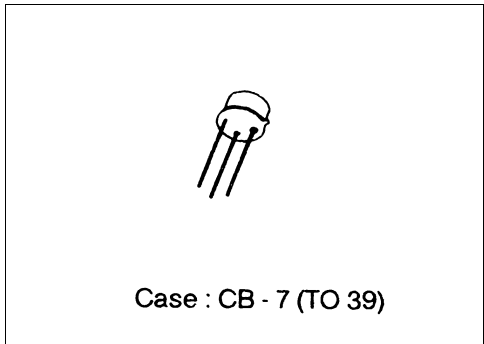


SD1127

RF & MICROWAVE TRANSISTORS
VHF COMMUNICATIONS

Features

- DESIGNED FOR VHF MILITARY AND COMMERCIAL EQUIPMENT
- 4.0 WATTS (MIN) WITH GREATER THAN 10 dB GAIN
- GROUNDED EMITTER CONFIGURATION



DESCRIPTION:

THE SD1127 IS A 12.5 VOLT SILICON NPN PLANAR TRANSISTOR DESIGNED FOR ECONOMICAL VHF COMMUNICATIONS. THE TRANSISTOR CHIP IS MOUNTED ON A BERYLLIUM OXIDE TAB TO ISOLATE THE COLLECTOR LEAD ALLOWING A GROUNDED EMITTER CONFIGURATION FOR HIGH GAIN AND EXCELLENT HEAT DISSIPATION.

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

Symbol	Parameter	Value	Unit
P _{DISS}	Total Power Dissipation *	8.0	W
V _{CBO}	Collector-base Voltage	36	V
V _{CEO}	Collector-emitter Voltage (I _B =0)	18	V
I _C	Collector Current *	0.64	A
T _{STG}	Storage Temperature	-65 to 200	°C
T _J	Junction Temperature	200	°C

*At RF Conditions

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case	21.9	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
Bvceo	I _C = 10 mA	18	---	---	V
Bvces	I _C = 5 mA	36	---	---	V
Bvebo	I _E = 1 mA	4.0	---	---	V
Cob	V _{CB} =15V	---	---	0.25	mA
HFE	I _C = 50 mA V _{CE} =5V	5.0	---	---	---

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P _{out}	f=175 MHz V _{CE} =12.5V	4.0	---	---	W
G _p	f=175 MHz V _{CE} =12.5V	10	12	---	dB
Cob	f=1 MHz V _{CE} =15V I _E = 0 mA	---	---	20	pF

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
175 MHz	4.1- j 5.6	13.5- j 20.0

P_{IN}=0.2W V_{CE}=12.5V

