

SD1429-03

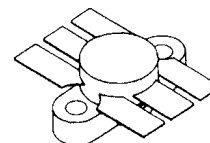
RF & MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

Features

- 470 MHz
- 12.5 VOLTS
- $P_{OUT} = 15.0$ WATTS
- $G_P = 7.5$ dB MINIMUM
- COMMON EMITTER CONFIGURATION

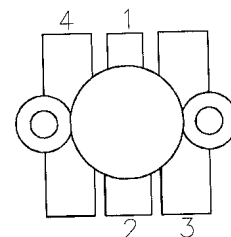
DESCRIPTION:

The SD1429-03 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for UHF communications. It withstands infinite VSWR at rated operating conditions.



.500 6LFL (M111)
epoxy sealed

PIN CONNECTION



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

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

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

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	4.6	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	I_C = 50 mA	V_{BE} = 0 mA	36	---	---	V
BV_{CEO}	I_C = 50 mA	I_B = 0 V	16	---	---	V
BV_{EBO}	I_C = 10 mA	I_C = 0 mA	4.0	---	---	V
I_{CES}	V_{CE} = 15 V	V_{BE} = 0 mA	---	---	5	mA
HFE	V_{CE} = 5.0 V	I_C = 500 A	20	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 470 MHz	P_{IN} = 2.65 W	V_{CE} = 12.5 V	15	---	---	W
G_p	f = 470 MHz	P_{IN} = 2.65 W	V_{CE} = 12.5 V	7.5	---	---	dB
C_{OB}	f = 1 MHz	V_{CB} = 12.0 V		---	---	50.0	pf

IMPEDANCE DATA

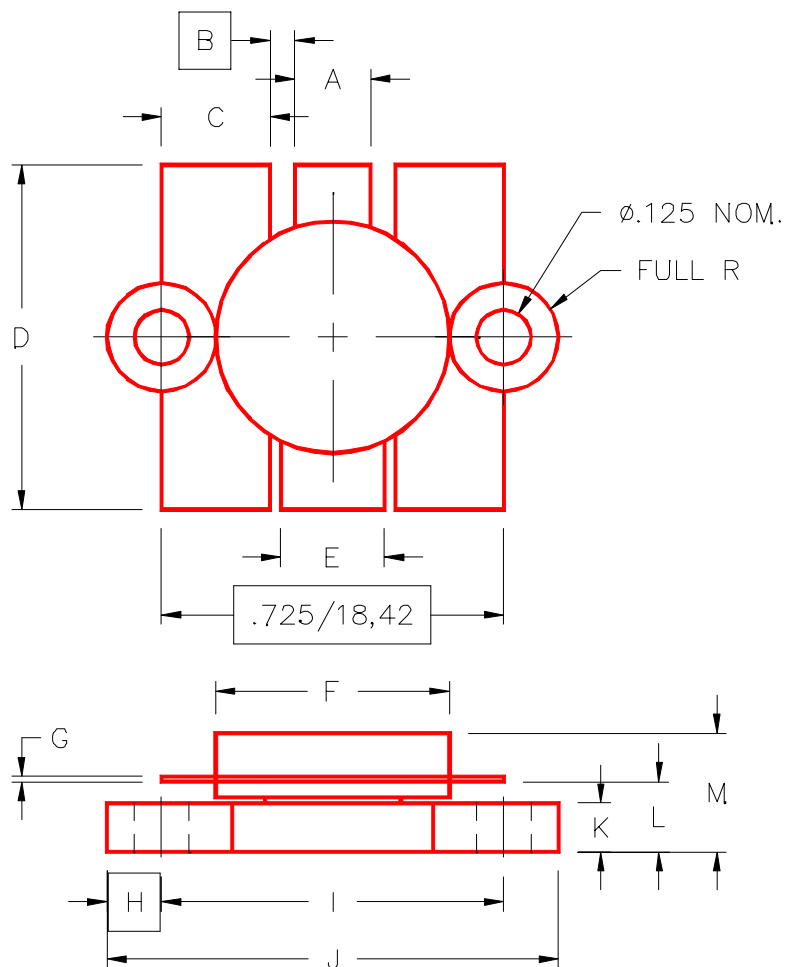
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
450 MHz	2.9 – j 0.2	1.0 + j 1.9
470 MHz	2.4 – j 0.9	0.90 + j 2.3
512 MHz	0.3 + j 0.4	0.90 + j 2.3

P_{OUT} = 15 W

V_{CE} = 12.5V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M111



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.150/3,43	.160/4,06	I	.720/18,29	.730/18,54
B	.045/1,14		J	.970/24,64	.980/24,89
C	.210/5,33	.220/5,59	K	.095/2,41	.105/2,67
D	.835/21,21	.865/21,97	L	.150/3,81	.170/4,32
E	.200/5,08	.210/5,33	M		.280/7,11
F	.490/12,45	.510/12,95			
G	.003/0,08	.007/0,18			
H	.125/3,18				