

140 COMMERCE DRIVE MONTGOMERYVILLE, PA 18936-1013

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# SD1143-01

# RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

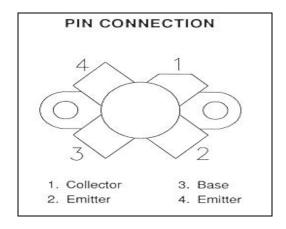
#### **Features**

- 175 MHz
- 12.5 VOLTS
- P<sub>OUT</sub> = 10 W
- G<sub>P</sub> = 10 dB MINIMUM
- COMMON EMITTER CONFIGURATION

# .380 4LFL (M113) epoxy sealed

### **DESCRIPTION:**

The SD1143-01 is a 12.5 V epitaxial silicon, NPN transistor designed primarily for Class C, VHF communications equipment. Emitter ballast resistors provide high VSWR operating capability.



# ABSOLUTE MAXIMUM RATINGS (Tcase = 25°C)

Symbol	Parameter	Value	Unit	
V <sub>CBO</sub>	Collector-Base Voltage	36	٧	
V <sub>CER</sub>	Collector-Emitter Voltage	18	٧	
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	٧	
Ic	Device Current	2.0	Α	
P <sub>DISS</sub>	Power Dissipation	20	W	
TJ	Junction Temperature	+200	°C	
T <sub>STG</sub>	Storage Temperature	-65 to +150	°C	

# **THERMAL DATA**

R <sub>TH(J-C)</sub>	Junction-case Thermal Resistance*	8.75	°C/W
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SD1143-01

# **ELECTRICAL SPECIFICATIONS (Tcase = 25°C) STATIC**

Symbol	Test Conditions			Value		
	rest Conditions	Min.	Typ.	Max.	Unit	
BV <sub>CES</sub>	$I_C = 50mA$	$V_{BE} = 0V$	36			V
BV <sub>CEO</sub>	I <sub>E</sub> = 15mA	I <sub>B</sub> = 0mA	18			V
BV <sub>EBO</sub>	I <sub>E</sub> = 2.5mA	I <sub>C</sub> = 0mA	4.0			V
I <sub>CES</sub>	V <sub>CE</sub> = 15 V	I <sub>E</sub> = 0mA			2	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5 V	$I_C = 250 \text{mA}$	5		200	

## **DYNAMIC**

Symbol	Test Conditions			Value			
Symbol	rest conditions			Min.	Typ.	Max.	Unit
P <sub>OUT</sub>	f = 175 MHz	$P_{IN} = 1 W$	$V_{CC} = 12.5V$	10			W
G₽	f = 175 MHz	P <sub>IN</sub> = 1 W	V <sub>CC</sub> = 12.5V	10			dB
Сов	f = 1 MHz	V <sub>CB</sub> = 15V				45	pf





## PACKAGE MECHANICAL DATA

