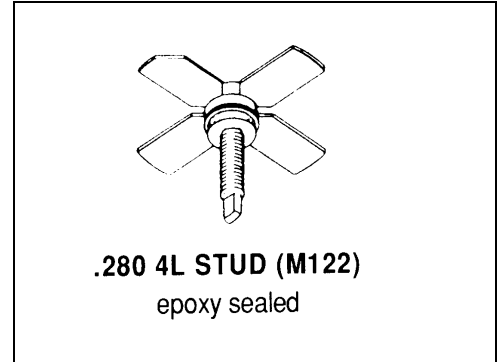


MS1502

RF & MICROWAVE TRANSISTORS UHF TVLINEAR APPLICATIONS

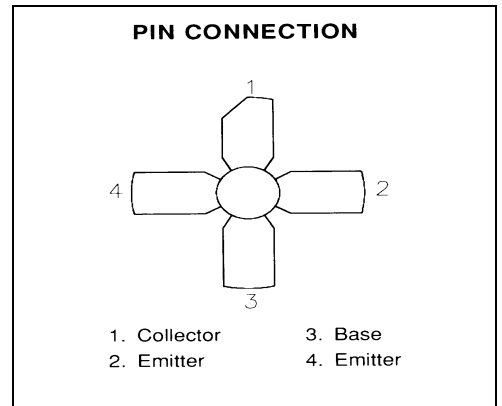
Features

- 860 MHz
- GOLD METALLIZATION
- CLASS A LINEAR OPERATION
- $P_{OUT} = 0.5$ WATTS
- $G_P = 9.5$ dB MINIMUM
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The MS1502 is a silicon NPN bipolar transistor designed for UHF linear applications, specifically TV Bands IV and V. The MS1502 is characterized for high linearity, Class A operation. Device ruggedness and reliability are maximized with emitter ballasting and gold metallization.



ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	45	V
V _{CEO}	Collector-Emitter Voltage	25	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	2.0	A
P _{DISS}	Power Dissipation	31.8	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*	5.5	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 1mA	I_E = 0mA	45	---	---	V
BV_{CEO}	I_E = 20mA	I_B = 0mA	24	---	---	V
BV_{EBO}	I_E = 0.25mA	I_C = 0mA	3.5	---	---	V
I_{CBO}	V_{CB} = 28 V	I_E = 0mA	-----	---	0.45	mA
h_{FE}	V_{CE} = 5 V	I_C = 100mA	15	---	120	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 860 MHz	P_{IN} = 56mW	V_{CE} = 20V	0.5	---	---	W
G_P	f = 860 MHz	P_{IN} = 56mW	V_{CE} = 20V	9.5	---	---	dB
IMD₃	P_{SYNC} = 0.5 W	V_{CE} = 20V	I_C = 220 mA	---	---	-58	dBc
C_{OB}	f = 1 MHz	V_{CB} = 28V		---	---	5	pf

Conditions: **V_{CE} = 20V** **I_C = 220 mA**

Conditions: **f₁ = 860MHz(-8dBc), f₂ = 863.5MHz(-16dBc), f₃ = 864.5MHz(-7dBc)**

PACKAGE MECHANICAL DATA

