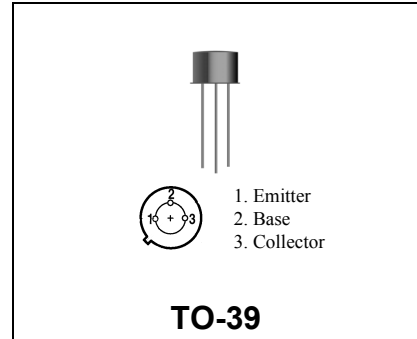


SD1444
**RF & MICROWAVE TRANSISTORS
450-512MHz CLASS C MOBILE APPLICATIONS**
Features

- 470 MHz
- 12.5 VOLTS
- P_{OUT} = 4.0 WATTS
- G_p = 12.0 dB MINIMUM
- COMMON EMITTER

DESCRIPTION:

The SD1444 is a 12.5V epitaxial silicon NPN planar transistor designed primarily for UHF communications. This device is packaged in a grounded emitter TO-39 package for increased power gain and optimum heat dissipation.


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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	36.0	V
V _{CEO}	Collector-Emitter Voltage	16.0	V
V _{EBO}	Emitter – Base Voltage	4.0	V
I _C	Collector Current	0.40	A
P _{tot}	Total Power Dissipation	5.0	W
T _{STG}	Storage Temperature	-65 + 200	°C
T _J	Junction Temperature	+200	°C

Thermal Data

R _{TH(J-C)}	Junction-case Thermal Resistance	35.0	°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	36	---	---	V
BV _{CEO}	I _C = 50 mA	I _B = 0	16	---	---	V
BV _{EBO}	I _E = 1 mA	I _C = 0	4.0	---	---	V
I _{CBO}	V _{CB} = 15 V	I _E = 0	---	---	1.0	mA
H _{FE}	V _{CE} = 5 V	I _C = 50 mA	20	---	200	---

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P _{OUT}	f = 470 MHz	V _{CE} = 12.5 V	2.0	---	---	W
G _{PE}	f = 470 MHz	V _{CE} = 12.5 V	8.0	---	---	dB
C _{ob}	V _{CE} = 15.0 V	f = 1 MHz	---	---	15.0	pf

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
470 MHz	2.9 + j0.6	15.6 – j10.2

P_{OUT} = 2W
V_{CC} = 12.5V

PACKAGE MECHANICAL DATA

