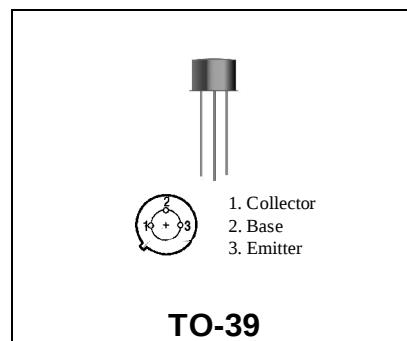


RF & MICROWAVE TRANSISTORS VHF FM MOBILE APPLICATIONS

Features

- 175 MHz
- 12.5 VOLTS
- $P_{OUT} = 4.0 \text{ W MINIMUM}$
- $G_P = 12.0 \text{ dB}$
- GROUNDED EMITTER



DESCRIPTION:

The SD1127 is a epitaxial silicon NPN transistor designed primarily for VHF mobile communications. The chip of this transistor is mounted on a beryllia pill to isolate the collector lead and ground the emitter lead for high gain performance

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	18	V
V_{CES}	Collector-Emitter Voltage	36	V
V_{EBO}	Emitter – Base Voltage	4.0	V
I_C	Collector Current	.64	A
P_{tot}	Total Power Dissipation	8.0	W
T_{STG}	Storage Temperature	-65 + 200	$^{\circ}\text{C}$
T_J	Junction Temperature	+200	$^{\circ}\text{C}$

Thermal Data

$R_{TH(J-C)}$	Junction-case Thermal Resistance	21.9	$^{\circ}\text{C/W}$
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	I_C = 5 mA	V_{BE} = 0	36	---	---	V
BV_{CEO}	I_C = 10 mA	I_B = 0	18	---	---	V
BV_{EBO}	I_E = 1 mA	I_C = 0	4.0	---	---	V
I_{CBO}	V_{CB} = 15.0 V	I_E = 0	---	---	.25	mA
H_{FE}	V_{CE} = 5.0 V	I_C = 50 mA	10	---	100	---

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_{OUT}	f =175 MHz	V_{CE} =12.5 V	4.0	---	---	W
G_{PE}	f =175 MHz	V_{CE} =12.5 V	12.0	---	---	dB
Cob	f =1 MHz	V_{CE} =15.0 V	---	---	20.0	pf

IMPEDANCE DATA

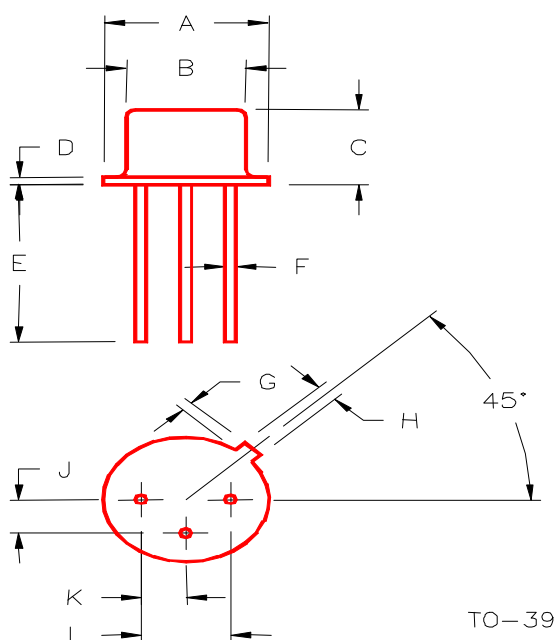
FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
136 MHz	3.0 – j3.8	12.8 – j11
155 MHz	4.0 – j2.0	11 – j14.8
175 MHz	4.3 – j5.8	13 – j20

P_{IN} = 0.2W

V_{CC} = 12.6V

PACKAGE MECHANICAL DATA

PACKAGE STYLE M246



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.350/8,89	.370/9,40	J	.095/2,41	.105/2,67
B	.315/8,00	.335/8,51	K	.095/2,41	.105/2,67
C	.240/6,10	.260/6,60	L	.190/4,83	.210/5,33
D	.015/0,38	.045/1,14			
E	.500/12,70				
F	.016/0,41	.019/0,48			
G	.029/0,74	.040/1,02			
H	.028/0,71	.034/0,86			