

MS1263

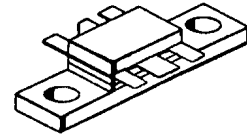
RF & MICROWAVE TRANSISTOR UHF MOBILE APPLICATIONS

Features

- 512 MHz
- 12.5 VOLTS
- $P_{OUT} = 15\text{ W MINIMUM}$
- $G_p = 7.8\text{ dB}$
- INPUT MATCHED
- COMMON EMITTER CONFIGURATION

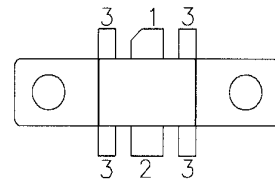
DESCRIPTION:

The MS1263 is a NPN silicon RF power transistor designed for 12.5-volt UHF amplifier applications operating to 512 MHz. The MS1263 has internal impedance matching for broadband operation and diffused emitter ballast for high load VSWR tolerance.



.230 6LFL (M142)
epoxy sealed

PIN CONNECTION



1. Collector 3. Base
2. Emitter

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	16	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Collector Current	3.4	A
P_{TOT}	Total Power Dissipation	37.5	W
T_{STG}	Storage Temperature	-65 to +150	$^{\circ}\text{C}$
T_J	Junction Temperature	+200	$^{\circ}\text{C}$

Thermal Data

$R_{\theta JC}$	Thermal Resistance Junction-case	4.6	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CEO}	I_C = 50mA	I_B = 0	16	---	---	V
BV_{CES}	I_C = 50mA	V_{BE} = 0	36	---	---	V
BV_{EBO}	I_E = 5.0mA	I_C = 0	4.0	---	---	V
I_{CES}	V_{CE} = 15V	V_{BE} = 0	---	---	5.0	mA
H_{FE}	V_{CE} = 5.0V	I_C = 500mA	20	---	120	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 512 MHz	P_{IN} = 2.5 W	V_{CC} = 12.5V	15	---	---	W
G_P	f = 512 MHz	P_{IN} = 2.5 W	V_{CC} = 12.5V	7.8	---	---	dB
η_c	f = 512 MHz	P_{IN} = 2.5 W	V_{CC} = 12.5V	50	---	---	%
C_{OB}	f = 1.0 MHz	V_{CB} = 12.5V		---	---	50	pf

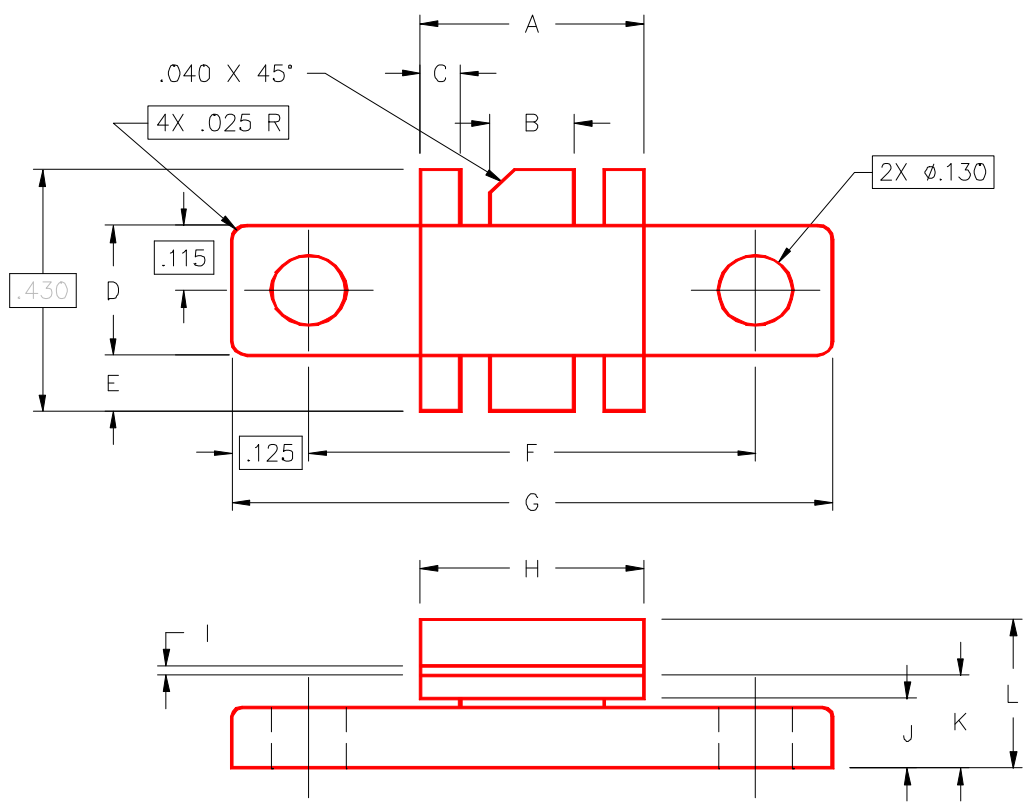
IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
470 MHz	0.95 – j1.1	2.2 + j0.9
512 MHz	0.82 + j2.5	2.1 + j2.3

P_{IN} = 2.5W
V_{CE} = 12.5V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M142



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.355/9,02	.365/9,27	I	.004/0,10	.006/0,15
B	.115/2,92	.125/3,18	J	.120/3,05	.130/3,30
C	.075/1,91	.085/2,16	K	.160/4,06	.180/4,57
D	.225/5,72	.235/5,97	L	.230/5,84	.260/6,60
E	.090/2,29	.110/2,79			
F	.720/18,29	.730/18,54			
G	.970/24,64	.980/24,89			
H	.355/9,02	.365/9,27			