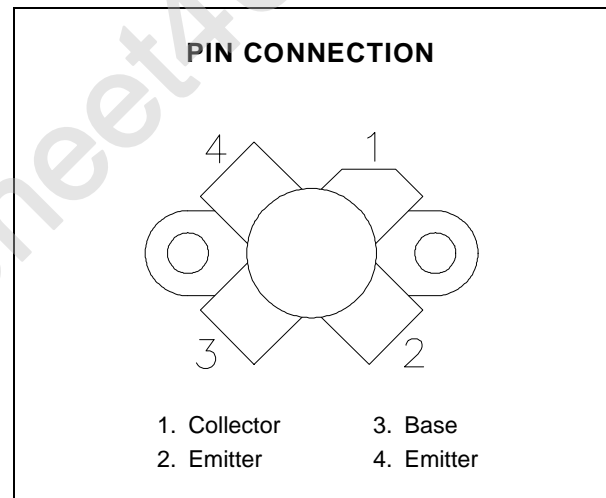
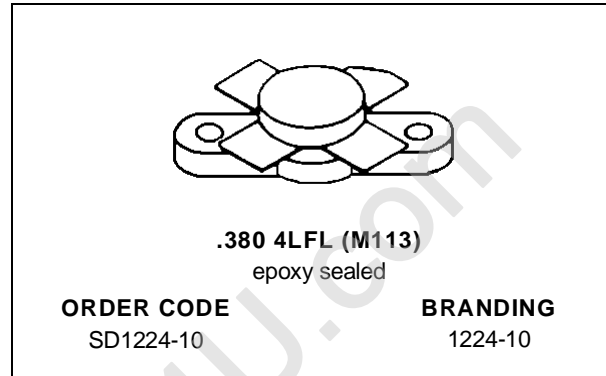


**RF & MICROWAVE TRANSISTORS
HF SSB APPLICATIONS**

- 30 MHz
- 28 VOLTS
- IMD -28 dB
- COMMON EMITTER
- GOLD METALLIZATION
- P_{OUT} = 30 W MIN. WITH 18 dB GAIN


DESCRIPTION

The SD1224-10 is a 28 V epitaxial silicon NPN planar transistor designed primarily for SSB communications. This device utilizes emitter ballasting for improved ruggedness and reliability.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	65	V
V _{CEO}	Collector-Emitter Voltage	36	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
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SD1224-10

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

STATIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
BV_{CBO}	$I_C = 200mA$	$I_E = 0mA$	65	—	—	V	
BV_{CES}	$I_C = 200mA$	$V_{BE} = 0V$	65	—	—	V	
BV_{CEO}	$I_C = 200mA$	$I_B = 0mA$	35	—	—	V	
BV_{EBO}	$I_E = 10mA$	$I_C = 0mA$	4.0	—	—	V	
I_{CBO}	$V_{CB} = 30V$	$I_E = 0mA$	—	—	1	mA	
h_{FE}	$V_{CE} = 5V$	$I_C = .5A$	5	—	200	—	

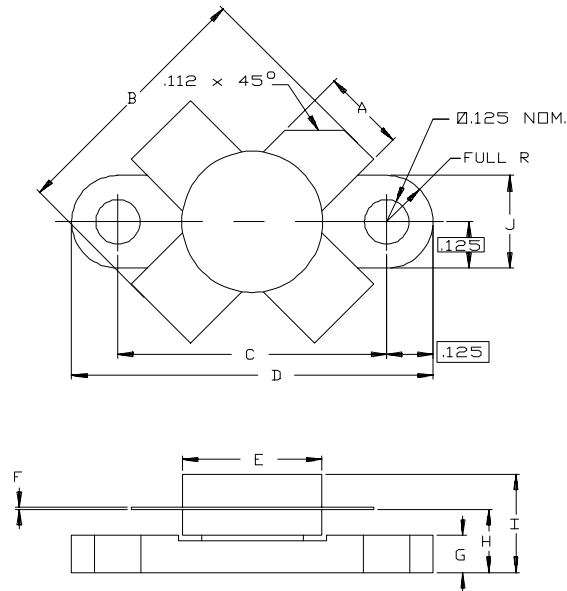
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 30\text{ MHz}$	$V_{CE} = 28\text{ V}$	$I_{CQ} = 25\text{ mA}$	30	—	—	W
G_P	$f = 30\text{ MHz}$	$V_{CE} = 28\text{ V}$	$I_{CQ} = 25\text{ mA}$	18	20	—	dB
IMD	$f = 30\text{ MHz}$	$V_{CE} = 28\text{ V}$	$I_{CQ} = 25\text{ mA}$	—	- 32	- 28	dB
C_{OB}	$f = 1\text{ MHz}$	$V_{CB} = 30\text{ V}$		—	—	65	pF

Note: $P_{IN} = 0.48W$

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0



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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