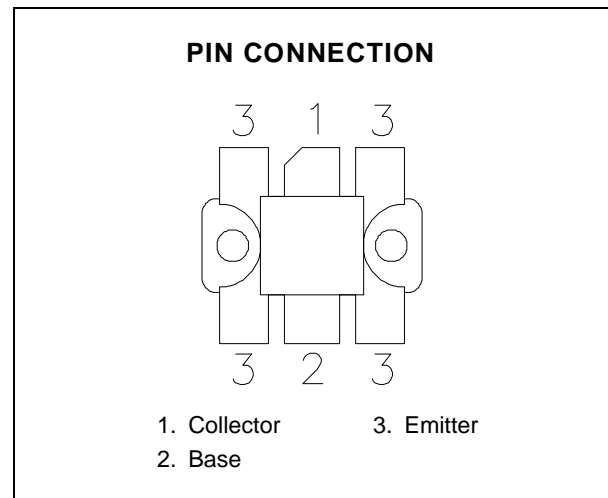
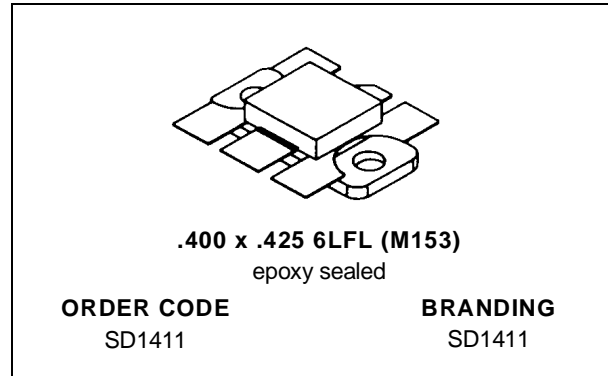


**RF & MICROWAVE TRANSISTORS  
HF SSB APPLICATIONS**

- 30 MHz
- 40 VOLTS
- IMD -30 dB
- COMMON EMITTER
- GOLD METALLIZATION
- P<sub>OUT</sub> = 200 W MIN. WITH 16 dB GAIN


**DESCRIPTION**

The SD1411 is a silicon NPN transistor designed for telecommunications in HF and VHF frequency bands. This device utilizes gold metallized die with diffused emitter resistors to achieve high reliability and ruggedness.

**ABSOLUTE MAXIMUM RATINGS** (T<sub>case</sub> = 25°C)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	110	V
V <sub>CEO</sub>	Collector-Emitter Voltage	55	V
V <sub>EBO</sub>	Emitter-Base Voltage	4.0	V
I <sub>C</sub>	Device Current	40	A
P <sub>DISS</sub>	Power Dissipation	330	W
T <sub>J</sub>	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	0.36	°C/W
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## SD1411

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

#### STATIC

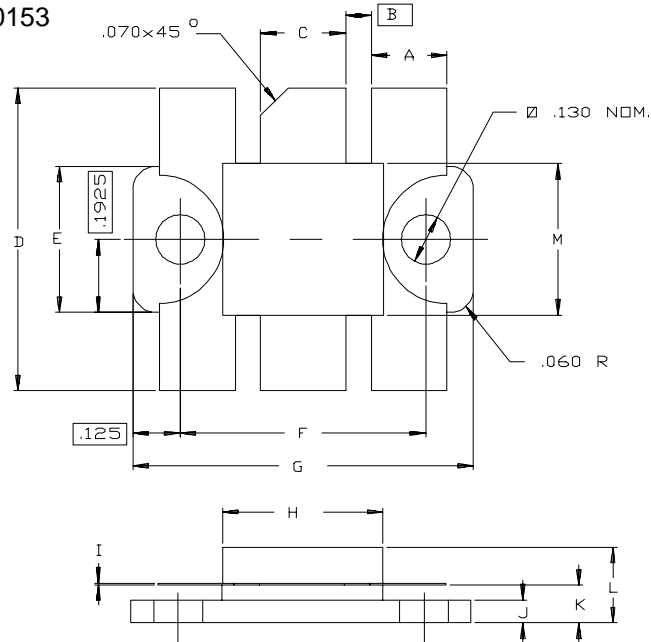
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
BV <sub>CBO</sub>	I <sub>C</sub> = 200mA	I <sub>E</sub> = 0mA	110	—	—	V	
BV <sub>CES</sub>	I <sub>C</sub> = 200mA	V <sub>BE</sub> = 0V	110	—	—	V	
BV <sub>CER</sub>	I <sub>C</sub> = 200mA	R <sub>BE</sub> = 10Ω	100	—	—	V	
BV <sub>CEO</sub>	I <sub>C</sub> = 200mA	I <sub>B</sub> = 0mA	55	—	—	V	
BV <sub>EBO</sub>	I <sub>E</sub> = 20mA	I <sub>C</sub> = 0mA	4.0	—	—	V	
I <sub>CES</sub>	V <sub>CE</sub> = 45V	I <sub>E</sub> = 0mA	—	—	20	mA	
h <sub>FE</sub>	V <sub>CE</sub> = 6V	I <sub>C</sub> = 10A	15	—	80	—	

#### DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P <sub>OUT</sub>	f = 30 MHz	V <sub>CE</sub> = 40 V	I <sub>CQ</sub> = 150 mA	200	—	—	W
G <sub>P</sub>	f = 30 MHz	V <sub>CE</sub> = 40 V	I <sub>CQ</sub> = 150 mA	16	—	—	dB
IMD	f = 30 MHz	V <sub>CE</sub> = 40 V	I <sub>CQ</sub> = 150 mA	—	—	-30	dB
C <sub>OB</sub>	f = 1 MHz	V <sub>CB</sub> = 50 V		—	—	360	pF

## PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0153



SGS-THOMSON MICROELECTRONICS			CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm		MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.195/4,95	.205/5,21	K	.095/2,41	.110/2,79
B	.067/1,70		L	.220/5,59	
C	.220/5,59	.230/5,84	M	.395/10,03	.408/10,36
D	.790/20,07	.810/20,57			
E	.380/9,65	.390/9,91			
F	.645/16,38	.655/16,64			
G	.885/22,48	.905/22,98			
H	.420/10,67	.433/11,00			
I	.003/0,08	.007/0,18			
J	.055/1,40	.065/1,65			

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