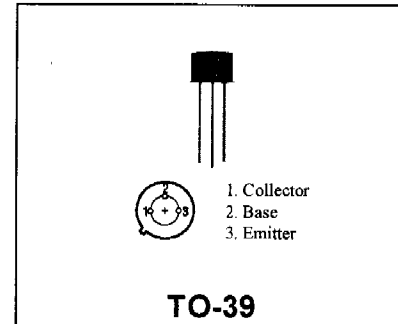


**SD1127**

**RF & MICROWAVE TRANSISTORS  
VHF FM MOBILE APPLICATIONS**

**Features**

- 175 MHz
- 12.5 VOLTS
- P<sub>OUT</sub> = 4.0 W MINIMUM
- G<sub>p</sub> = 12.0 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

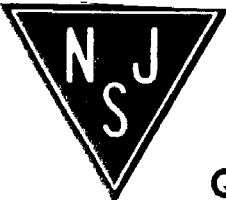
**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	36	V
V <sub>CEO</sub>	Collector-Emitter Voltage	18	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	.64	A
P <sub>tot</sub>	Total Power Dissipation	8.0	W
T <sub>STG</sub>	Storage Temperature	-65 + 200	°C
T <sub>J</sub>	Junction Temperature	+200	°C

**Thermal Data**

R <sub>TH(J-C)</sub>	Junction-case Thermal Resistance	21.9	°C/W
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NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



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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> = 5 mA	V <sub>BE</sub> = 0	36	---	---	V
BV <sub>CEO</sub>	I <sub>C</sub> = 10 mA	I <sub>B</sub> = 0	18	---	---	V
BV <sub>EBO</sub>	I <sub>E</sub> = 1 mA	I <sub>C</sub> = 0	4.0	---	---	V
I <sub>CBO</sub>	V <sub>CB</sub> = 15.0 V	I <sub>E</sub> = 0	---	---	.25	mA
H <sub>FE</sub>	V <sub>CE</sub> = 5.0 V	I <sub>C</sub> = 50 mA	10	---	100	---

### DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 175 MHz	V <sub>CE</sub> = 12.5 V	4.0	---	---	W
G <sub>PE</sub>	f = 175 MHz	V <sub>CE</sub> = 12.5 V	12.0	---	---	dB
C <sub>ob</sub>	f = 1 MHz	V <sub>CE</sub> = 15.0 V	---	---	20.0	pf

### IMPEDANCE DATA

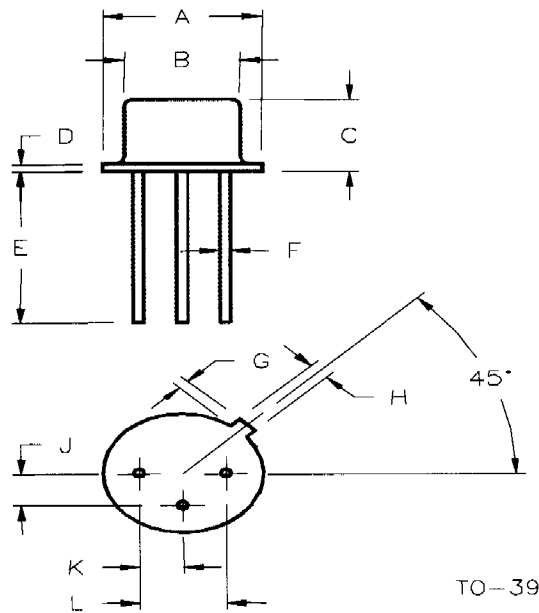
FREQ	Z <sub>IN</sub> (Ω)	Z <sub>CL</sub> (Ω)
136 MHz	3.0 - j3.8	12.8 - j11
155 MHz	4.0 - j2.0	11 - j14.8
175 MHz	4.3 - j5.8	13 - j20

P<sub>IN</sub> = 0.2W  
V<sub>CC</sub> = 12.6V

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**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			