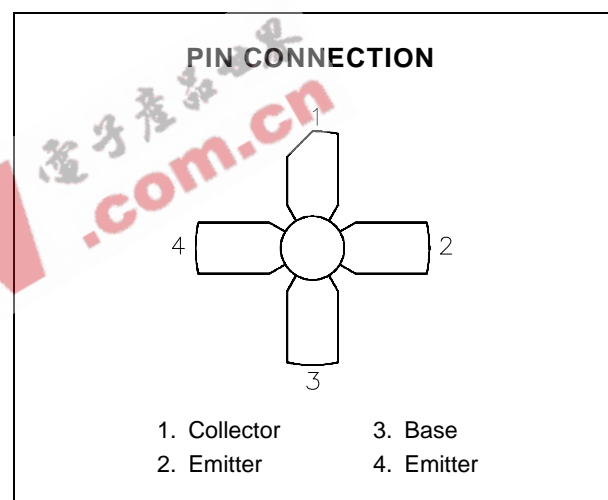
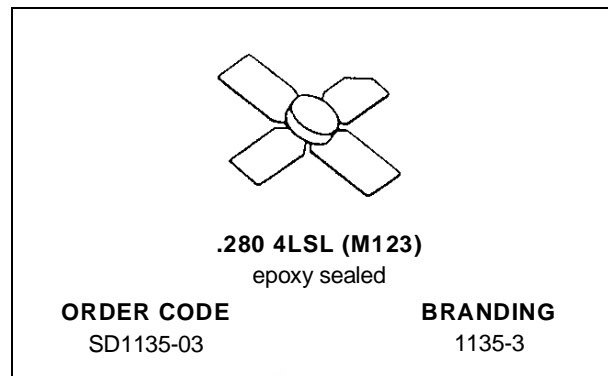


## RF & MICROWAVE TRANSISTORS VHF PORTABLE/MOBILE APPLICATIONS

- 150 MHz
- 7.5 VOLTS
- COMMON EMITTER
- $P_{OUT} = 2.5 \text{ W MIN. WITH } 11.0 \text{ dB GAIN}$



### DESCRIPTION

The SD1135-03 is a 7.5 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications. It withstands severe mismatch under operating conditions.

### ABSOLUTE MAXIMUM RATINGS ( $T_{case} = 25^{\circ}\text{C}$ )

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	36	V
$V_{CER}$	Collector-Emitter Voltage	16	V
$V_{CES}$	Collector-Emitter Voltage	36	V
$V_{EBO}$	Emitter-Base Voltage	4.0	V
$I_C$	Device Current	1.7	A
$P_{DISS}$	Power Dissipation	15	W
$T_J$	Junction Temperature	+200	$^{\circ}\text{C}$
$T_{STG}$	Storage Temperature	- 65 to +150	$^{\circ}\text{C}$

### THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	11.6	$^{\circ}\text{C/W}$
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## SD1135-03

### ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)

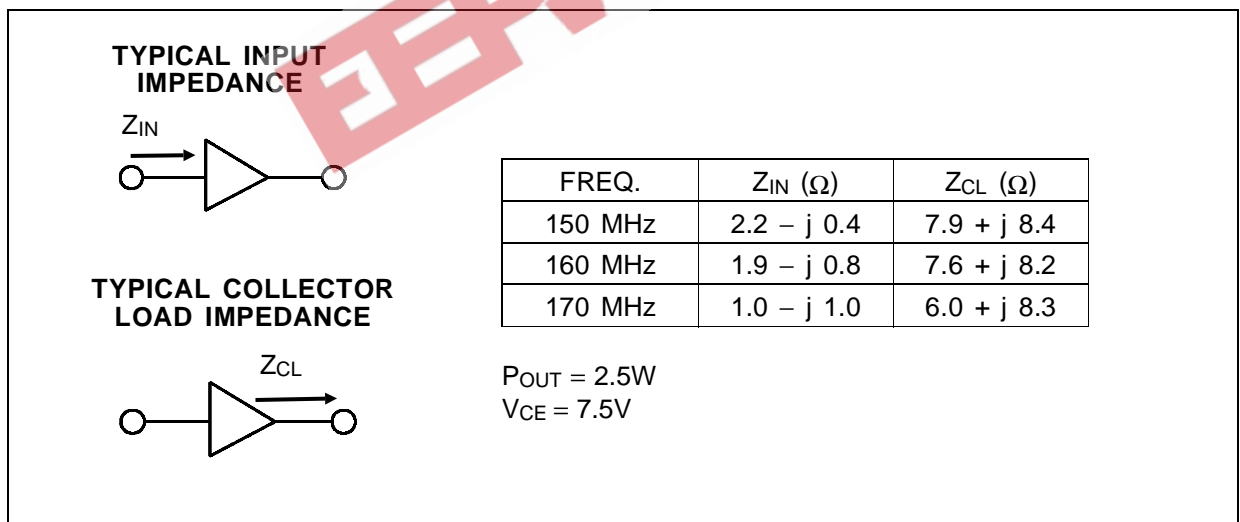
#### STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV <sub>CES</sub>	I <sub>C</sub> = 10mA	V <sub>BE</sub> = 0V	36	—	—	V
BV <sub>CEO</sub>	I <sub>C</sub> = 50mA	I <sub>B</sub> = 0mA	16	—	—	V
BV <sub>EBO</sub>	I <sub>E</sub> = 2mA	I <sub>C</sub> = 0mA	4.0	—	—	V
I <sub>CER</sub>	V <sub>CE</sub> = 10V	R <sub>BE</sub> = 50Ω	—	—	0.5	mA
I <sub>CBO</sub>	V <sub>CB</sub> = 15V	I <sub>E</sub> = 0mA	—	—	1.0	mA
h <sub>FE</sub>	V <sub>CE</sub> = 5V	I <sub>C</sub> = 200mA	20	—	—	—

#### DYNAMIC

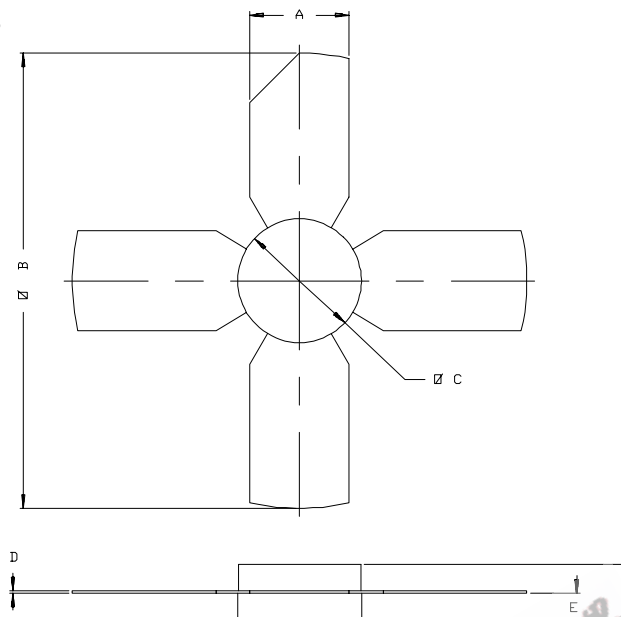
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 150 MHz	V <sub>CC</sub> = 7.5 V	2.5	—	—	W
G <sub>P</sub>	f = 150 MHz	V <sub>CC</sub> = 7.5 V	11.0	—	—	dB
C <sub>OB</sub>	f = 1 MHz	V <sub>CB</sub> = 7.5 V	—	19	—	pF

#### IMPEDANCE DATA



## PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0123



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84
B	-----	1.055/26,8
C	.275/6,99	.285/7,24
D	.004/0,10	.006/0,15
E	.050/1,27	.060/1,52
F	.118/3,00	.130/3,30

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