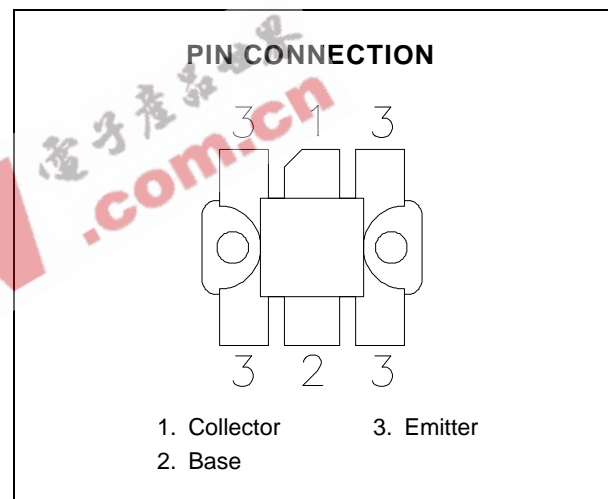
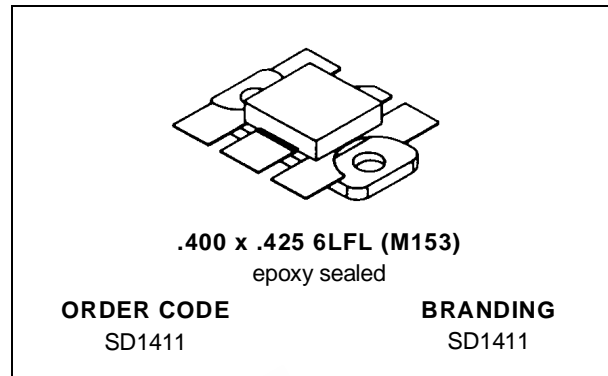


**RF & MICROWAVE TRANSISTORS  
HF SSB APPLICATIONS**

- 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** ( $T_{\text{case}} = 25^{\circ}\text{C}$ )

## STATIC

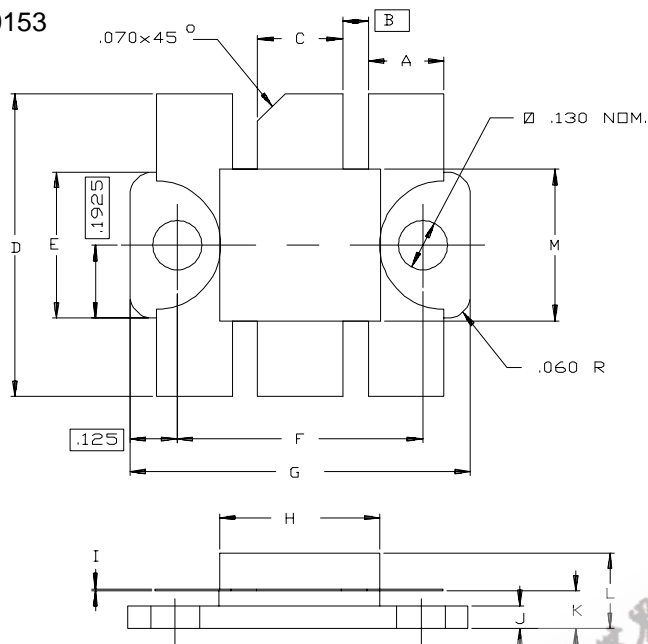
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{\text{CBO}}$	$I_{\text{C}} = 200\text{mA}$	$I_{\text{E}} = 0\text{mA}$	110	—	—	V
$BV_{\text{CES}}$	$I_{\text{C}} = 200\text{mA}$	$V_{\text{BE}} = 0\text{V}$	110	—	—	V
$BV_{\text{CER}}$	$I_{\text{C}} = 200\text{mA}$	$R_{\text{BE}} = 10\Omega$	100	—	—	V
$BV_{\text{CEO}}$	$I_{\text{C}} = 200\text{mA}$	$I_{\text{B}} = 0\text{mA}$	55	—	—	V
$BV_{\text{EBO}}$	$I_{\text{E}} = 20\text{mA}$	$I_{\text{C}} = 0\text{mA}$	4.0	—	—	V
$I_{\text{CES}}$	$V_{\text{CE}} = 45\text{V}$	$I_{\text{E}} = 0\text{mA}$	—	—	20	mA
$h_{\text{FE}}$	$V_{\text{CE}} = 6\text{V}$	$I_{\text{C}} = 10\text{A}$	15	—	80	—

## DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$P_{\text{OUT}}$	$f = 30\text{ MHz}$	$V_{\text{CE}} = 40\text{ V}$	$I_{\text{CQ}} = 150\text{ mA}$	200	—	—	W
$G_{\text{P}}$	$f = 30\text{ MHz}$	$V_{\text{CE}} = 40\text{ V}$	$I_{\text{CQ}} = 150\text{ mA}$	16	—	—	dB
IMD	$f = 30\text{ MHz}$	$V_{\text{CE}} = 40\text{ V}$	$I_{\text{CQ}} = 150\text{ mA}$	—	—	-30	dB
$C_{\text{OB}}$	$f = 1\text{ MHz}$	$V_{\text{CB}} = 50\text{ V}$		—	—	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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