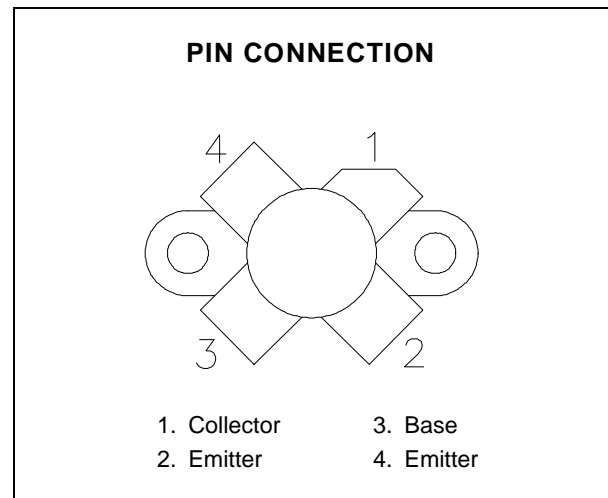
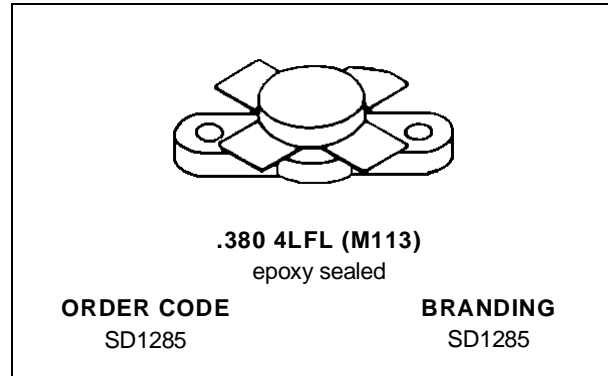


**RF & MICROWAVE TRANSISTORS
HF SSB APPLICATIONS**

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


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.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°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	°C
T _{STG}	Storage Temperature	- 65 to +150	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance	2.2	°C/W
----------------------	----------------------------------	-----	------

SD1285

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

STATIC

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

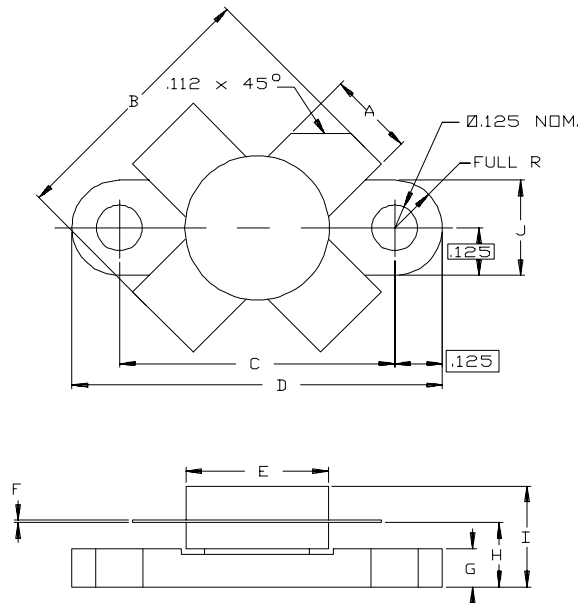
DYNAMIC

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

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A