



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



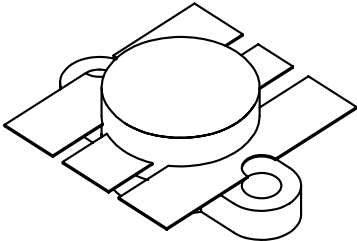
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<p>GENERAL DESCRIPTION The UMIL 25 is an input matched COMMON EMITTER broadband transistor specifically intended for use in the 225-400 MHz frequency band. It may be operated in Class AB or C. Gold metallization and silicon diffused resistors ensure ruggedness and high reliability.</p>	<p>CASE OUTLINE 55HV, Style 2</p> 													
<p>ABSOLUTE MAXIMUM RATINGS Maximum Power Dissipation @ 25°C 70 Watts</p> <p>Maximum Voltage and Current</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">BVces</td> <td style="width: 45%;">Collector to Emitter Voltage</td> <td style="width: 40%; text-align: right;">60 Volts</td> </tr> <tr> <td>BVebo</td> <td>Emitter to Base Voltage</td> <td style="text-align: right;">4.0 Volts</td> </tr> <tr> <td>Ic</td> <td>Collector Current</td> <td style="text-align: right;">3 A</td> </tr> </table> <p>Maximum Temperatures</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 40%;">Storage Temperature</td> <td style="text-align: right;">- 65 to +150°C</td> </tr> <tr> <td>Operating Junction Temperature</td> <td style="text-align: right;">+200°C</td> </tr> </table>	BVces	Collector to Emitter Voltage	60 Volts	BVebo	Emitter to Base Voltage	4.0 Volts	Ic	Collector Current	3 A	Storage Temperature	- 65 to +150°C	Operating Junction Temperature	+200°C	
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ELECTRICAL CHARACTERISTICS @ 25 °C

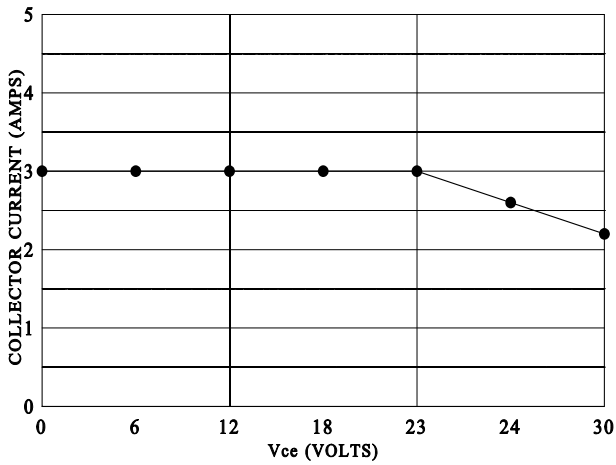
SYMBOL	CHARACTERISTICS	TEST CONDITIONS	MIN	TYP	MAX	UNITS
P _{OUT}	Power Output	F = 400 MHz	25			W
P _{IN}	Power Input	V _{cc} = 28 Volts			3.2	W
P _G	Power Gain		8.9	10		dB
η _c	Collector Efficiency			50		%
VSWR	Load Mismatch Tolerance ¹				5:1	

BV _{EBO}	Emitter to Base Breakdown	I _e = 5 mA	4.0			Volts
BV _{CES}	Collector to Emitter Breakdown	I _c = 50 mA	65			Volts
BV _{CEO}	Collector to Emitter Breakdown	I _e = 50 mA	33			Volts
h _{FE}	DC - Current Gain	I _c = 0.5 A, V _{ce} = 5 V	10			
θ _{jc} ¹	Thermal Resistance				2.5	°C/W
C _{ob}	Output Capacitance	V _{cb} = 28 V, F = 1 MHz		22	27	pF
I _{EBO}	Emitter to Base Leakage	V _{eb} = 2 V			2	mA
I _{CBO}	Collector to Base Leakage	V _{cb} = 20 V			2	mA

