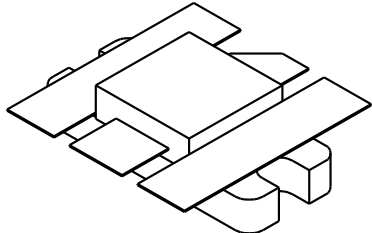


# UMIL 100A

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

<p><b>GENERAL DESCRIPTION</b> The UMIL100A 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><b>CASE OUTLINE</b> <b>55JU, Style 2</b></p> 
<p><b>ABSOLUTE MAXIMUM RATINGS</b> Maximum Power Dissipation @ 25°C                      270 Watts</p> <p><b>Maximum Voltage and Current</b> BVces Collector to Emitter Voltage                      65 Volts BVebo Emitter to Base Voltage                              4.0 Volts Ic Collector Current                                              20 A</p> <p><b>Maximum Temperatures</b> Storage Temperature                                              - 65 to +150°C Operating Junction Temperature                              +150°C</p>	

## ELECTRICAL CHARACTERISTICS @ 25 °C

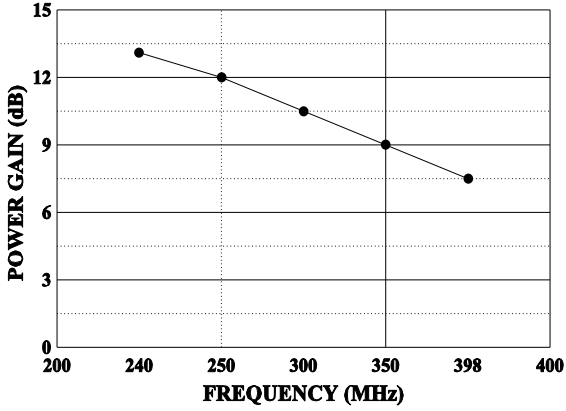
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
<b>Pout</b>	Power Output	F = 400 MHz	100			Watts
<b>Pin</b>	Power Input	Vcc = 28 Volts			19	Watts
<b>Pg</b>	Power Gain		7.2	8.5		dB
$\eta_c$	Efficiency			55		%
<b>VSWR</b>	Load Mismatch Tolerance				5:1	

<b>BVebo</b>	Emitter to Base Breakdown	Ie = 5 mA	4.0			Volts
<b>BVces</b>	Collector to Emitter Breakdown	Ic = 100 mA	60			Volts
<b>BVceo</b>	Collector to Emitter Breakdown	Ie = 50 mA	31			Volts
<b>BVcbo</b>	Collector to Base Breakdown	Ic = 100 mA	60			Volts
<b>Icbo</b>	Collector to Base Current	Vc = 30 Volts			50	mA
<b>Cob</b>	Output Capacitance	Vcb = 28 V, F = 1 MHz		120		pF
<b>hFE</b>	DC - Current Gain	Vce = 5 V, Ic = 1 A	10			
$\theta_{jc}$	Thermal Resistance				0.7	°C/W

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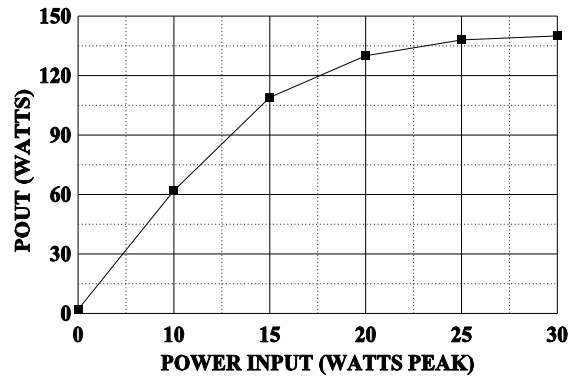
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**POWER GAIN VS FREQUENCY**



**POWER OUTPUT vs POWER INPUT**

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



**DC SAFE OPERATING AREA**

