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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ADVANCED POWER TECHNOLOGY RF®

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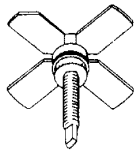
MS1402

RF AND MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

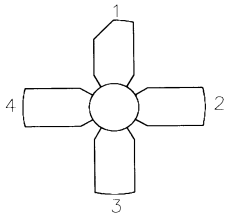


.280 4L STUD (M122)
epoxy sealed

Features

- **450 - 512 MHz**
- **12.5 Volts**
- **Efficiency 55%**
- P_{OUT} **= 2.0 W Min.**
- G_P **= 10.0 dB Gain**

PIN CONNECTION



1. Collector
2. Emitter
3. Base
4. Emitter

DESCRIPTION:

The MS1402 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for UHF communications. This device utilizes improved metallization to achieve infinite VSWR at rated operating conditions.

ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	16	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	0.75	A
P_{DISS}	Power Dissipation	5	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

Thermal Data

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	35	°C/W

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			Units
			Min.	Typ.	Max.	
BV_{CES}	I_C = 5 mA	V_{BE} = 0 V	36			V
BV_{CEO}	I_C = 25 mA	I_B = 0 mA	16			V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	4.0			V
I_{CBO}	V_{CB} =15 V	I_E = 0 mA			1.0	mA
h_{FE}	V_{CE} = 5 V	I_C = 100 mA	20		100	

DYNAMIC

Symbol	Test Conditions			Value			Units
				Min.	Typ.	Max.	
P_{OUT}	f = 470 MHz	P_{IN} = 0.20 W	V_{CC} = 12.5 V	2.0			W
G_P	f = 470 MHz	P_{IN} = 0.20 W	V_{CC} = 12.5 V	10			dB
C_{OB}	f = 1 MHz	V_{CB} = 12 V				10	pF

IMPEDANCE DATA

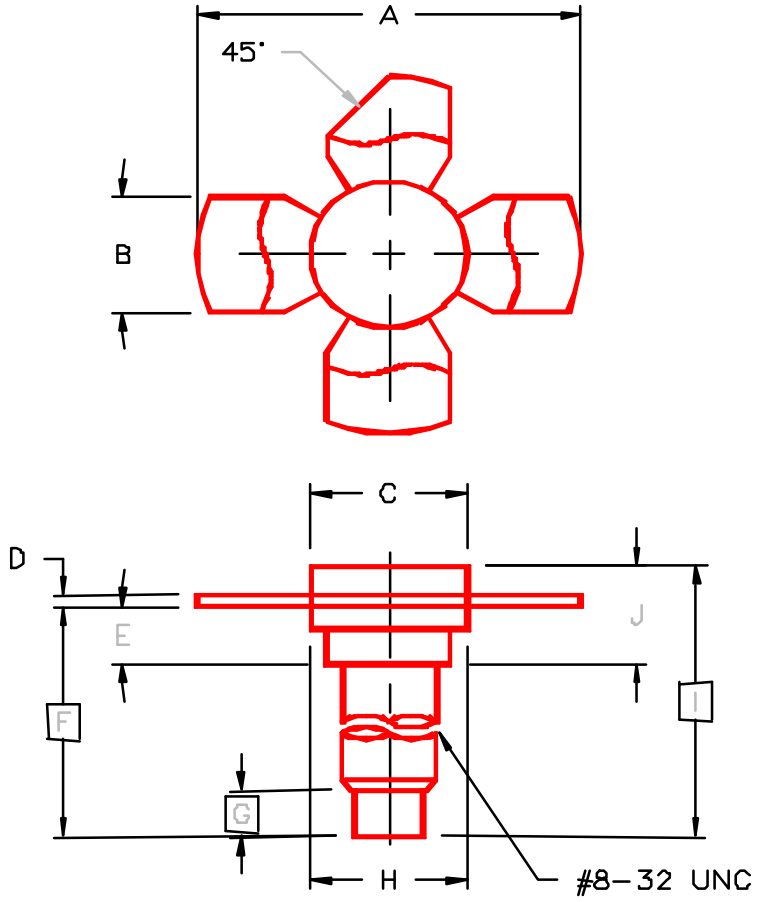
Freq.	ZIN (Ω)	ZCL (Ω)
450 MHz	2.7 – j 0.9	11.5 + j 15.0
470 MHz	2.6 – j 1.3	12.2 + j 13.5
512 MHz	2.2 – j 1.7	12.7 + j 13.0

ADVANCED POWER TECHNOLOGY RF®

MS1402

PACKAGE MECHANICAL DATA

PACKAGE STYLE M122



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	1.010/25,65	1.055/26,80	I	.640/16,26	
B	.220/5,59	.230/5,84	J	.175/4,45	.217/5,51
C	.270/6,86	.285/7,24			
D	.003/0,08	.007/0,18			
E	.117/2,97	.137/3,48			
F	.572/14,53				
G	.130/3,30				
H	.275/6,99	.285/7,24			