



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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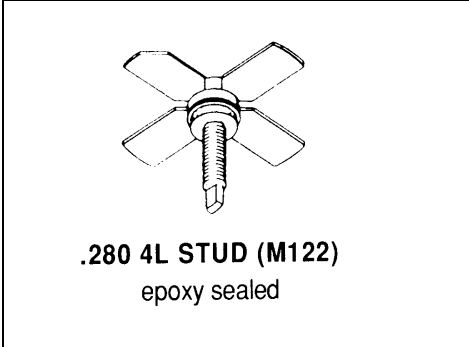


MS1512

**RF & MICROWAVE TRANSISTORS
UHF TV/LINEAR APPLICATIONS**

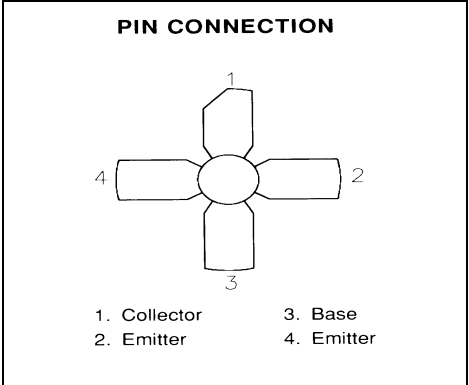
Features

- 860 MHz
- 20 VOLTS
- CLASS A LINEAR OPERATION
- $P_{OUT} = 1.0$ WATT
- $G_P = 10.0$ dB MINIMUM
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The MS1512 is a silicon NPN bipolar transistor designed for UHF linear applications, specifically TV Bands IV and V. The MS1512 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	1.2	A
P _{DISS}	Power Dissipation	19.4	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	9.0	°C/W
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MS1512

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol			Value			Unit
			Min.	Typ.		
BV_{CBO}	I_C	I_E	45	---		V
BV_C	$I = 40mA$	$R_{BE} \quad \Omega$	50		---	V
C_{EO}	$C = 40 mA$	$I_B = 0 mA$	24		---	V
E_{BO}	$I_E = .5 mA$	$I_C = 0 mA$	3.5		---	V
C_{BO}	$V_{CB} = 28 V$	$I = 0 mA$		---	0.45	
h	$V = 5 V$	$I = 200 mA$		---	120	-

DYNAMIC

Symbol	Test Conditions						Unit
					Typ.	Max.	
P	$f = 860 MHz$	P_{IN}	$V_{CE} = 20V$	1.0		---	W
P		$P = 100mW$	V_{CE}	10	---		dB
IMD_3	P_{SYNC}	$V_{CE} = 20V$	$I_C = 440 mA$	---		-	dBc
C_{OB}	$f = 1 MHz$	V_{CB}		---	---		pf

Conditions: $V_{CE} = 20V, I_C = 440 mA$
 Conditions: $f_1 = 863.5MHz(-8dBc), f_3 = 864.5MHz(7dBc)$

IMPEDANCE DATA

FRE	Z (Ω)	$c_L(\Omega)$
470 MHz	2.0 - j 1.5	23 - j 35
650 MHz	1.9 - j 0.5	15 - j 27
860 MHz	1.8 + j 0.8	8.0 - j 15

PACKAGE MECHANICAL DATA