Rev. A – Apr 2004

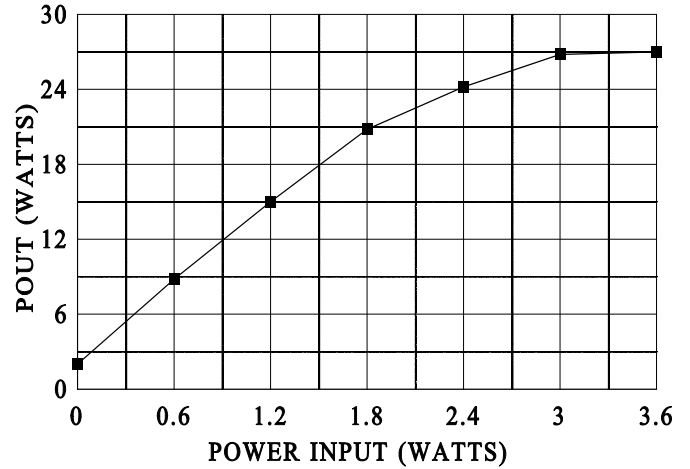
UMIL25

DC SAFE OPERATING AREA

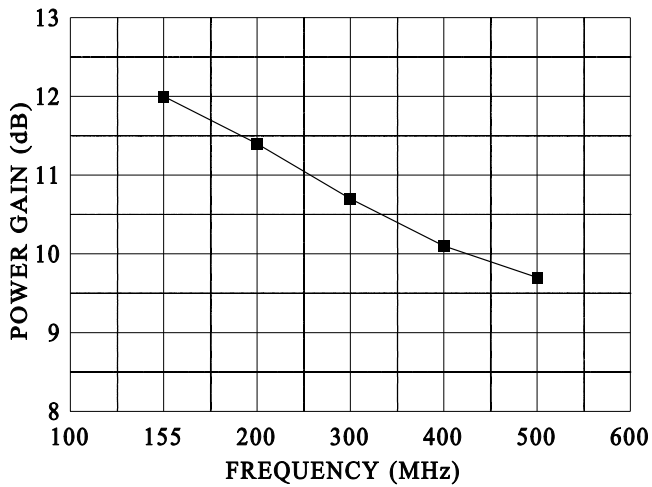


POWER OUTPUT vs POWER INPUT

Vcc= 28V f=400MHz

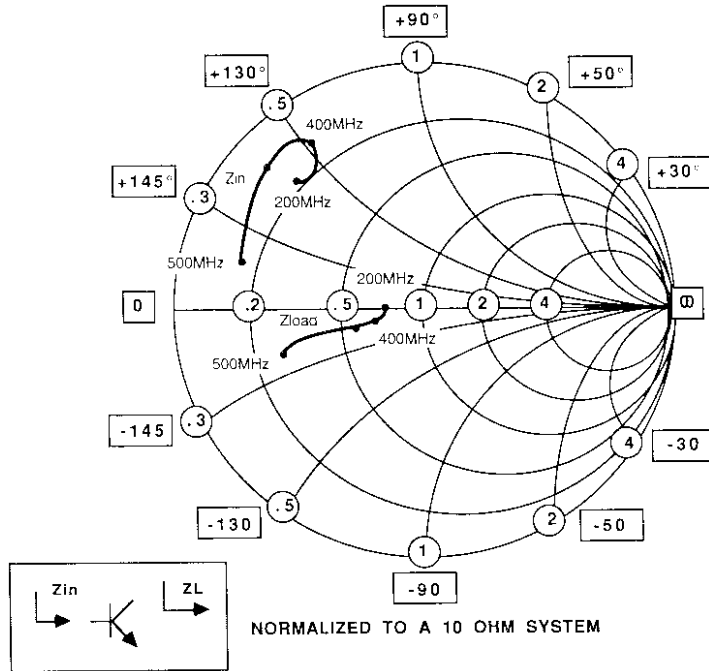


POWER GAIN VS FREQUENCY

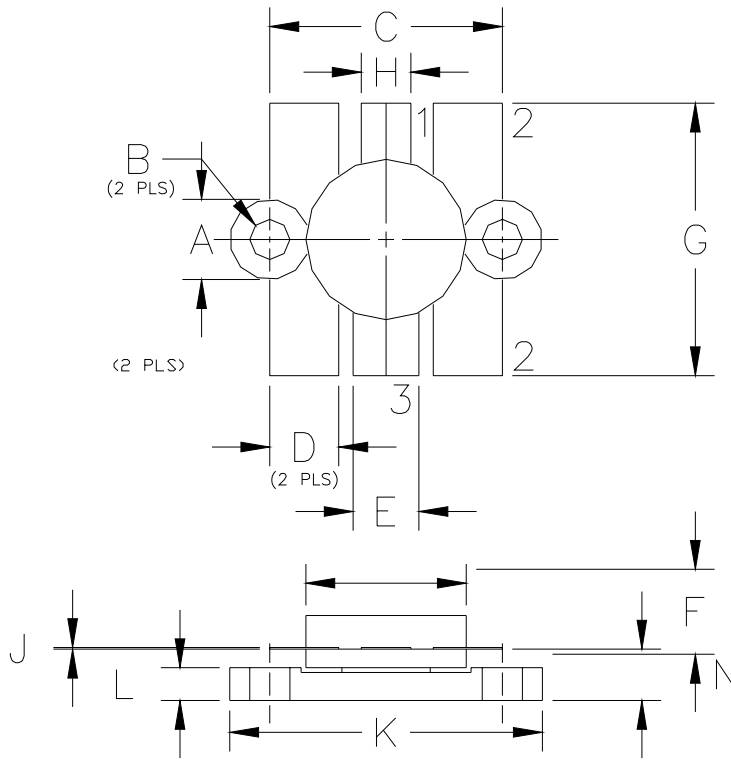


**SMITH CHART
UMIL25**

NORMALIZED IMPEDANCE AND ADMITTANCE COORDINATES



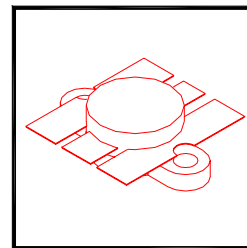
FREQUENCY MHz	R	Z _{in}	JX	FREQUENCY MHz	R	Z _{load}	JX
200	1.6		+1.5	200	7.6		0.0
300	1.1		+4.0	300	7.5		-1.0
400	1.7		+5.1	400	6.0		-1.3
500	1.7		+4.2	500	3.0		-2.0



DIM	MILLIMETER	±TOL	INCHES	±TOL
A	6.35 DIA	.13	.250 DIA	.005
B	3.17 DIA	.13	.325 DIA	.005
C	18.41	.13	.725	.005
D	5.46	.13	.215	.005
E	5.21	.13	.205	.005
F	6.73	REF	.265	REF
G	21.59	.38	.850	.015
H	3.94	.13	.155	.005
I	12.70 DIA	.13	.500 DIA	.005
J	0.13	.02	.005	.001
K	24.76	.13	.975	.005
L	2.59	.13	.102	.005
M	4.06	.25	.160	.010

STYLE 1:
 PIN 1 = COLLECTOR
 2 = BASE
 3 = EMITTER

STYLE 2:
 PIN 1 = COLLECTOR
 2 = EMITTER
 3 = BASE



GHz TECHNOLOGY
 RF - MICROWAVE SILICON POWER TRANSISTORS

DWG NO.

55HV