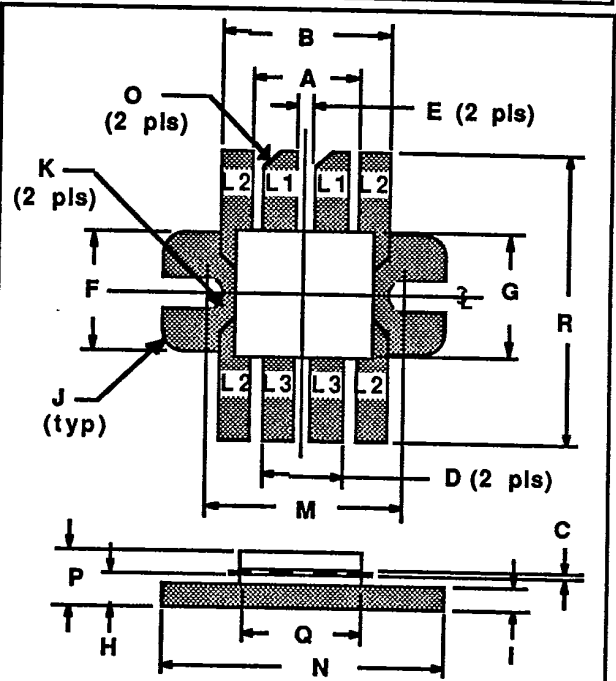


GENERAL DESCRIPTION

The 0105-50 is an internally matched balanced transistor specifically designed for broadband Class A, AB or C high power applications from 100-500 MHz. Gold thin film metallization and surface passivation provide proven highest mean-time-before-failure. Diffused ballast resistors assure excellent broadband ruggedness. The 0105-50 is an improved drop-in replacement for the BAL0105-50.

0105-50
50 WATTS - 28 VOLTS
100-500 MHz

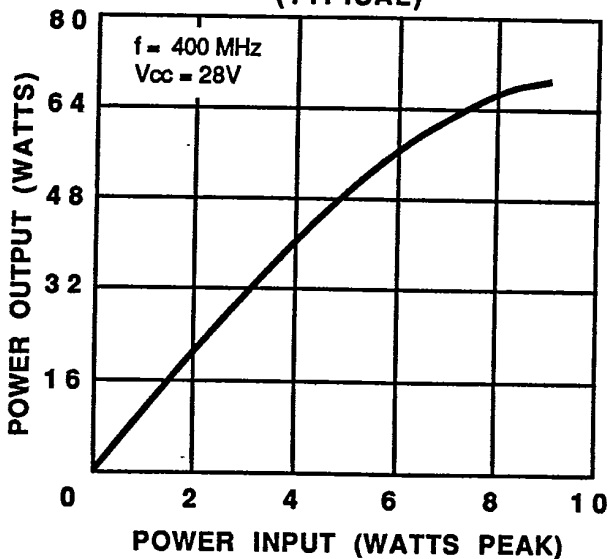
UHF COMMUNICATIONS



ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25 C Case Temperature	140W
Maximum Voltage and Current	
BVces Collector to Emitter Voltage	60 V
BVebo Emitter to Base Voltage	4.0 V
Ic Collector Current	7.0 A
Maximum Temperatures	
Storage Temperature	-65 to +150°C
Operating Junction Temperature	+200°C

POWER OUTPUT VS POWER INPUT (TYPICAL)



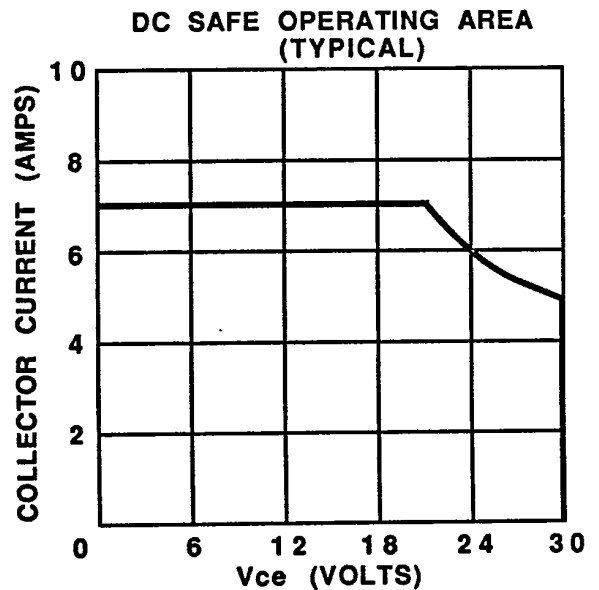
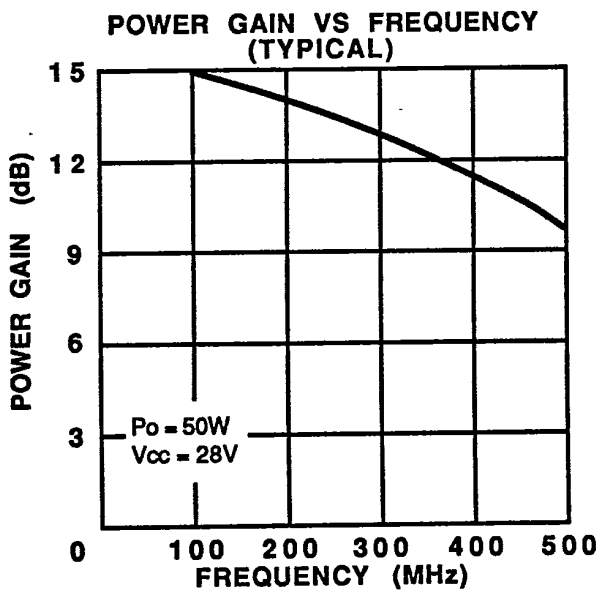
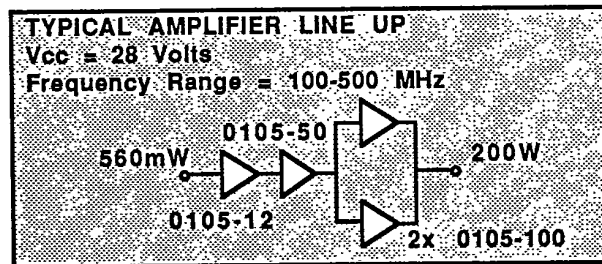
DIM	Millimeter	TOL	Inches	TOL	
L1 : C	A	9.14	.13	.360	.005
L2 : E	B	12.70	.13	.500	.005
L3 : B	C	0.13	.02	.005	.001
	D	6.86	.13	.270	.005
	E	0.76	.13	.030	.005
	F	9.78	.13	.385	.005
	G	10.16	.13	.400	.005
	H	4.19	.13	.165	.005
	I	3.17	.13	.125	.005
	J	1.52 R	.13	.060 R	.005
	K	1.65 R	.13	.065 R	.005
	M	16.51	.13	.650	.005
	N	22.86	.13	.900	.005
	O	45°	5°	45°	5°
	P	6.35	REF	.250	REF
	Q	10.77	.13	.424	.005
	R	19.05	.25	.750	.010

