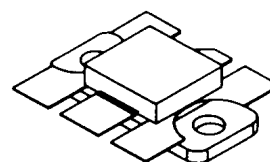


RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

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



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

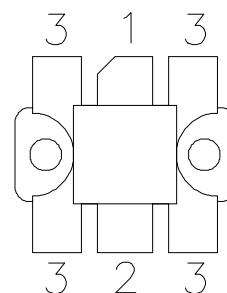
ORDER CODE
SD1411

BRANDING
SD1411

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.

PIN CONNECTION



1. Collector 3. Emitter
2. Base

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

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	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	- 65 to +150	$^{\circ}\text{C}$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	0.36	$^{\circ}\text{C/W}$
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SD1411

ELECTRICAL SPECIFICATIONS ($T_{\text{case}} = 25^{\circ}\text{C}$)

STATIC

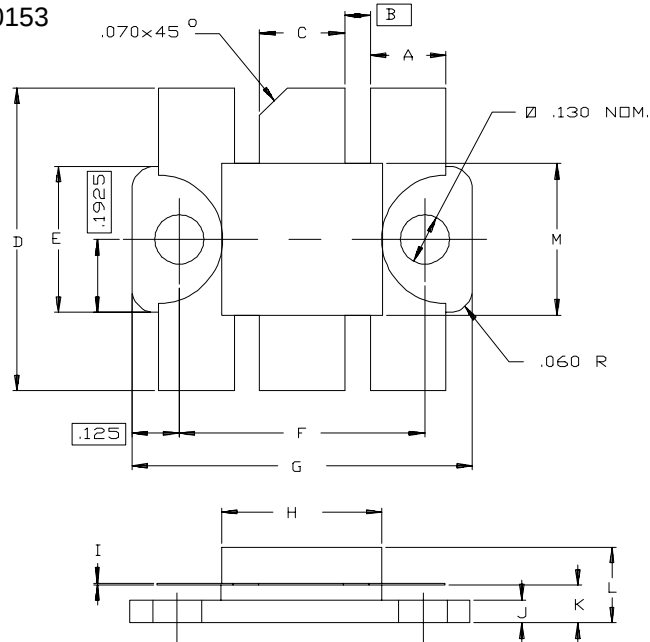
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_{\text{C}} = 200\text{mA}$	$I_{\text{E}} = 0\text{mA}$	110	—	—	V
BV_{CES}	$I_{\text{C}} = 200\text{mA}$	$V_{\text{BE}} = 0\text{V}$	110	—	—	V
BV_{CER}	$I_{\text{C}} = 200\text{mA}$	$R_{\text{BE}} = 10\Omega$	100	—	—	V
BV_{CEO}	$I_{\text{C}} = 200\text{mA}$	$I_{\text{B}} = 0\text{mA}$	55	—	—	V
BV_{EBO}	$I_{\text{E}} = 20\text{mA}$	$I_{\text{C}} = 0\text{mA}$	4.0	—	—	V
I_{CES}	$V_{\text{CE}} = 45\text{V}$	$I_{\text{E}} = 0\text{mA}$	—	—	20	mA
h_{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_{OUT}	$f = 30\text{ MHz}$	$V_{\text{CE}} = 40\text{ V}$	$I_{\text{CQ}} = 150\text{ mA}$	200	—	—	W
G_{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_{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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