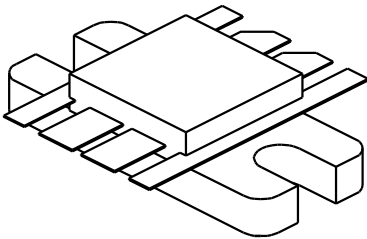


0105-50

50 Watts, 28 Volts, Class AB
Defcom 100 - 500 MHz

<p>GENERAL DESCRIPTION The 0105-50 is a double input matched COMMON EMITTER broadband transistor specifically intended for use in the 100-500 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 55JT, 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 65 Volts BVebo Emitter to Base Voltage 4.0 Volts Ic Collector Current 7.0 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 = 500 MHz	50			Watts
Pin	Power Input	Vcc = 28 Volts		5.0	7.0	Watts
Pg	Power Gain		8.5	10		dB
η_c	Efficiency			55		%
VSWR	Load Mismatch Tolerance				5:1	

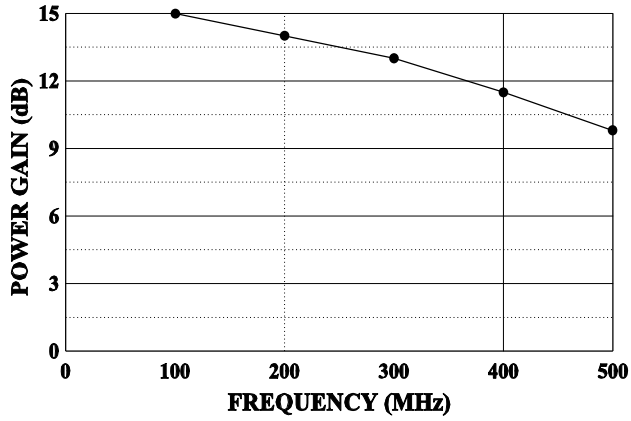
BVebo	Emitter to Base Breakdown	Ie = 10 mA	4.0			Volts
BVces	Collector to Emitter Breakdown	Ic = 100 mA	60			Volts
BVceo	Collector to Emitter Breakdown	Ie = 100 mA	33			Volts
Cob	Output Capacitance	Vcb = 28 V, F = 1 MHz		52		pF
h_{FE}	DC - Current Gain	Vce = 5 V, Ic = 1 A	10			
θ_{jc}	Thermal Resistance				1.25	°C/W

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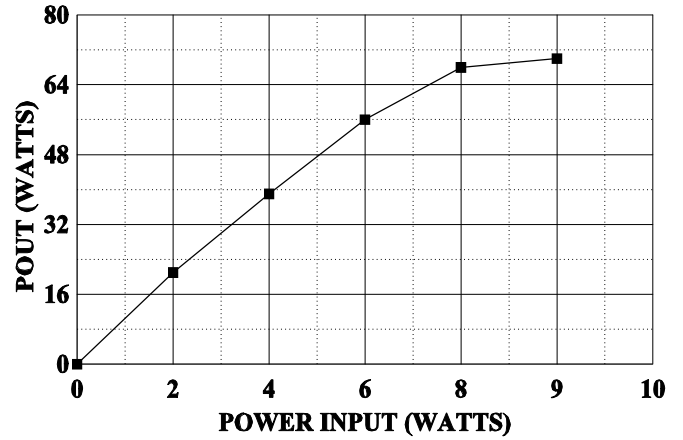
POWER GAIN VS FREQUENCY

Po=50W, Vcc=28V

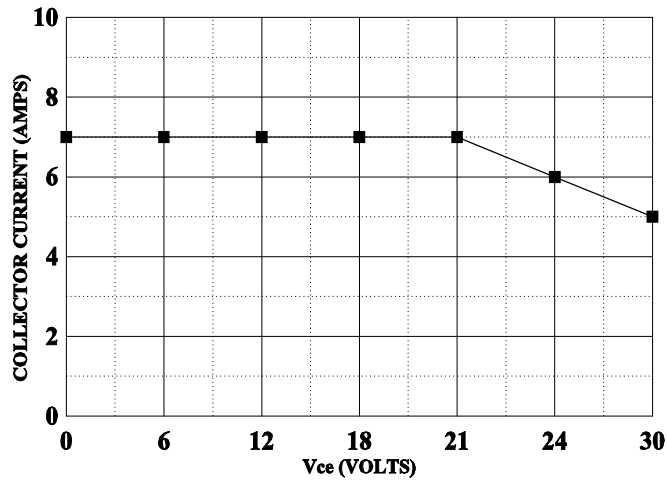


POWER OUTPUT vs POWER INPUT

Vcc= 28V f=400MHz



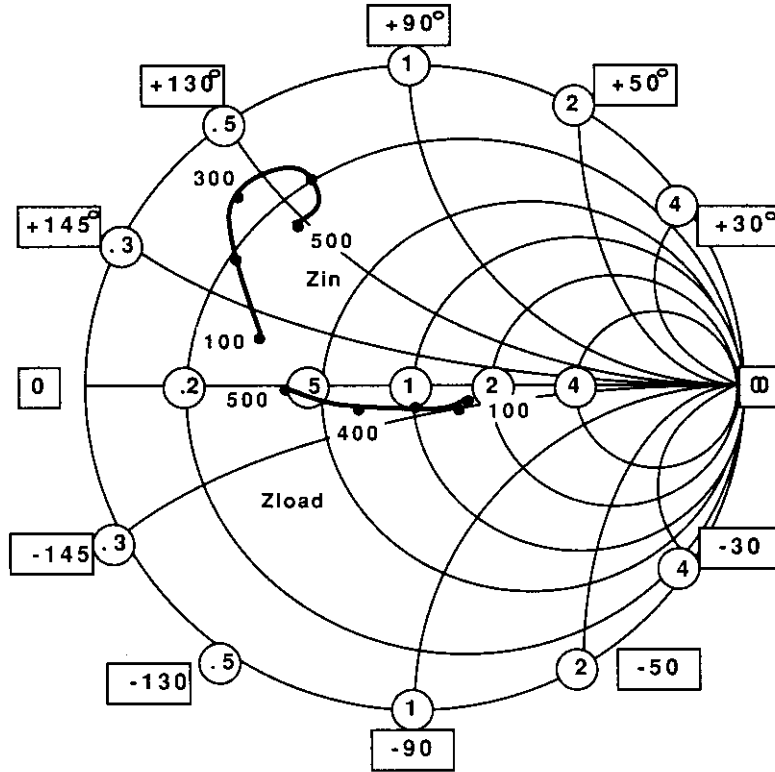
DC SAFE OPERATING AREA



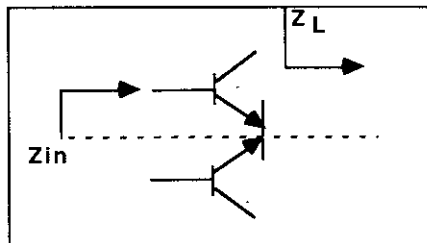
SMITH CHART

0105-50

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO 10 OHM SYSTEM



FREQUENCY MHz	R	Zin	JX	FREQUENCY MHz	R	Zload	JX
100	3.5		+ 1.8	100	12.2		- 2.0
200	2.2		+ 3.0	200	11.0		- 2.5
300	1.5		+ 4.4	300	10.0		- 1.4
400	2.4		+ 5.2	400	7.0		- 1.4
500	2.8		+ 4.0	500	4.0		- 0.5