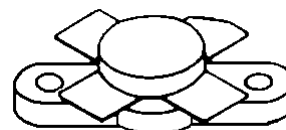


**RF & MICROWAVE TRANSISTORS
HF SSB APPLICATIONS**

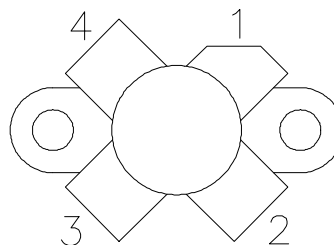
- 30 MHz
- 28 VOLTS
- IMD -28 dB
- COMMON EMITTER
- GOLD METALLIZATION
- P_{OUT} = 30 W MIN. WITH 18 dB GAIN



.380 4LFL (M113)
epoxy sealed

ORDER CODE
SD1224-10

BRANDING
1224-10

PIN CONNECTION


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

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°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	—	

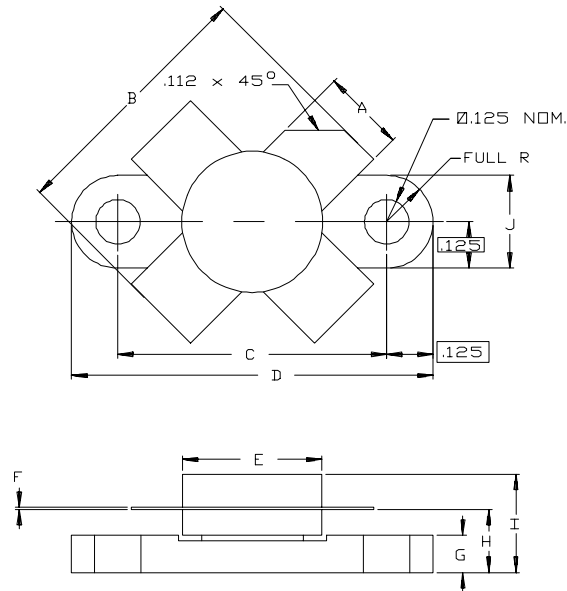
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 30 MHz	V _{CE} = 28 V	I _{CQ} = 25 mA	30	—	—	W
G _P	f = 30 MHz	V _{CE} = 28 V	I _{CQ} = 25 mA	18	20	—	dB
IMD	f = 30 MHz	V _{CE} = 28 V	I _{CQ} = 25 mA	—	- 32	- 28	dB
C _{OB}	f = 1 MHz	V _{CB} = 30 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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