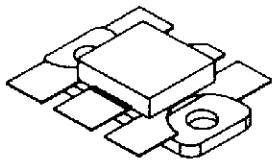
SGS-THOMSON MICROELECTRONICS

SD1411

RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

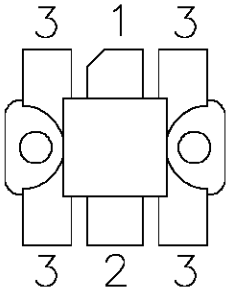
- 30 MHz
- 40 VOLTS
- IMD –30 dB
- COMMON EMITTER
- GOLD METALLIZATION
- P_{OUT} = 200 W MIN. WITH 16 dB GAIN



.400 x .425 6LFL (M153)
epoxy sealed

ORDER CODE	BRANDING
SD1411	SD1411

PIN CONNECTION



1. Collector
2. Base
3. Emitter

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_{case} = 25°C)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	110	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	40	A
P_{DISS}	Power Dissipation	330	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	0.36	°C/W

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

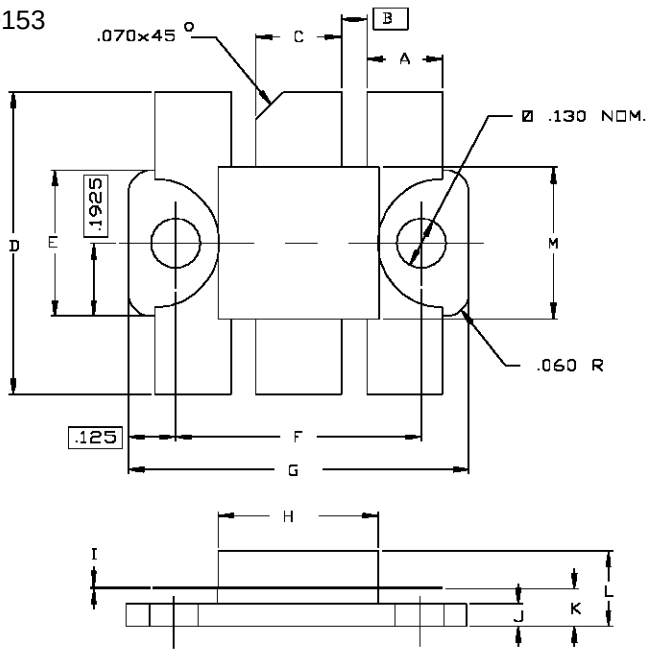
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 200mA	I_E = 0mA	110	—	—	V
BV_{CES}	I_C = 200mA	V_{BE} = 0V	110	—	—	V
BV_{CER}	I_C = 200mA	R_{BE} = 10Ω	100	—	—	V
BV_{CEO}	I_C = 200mA	I_B = 0mA	55	—	—	V
BV_{EBO}	I_E = 20mA	I_C = 0mA	4.0	—	—	V
I_{CES}	V_{CE} = 45V	I_E = 0mA	—	—	20	mA
h_{FE}	V_{CE} = 6V	I_C = 10A	15	—	80	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 30 MHz	V_{CE} = 40 V	I_{CQ} = 150 mA	200	—	—	W
G_P	f = 30 MHz	V_{CE} = 40 V	I_{CQ} = 150 mA	16	—	—	dB
IMD	f = 30 MHz	V_{CE} = 40 V	I_{CQ} = 150 mA	—	—	–30	dB
C_{OB}	f = 1 MHz	V_{CB} = 50 V		—	—	360	pF

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0153



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.195/4,95	.205/5,21
B	.067/1,70	
C	.220/5,59	.230/5,84
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

CONT'D		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
K	.095/2,41	.110/2,79
L		.220/5,59
M	.395/10,03	.408/10,36