0105-50-2

ELECTRICAL CHARACTERISTICS

SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
P _{out}	Power Output	f = 500 MHz, V _{cc} = 28V, Class C	50			Watts
P _{in}	Power Input	At Rated Power Out			7.0	Watts
P _g	Power Gain	At Rated Power Out		10		dB
V _{Vebo}	Voltage - Emitter to Base	I _e = 10mA	4.0			Volts
V _{Vces}	Voltage - Collector to Emitter	I _c = 100mA	60			Volts
V _{Vceo}	Voltage - Collector to Emitter	I _c = 100mA	33			Volts
V _{SWR}	Load Mismatch Tolerance	At Rated Power Out			5:1	
η _c	Collector Efficiency	At Rated Power Out		55		%
C _{ob}	Capacitance-Collector to Base	f = 1 MHz, V _{cb} = 28V		52		pF
h _{FE}	DC-Current Gain	I _c = 1A, V _{ce} = 5V	10			
θ _{jc}	Thermal Resistance	T _c = 25°C			1.25	°C/W

For DC measurements, bases and collectors are paralleled.

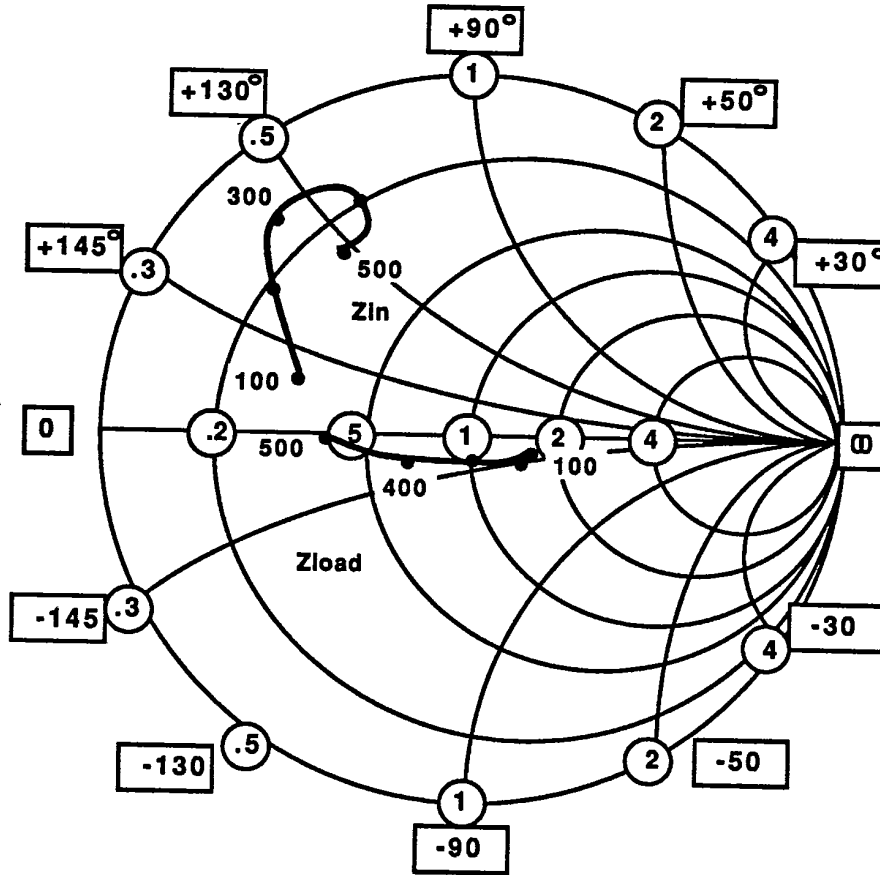


SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE

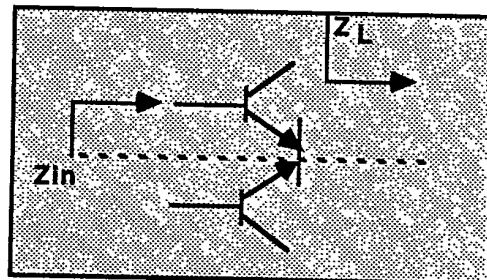
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SMITH CHART
0105-50

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



NORMALIZED TO 10 OHM SYSTEM



FREQUENCY MHz	R	Z _{in}	JX	FREQUENCY MHz	R	Z _{load}	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

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