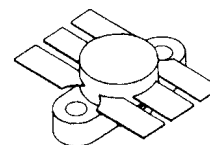


SD1422

RF & MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

Features

- 470 MHz
- 12.5 VOLTS
- $P_{OUT} = 25.0$ WATTS
- $G_P = 6.2$ dB MINIMUM
- COMMON EMITTER CONFIGURATION

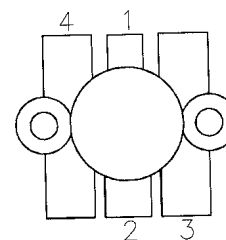


.500 6LFL (M111)
epoxy sealed

DESCRIPTION:

The MS1429-03 is an epitaxial silicon NPN planar transistor designed for broadband applications in the 450-512MHz land Mobile radio band. This device utilizes diffused emitter resistors to withstand 20:1 VSWR at rated operating conditions.

PIN CONNECTION



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

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Collector Current	7.5	W
P_{tot}	Total Power Dissipation	70.0	A
T_J	Junction Temperature	+200	$^{\circ}C$
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}C$

THERMAL DATA

$R_{TH(J-C)}$	Thermal Resistance Junction-case	2.5	$^{\circ}C/W$
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SD1422

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

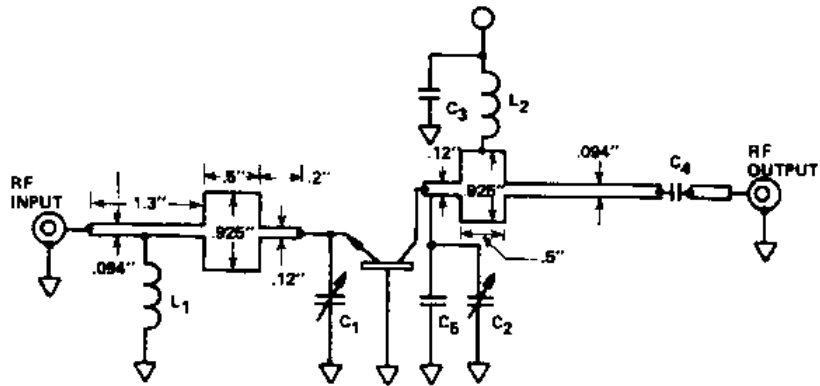
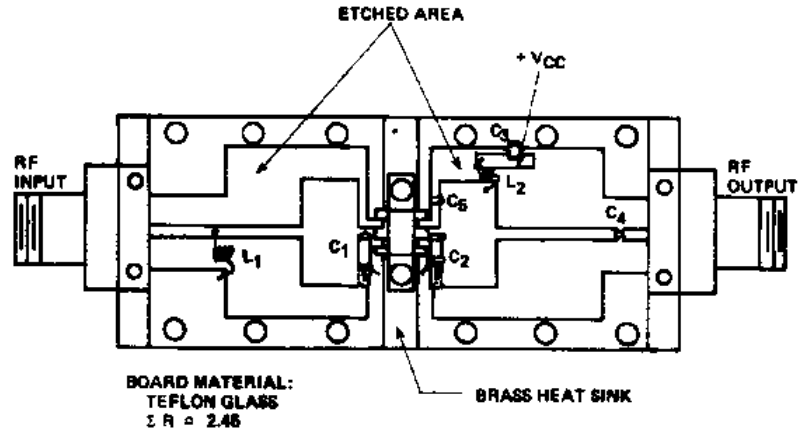
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CES}	I_C = 10 mA V_{BE} = 0 mA	36	---	---	V
BV_{CEO}	I_C = 50 mA I_B = 0 V	18	---	---	V
BV_{EBO}	I_C = 5 mA I_C = 0 mA	4.0	---	---	V
I_{CBO}	V_{CB} = 15 V I_E = 0 mA	---	---	5	mA
h_{FE}	V_{CE} = 5.0 V I_C = 1.0 A	10.0	---		---

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 836 MHz V_{CE} = 12.5V	25.0	---	---	W
G_P	f = 836 MHz V_{CE} = 12.5V	5.5	---	---	dB
C_{OB}	f = 1 MHz V_{CB} = 12.5 V	---	---	75	pF

SD1422

TEST CIRCUIT



S88SD1421-06

COMPONENTS LIST

C1, C2 .5 - 5.0pF Johanson E5851
 L1, L2 4.5 TURNS # 22 .09" I.D.

C3 470pF, 100MIL SQ ATC
 C4 .001MF 50MIL SQ ATC 200A 102MC 50
 C5 3.2pF 50MIL SQ ATC

SD1422

PACKAGE MECHANICAL DATA

