

SD1143-01

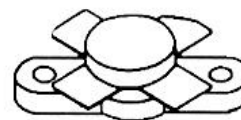
**RF & MICROWAVE TRANSISTORS
 VHF MOBILE APPLICATIONS**

Features

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

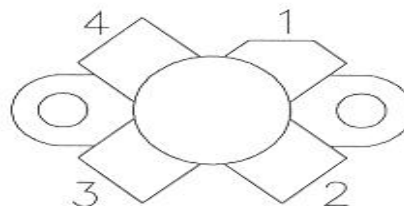
DESCRIPTION:

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.



.380 4LFL (M113)
 epoxy sealed

PIN CONNECTION



1. Collector 3. Base
 2. Emitter 4. Emitter

ABSOLUTE MAXIMUM RATINGS (Tcase = 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 (Tcase = 25°C)

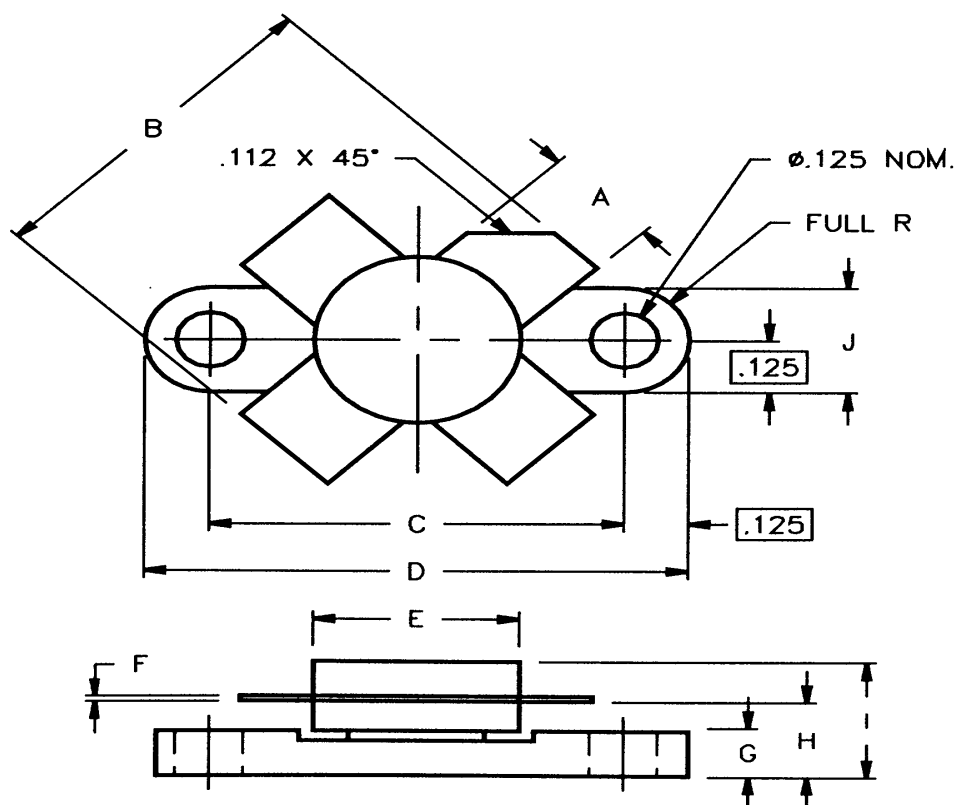
STATIC

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			