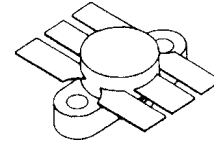


**SD1429-03**
**RF & MICROWAVE TRANSISTORS  
UHF MOBILE APPLICATIONS**
**Features**

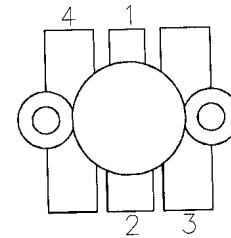
- 470 MHz
- 12.5 VOLTS
- P<sub>OUT</sub> = 15.0 WATTS
- G<sub>P</sub> = 7.5 dB MINIMUM
- COMMON EMITTER CONFIGURATION



.500 6LFL (M111)  
epoxy sealed

**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.

**PIN CONNECTION**


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

**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	36	V
V <sub>CEO</sub>	Collector-Emitter Voltage	16	V
V <sub>CES</sub>	Collector-Emitter Voltage	36	V
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	V
I <sub>C</sub>	Collector Current	3.4	W
P <sub>tot</sub>	Total Power Dissipation	37.5	A
T <sub>J</sub>	Junction Temperature	+200	°C
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C

**Thermal Data**

R <sub>TH(J-C)</sub>	Thermal Resistance Junction-case	4.6	°C/W
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## ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)

### STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV <sub>CES</sub>	I <sub>C</sub> = 50 mA	V <sub>BE</sub> = 0 mA	36	---	---	V
BV <sub>CEO</sub>	I <sub>C</sub> = 50 mA	I <sub>B</sub> = 0 V	16	---	---	V
BV <sub>EBO</sub>	I <sub>C</sub> = 10 mA	I <sub>C</sub> = 0 mA	4.0	---	---	V
I <sub>CES</sub>	V <sub>CE</sub> = 15 V	V <sub>BE</sub> = 0 mA	---	---	5	mA
HFE	V <sub>CE</sub> = 5.0 V	I <sub>C</sub> = 500 A	20	---	200	---

### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 470 MHz	P <sub>IN</sub> = 2.65 W	V <sub>CE</sub> = 12.5 V	15	---	---	W
G <sub>p</sub>	f = 470 MHz	P <sub>IN</sub> = 2.65 W	V <sub>CE</sub> = 12.5 V	7.5	---	---	dB
C <sub>OB</sub>	f = 1 MHz	V <sub>CB</sub> = 12.0 V		---	---	50.0	pf

### IMPEDANCE DATA

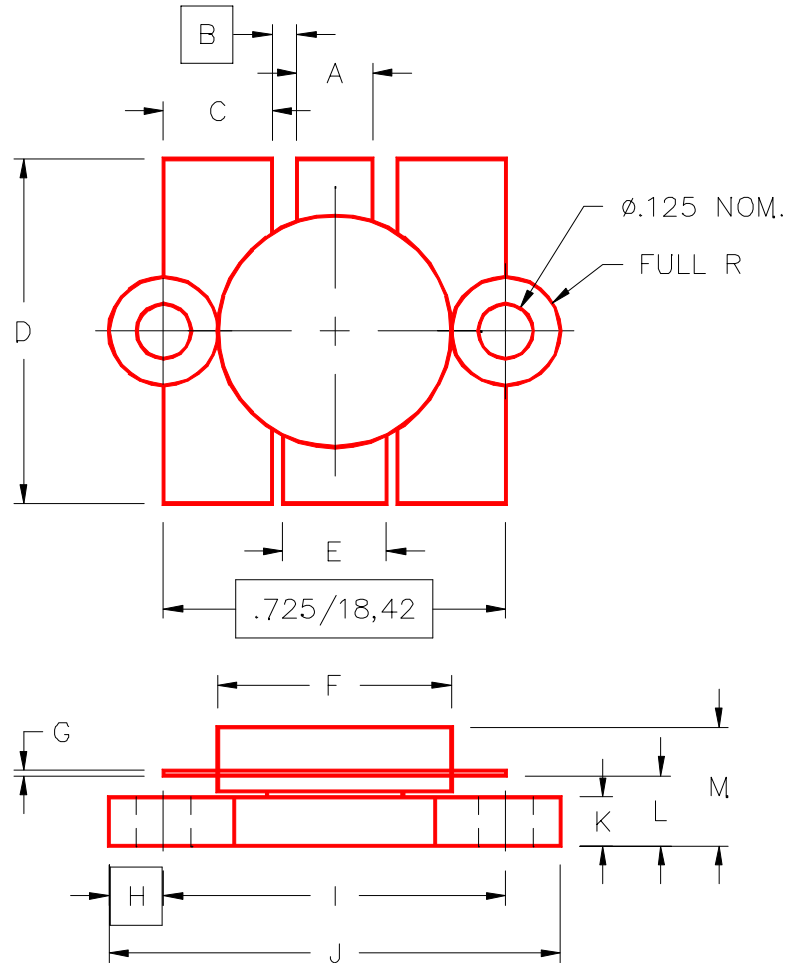
FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
450 MHz	2.9 - j 0.2	1.0 + j 1.9
470 MHz	2.4 - j 0.9	0.90 + j 2.3
512 MHz	0.3 + j 0.4	0.90 + j 2.3

P<sub>OUT</sub> = 15 W

V<sub>CE</sub> = 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				