ADVANCED POWER TECHNOLOGY RF®

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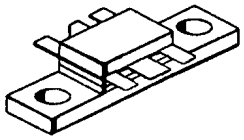
MS1263

RF & MICROWAVE TRANSISTOR
UHF MOBILE APPLICATIONS

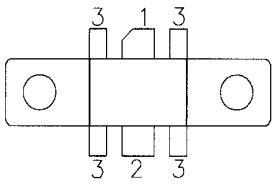


.230 6LFL (M142)
epoxy sealed

Features

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

PIN CONNECTION



1. Collector
2. Emitter
3. Base

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.

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_{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	°C
T_J	Junction Temperature	+200	°C

Thermal Data

$R_{\theta JC}$	Thermal Resistance Junction-case	4.6	°C/W

ELECTRICAL SPECIFICATIONS (Tcase = 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	$Z_{IN}(\Omega)$	$Z_{CL}(\Omega)$
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

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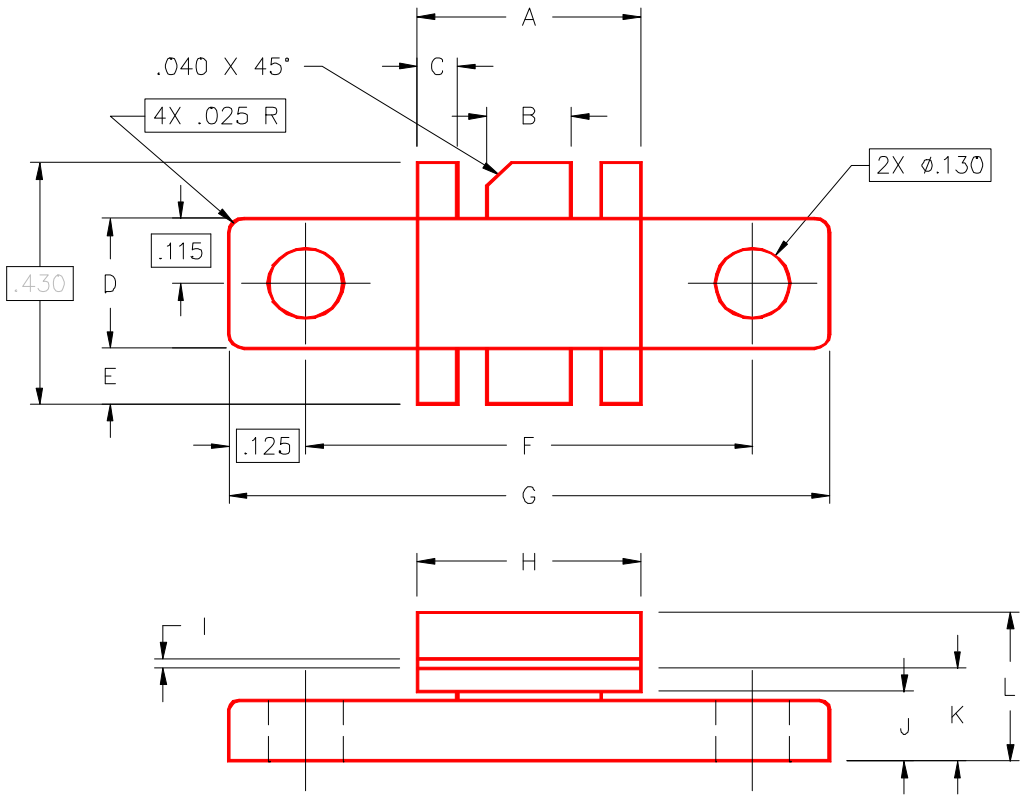
PACKAGE MECHANICAL DATA

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			