

140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013

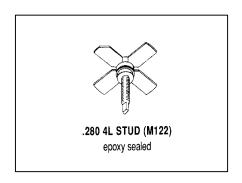
PHONE: (215) 631-9840 FAX: (215) 631-9855

MS1402

RF AND MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

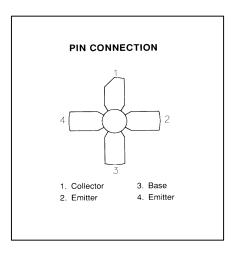
Features

- 450 512 MHz
- 12.5 Volts
- Efficiency 55%
- Pout = 2.0 W Min.
- $G_P = 10.0 \text{ dB Gain}$



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
Ic	Device Current	0.75	Α
P _{DISS}	Power Dissipation	5	W
TJ	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
---------------	----------------------------------	----	------

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.





ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			
	rest Conditions		Min.	Тур.	Max.	Units
BV _{CES}	$I_C = 5 \text{ mA}$	$V_{BE} = 0 V$	36			V
BV _{CEO}	$I_C = 25 \text{ mA}$	$I_B = 0 \text{ mA}$	16			٧
BV _{EBO}	$I_E = 1 \text{ mA}$	$I_C = 0 \text{ mA}$	4.0			V
$I_{\sf CBO}$	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
Syllibol			Min.	Тур.	Max.	Offics
P _{out}	$f = 470 \text{ MHz}$ $P_{IN} = 0.20 \text{ W}$	$V_{CC} = 12.5 \text{ V}$	2.0			W
G₽	$f = 470 \text{ MHz}$ $P_{IN} = 0.20 \text{ W}$	V _{CC} = 12.5 V	10			dB
Сов	$f = 1 MHz$ $V_{CB} = 12 V$				10	pF

IMPEDANCE DATA

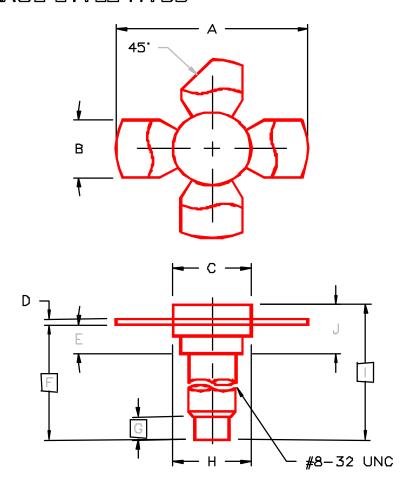
Freq.	ΖΙΝ (Ω)	ZCL (Ω)
450 MHz	2.7 – j 0.9	11.5 + j 15.0
470 MHz	2.6 – j 1.3	12.2 + j 13.5
512 MHz	2.2 – j 1.7	12.7 + j 13.0

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.





PACKAGE MECHANICAL DATA PACKAGE STYLE M122



	MIN/MUM INCHES/MM	MAXIMUM INCHES/MM		MIN/MUM INCHES/MM	MAXIMUM INCHES/MM
Α	1.010/25,65	1.055/26,80	1	.640/16,26	
В	.220/5,59	.230/5,84	J	<i>.</i> 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				
Н	.275/6,99	.285/7,24			

Advanced Power Technology reserves the right to change, without notice, the specifications and information contained herein Visit our website at **WWW.ADVANCEDPOWER.COM** or contact our factory direct.