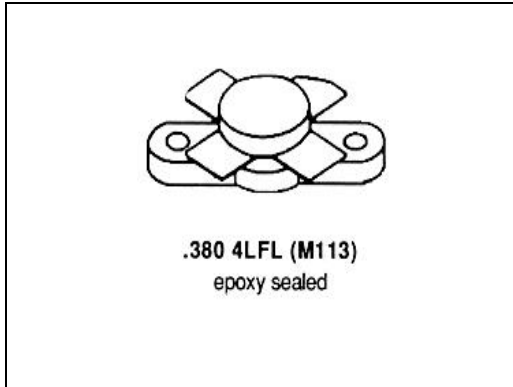


SD1143-01

**RF & MICROWAVE TRANSISTORS
VHF MOBILE APPLICATIONS**

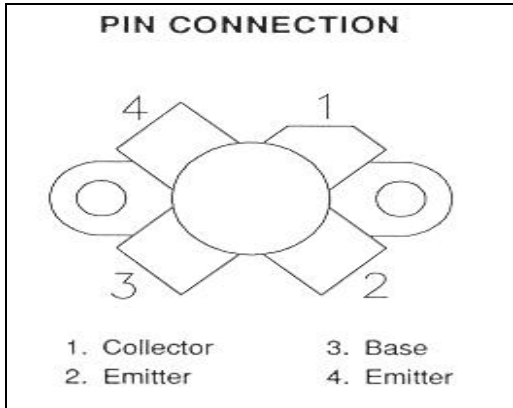
Features

- 175 MHz
- 12.5 VOLTS
- $P_{OUT} = 10\text{ W}$
- $G_P = 10\text{ dB MINIMUM}$
- COMMON EMITTER CONFIGURATION



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 (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CER}	Collector-Emitter Voltage	18	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	2.0	A
P_{DISS}	Power Dissipation	20	W
T_J	Junction Temperature	+200	°C
T_{STG}	Storage Temperature	-65 to +150	°C

THERMAL DATA

$R_{TH(J-C)}$	Junction-case Thermal Resistance*	8.75	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

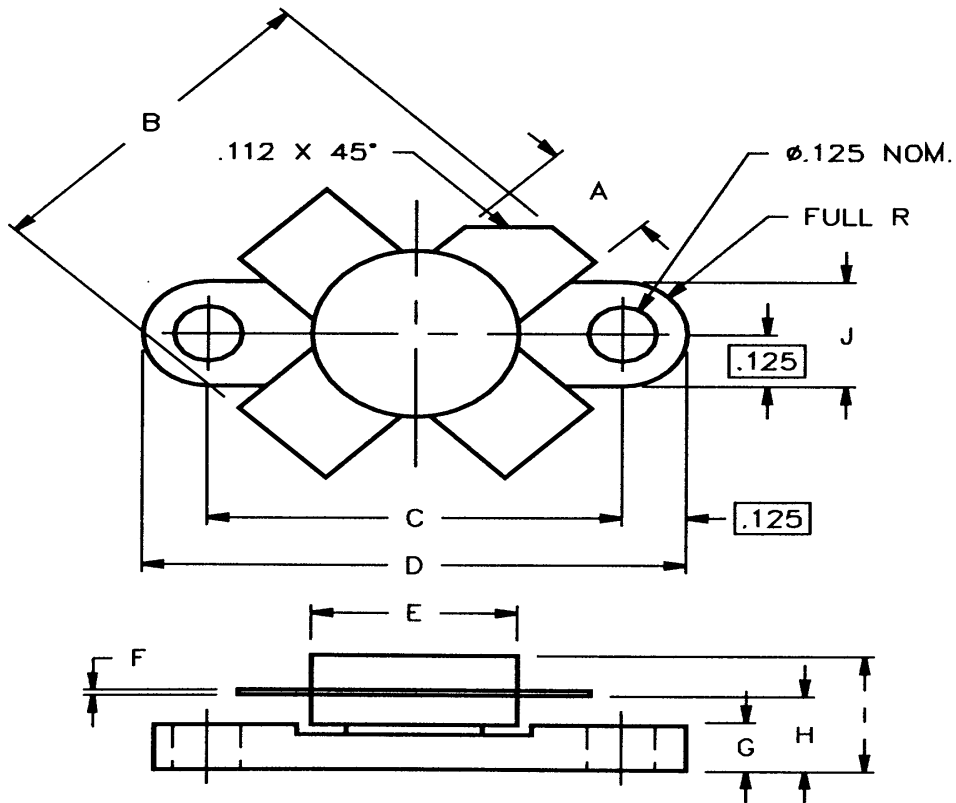
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	I_C = 50mA	V_{BE} = 0V	36	---	---	V
BV_{CEO}	I_E = 15mA	I_B = 0mA	18	---	---	V
BV_{EBO}	I_E = 2.5mA	I_C = 0mA	4.0	---	---	V
I_{CES}	V_{CE} = 15 V	I_E = 0mA	-----	---	2	mA
h_{FE}	V_{CE} = 5 V	I_C = 250mA	5	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 175 MHz	P_{IN} = 1 W	V_{CC} = 12.5V	10	---	---	W
G_P	f = 175 MHz	P_{IN} = 1 W	V_{CC} = 12.5V	10	---	---	dB
C_{OB}	f = 1 MHz	V_{CB} = 15V		---	---	45	pf

PACKAGE MECHANICAL DATA



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84	I		.260/7,11
B	.785/19,94		J	.240/6,10	.255/6,48
C	.720/18,29	.730/18,54			
D	.970/24,64	.980/24,89			
E		.385/9,78			
F	.004/0,10	.006/0,15			
G	.085/2,16	.105/2,67			
H	.160/4,06	.180/4,57			