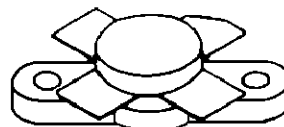


RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

- 30 MHz
- 12.5 VOLTS
- COMMON EMITTER
- GOLD METALLIZATION
- IMD – 30 dB
- $P_{OUT} = 20\text{ W MIN. WITH } 15\text{ dB GAIN}$



.380 4LFL (M113)
epoxy sealed

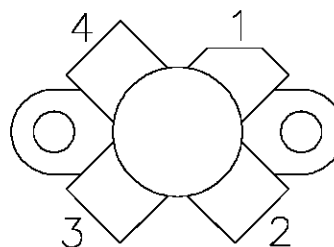
ORDER CODE
SD1285

BRANDING
SD1285

DESCRIPTION

The SD1285 is a 12.5 V epitaxial NPN planar transistor designed primarily for SSB communications. This device utilizes emitter ballasting to achieve extreme ruggedness under severe operating conditions.

PIN CONNECTION



- | | |
|--------------|------------|
| 1. Collector | 3. Base |
| 2. Emitter | 4. Emitter |

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	36	V
V_{CEO}	Collector-Emitter Voltage	18	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	4.5	A
P_{DISS}	Power Dissipation	80	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	2.2	$^{\circ}\text{C/W}$
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SD1285

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 50\text{mA}$	$I_E = 0\text{mA}$	36	—	—	V
BV_{CES}	$I_C = 50\text{mA}$	$V_{BE} = 0\text{V}$	36	—	—	V
BV_{CEO}	$I_C = 50\text{mA}$	$I_B = 0\text{mA}$	18	—	—	V
BV_{EBO}	$I_E = 5\text{mA}$	$I_C = 0\text{mA}$	4.0	—	—	V
I_{CES}	$V_{CE} = 15\text{V}$	$I_E = 0\text{mA}$	—	—	5	mA
h_{FE}	$V_{CE} = 5\text{V}$	$I_C = 1\text{A}$	10	—	200	—

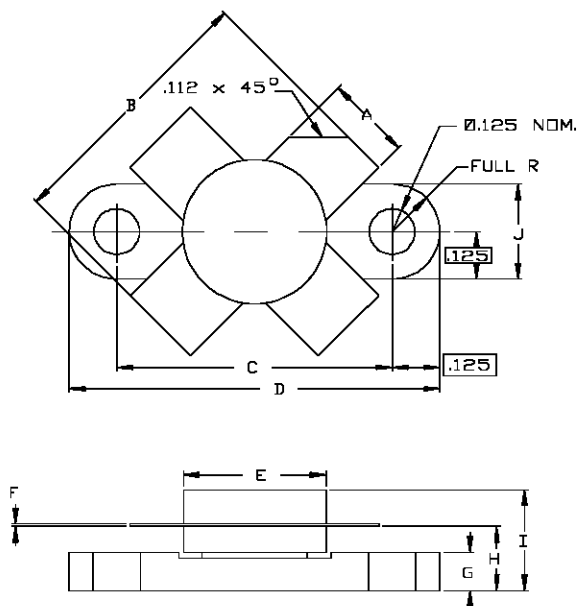
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 30\text{ MHz}$	$V_{CC} = 12.5\text{ V}$	$I_{CQ} = 25\text{ mA}$	20	—	—	W
G_P	$f = 30\text{ MHz}$	$V_{CC} = 12.5\text{ V}$	$I_{CQ} = 25\text{ mA}$	15	18	—	dB
IMD	$f = 30\text{ MHz}$	$V_{CC} = 12.5\text{ V}$	$I_{CQ} = 25\text{ mA}$	—	—	- 30	dB
C_{OB}	$f = 1\text{ MHz}$	$V_{CB} = 12.5\text{ V}$		—	100	—	pF

Note: $P_{IN} = 0.65\text{ W}$

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0113



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84
B	.785/19,94	
C	.720/18,29	.730/18,54
D	.970/24,64	.980/24,89
E		.385/9,78
F	.004/0,10	.006/0,15
G	.085/2,16	.105/2,67
H	.160/4,06	.180/4,57
I		.280/7,11
J	.240/6,10	.255/6,48

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