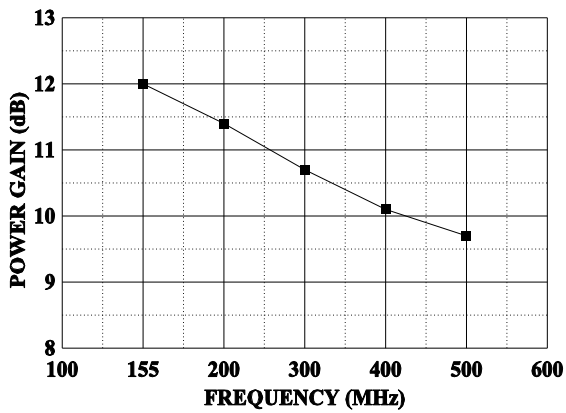


POWER OUTPUT vs POWER INPUT

V_{cc}= 28V f=400MHz

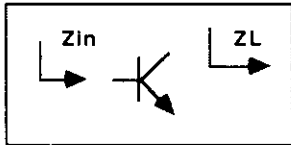
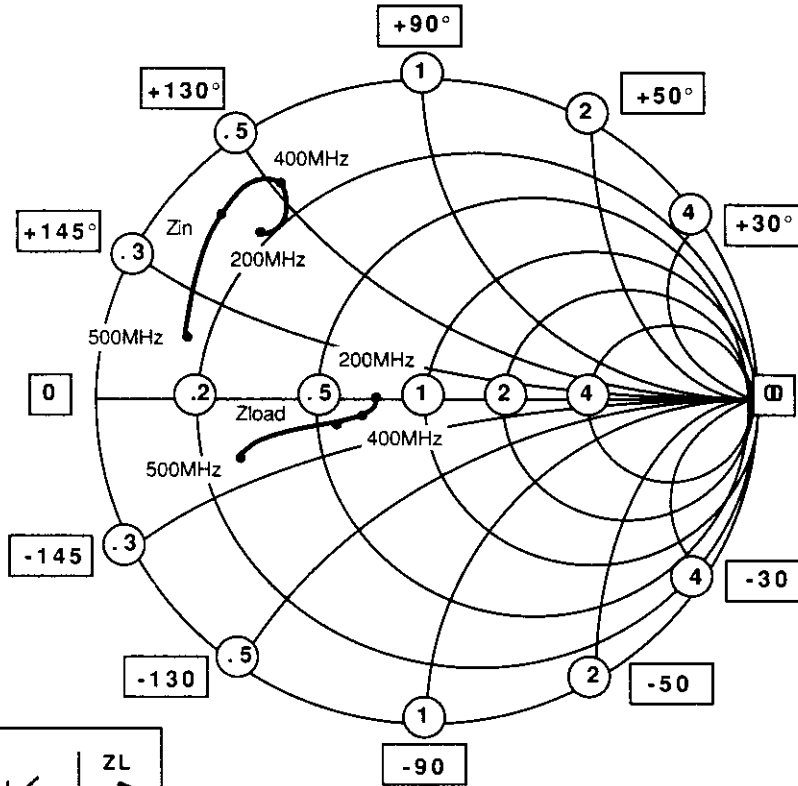


POWER GAIN VS FREQUENCY



SMITH CHART UMIL25

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 10 OHM SYSTEM

FREQUENCY MHz	R	Zin JX	FREQUENCY MHz	R	Zload JX
200	1.6	+1.5	200	7.6	0.0
300	1.1	+4.0	300	7.5	-1.0
400	1.7	+5.1	400	6.0	-1.3
500	1.7	+4.2	500	3.0	-2.0