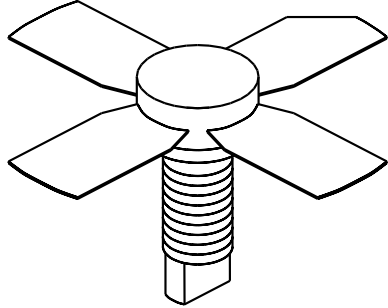


UMIL 3

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

<p>GENERAL DESCRIPTION The UMIL3 is a 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 55FT, Style 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 11 Watts</p> <p>Maximum Voltage and Current</p> <p>BVces Collector to Emitter Voltage 55 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 0.7 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +150°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

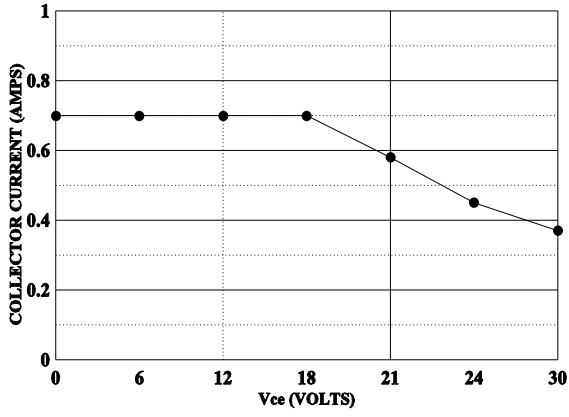
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	3			Watts
Pin	Power Input	Vcc = 28 Volts			0.2	Watts
Pg	Power Gain		11.8	13		dB
η_c	Efficiency			60		%
VSWR	Load Mismatch Tolerance				30:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 20 mA	55			Volts
BVceo	Collector to Emitter Breakdown	Ie = 50 mA	30			Volts
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz		4.5		pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 100 A	10	45	150	
θ_{jc}	Thermal Resistance				16	°C/W

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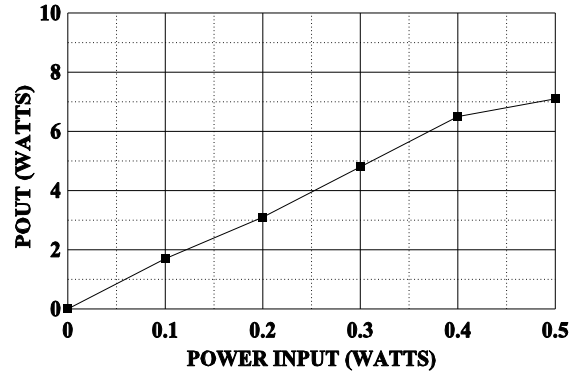
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DC SAFE OPERATING AREA



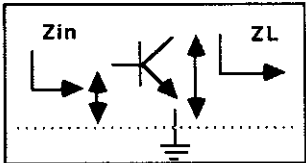
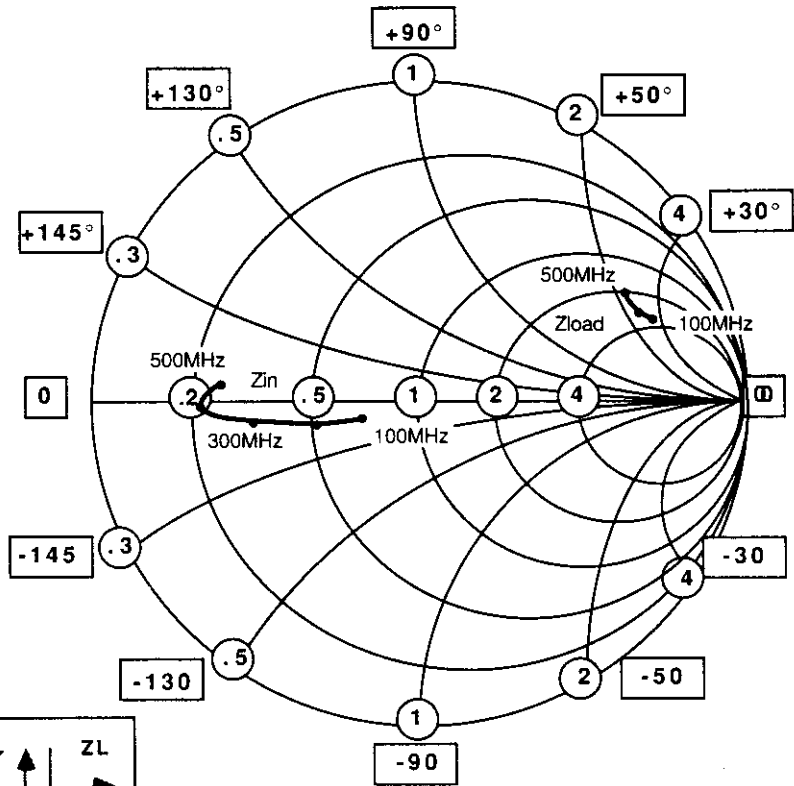
POWER OUTPUT vs POWER INPUT

V_c= 28V f=400MHz



SMITH CHART UMIL3

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 10 OHM SYSTEM.

FREQUENCY MHz	R	Zin	jX	FREQUENCY MHz	R	Zload	jX
100	7.0		-1.6	100	35		+34
200	5.3		-1.7	200	33		+30
300	3.5		-1.2	300	20		+25
400	2.1		-0.3	400	25		+23
500	2.5		+0.5	500	20		+22