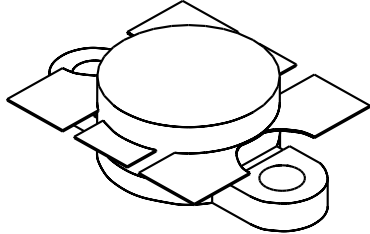

UMIL 70
70 Watts, 28 Volts, Class AB
Defcom 225 - 400 MHz

<p>GENERAL DESCRIPTION The UMIL70 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.</p>	<p>CASE OUTLINE 55HU, Style 2</p> 
<p>ABSOLUTE MAXIMUM RATINGS</p> <p>Maximum Power Dissipation @ 25°C 140 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 8.0 A</p> <p>Maximum Temperatures</p> <p>Storage Temperature - 65 to +150°C Operating Junction Temperature +200°C</p>	

ELECTRICAL CHARACTERISTICS @ 25 °C

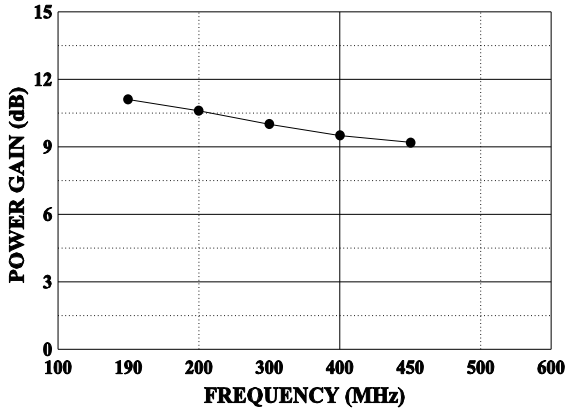
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Pout	Power Output	F = 400 MHz	70			Watts
Pin	Power Input	Vcc = 28 Volts			10	Watts
Pg	Power Gain		8.5	10		dB
η_c	Efficiency		60			%
VSWR	Load Mismatch Tolerance	F = 400 MHz			5:1	

BVebo	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 50 mA	60			Volts
BVceo	Collector to Emitter Breakdown	Ie = 50 mA	33			Volts
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz			76	pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 2 A	20			
θ_{jc}	Thermal Resistance				1.25	°C/W

Issue August 1996

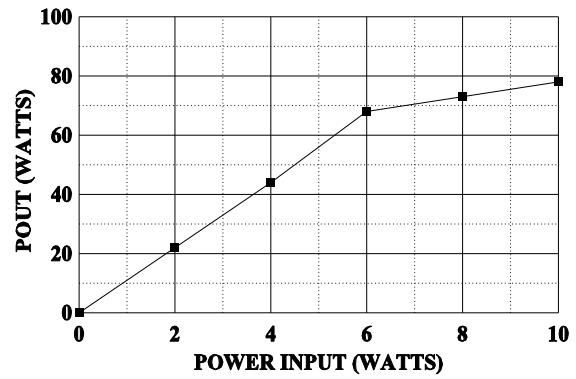
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POWER GAIN VS FREQUENCY

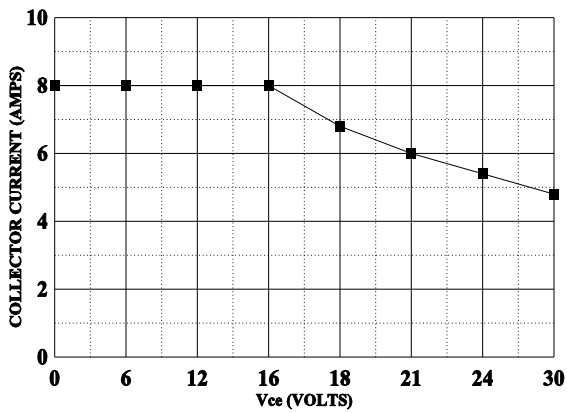


POWER OUTPUT vs POWER INPUT

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

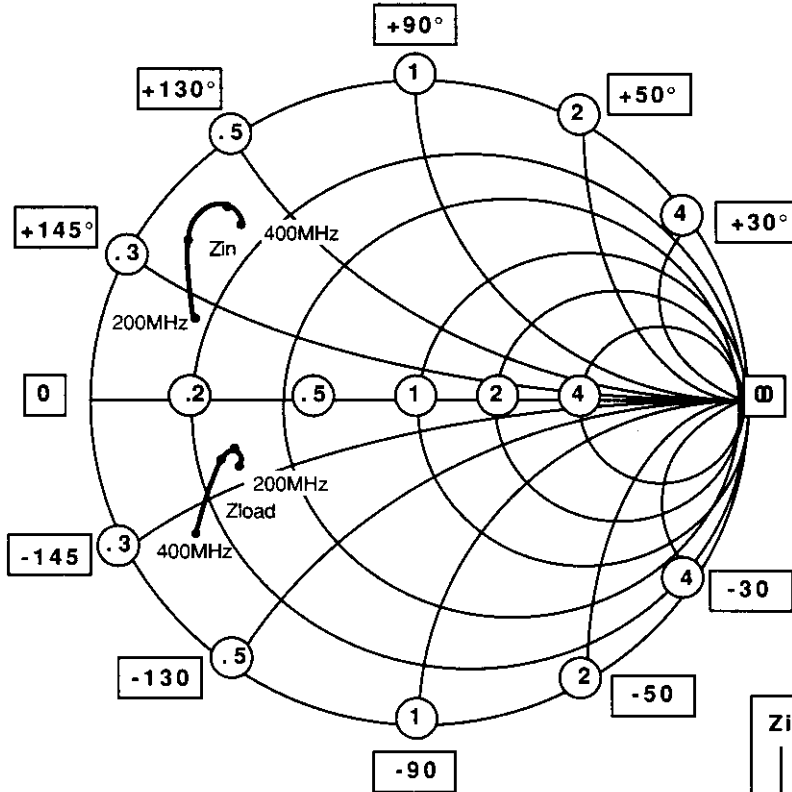


DC SAFE OPERATING AREA

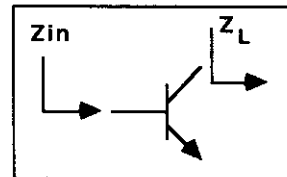


SMITH CHART UMIL70

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO A 10 OHM SYSTEM.



FREQUENCY MHz	R	Z _{in} JX	FREQUENCY MHz	R	Z _{load} JX
200	1.8	+2.6	200	3.3	-2.2
250	1.1	+3.6	250	3.3	-2.0
300	1.2	+4.5	300	3.0	-2.0
400	1.3	+4.3	400	1.4	-3.5