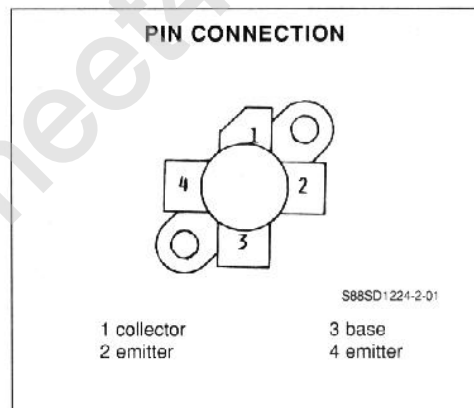
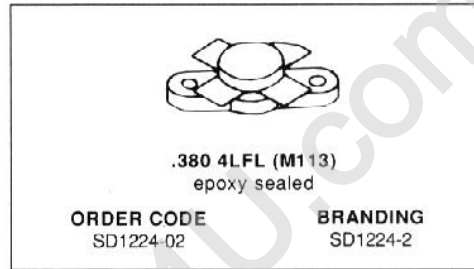


RF & MICROWAVE TRANSISTORS
108...152MHz APPLICATIONS

- CLASS C TRANSISTOR
- FREQUENCY 175MHz
- VOLTAGE 28V
- POWER OUT 40W
- POWER GAIN 7.6dB
- EFFICIENCY 60%
- GOLD METALLIZATION
- COMMON EMITTER



DESCRIPTION

The SD1224-2 is an epitaxial silicon NPN planar transistor designed primarily for 12.5V AM Class C RF amplifiers functional in the aviation band 118-136MHz and for 28V FM Class C RF amplifiers utilized in ground station transmitters. It withstands extremely high VSWR under rated conditions.

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	65.0	V
V_{CEO}	Collector - Emitter Voltage	35.0	V
V_{CES}	Collector - Emitter Voltage	65	V
V_{EBO}	Emitter - Base Voltage	4.0	V
I_C	Collector Current	5.0	A
P_{tot}	Total Power Dissipation	60.0	W
T_{stg}	Storage Temperature	- 65 to + 150	$^{\circ}C$
T_j	Junction Temperature	+ 200	$^{\circ}C$

THERMAL DATA

$R_{th(j-c)}$	Junction-case Thermal Resistance	2.9	$^{\circ}C/W$
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SD1224-2

ELECTRICAL CHARACTERISTICS ($T_{CRSO} = 25^{\circ}\text{C}$)

STATIC

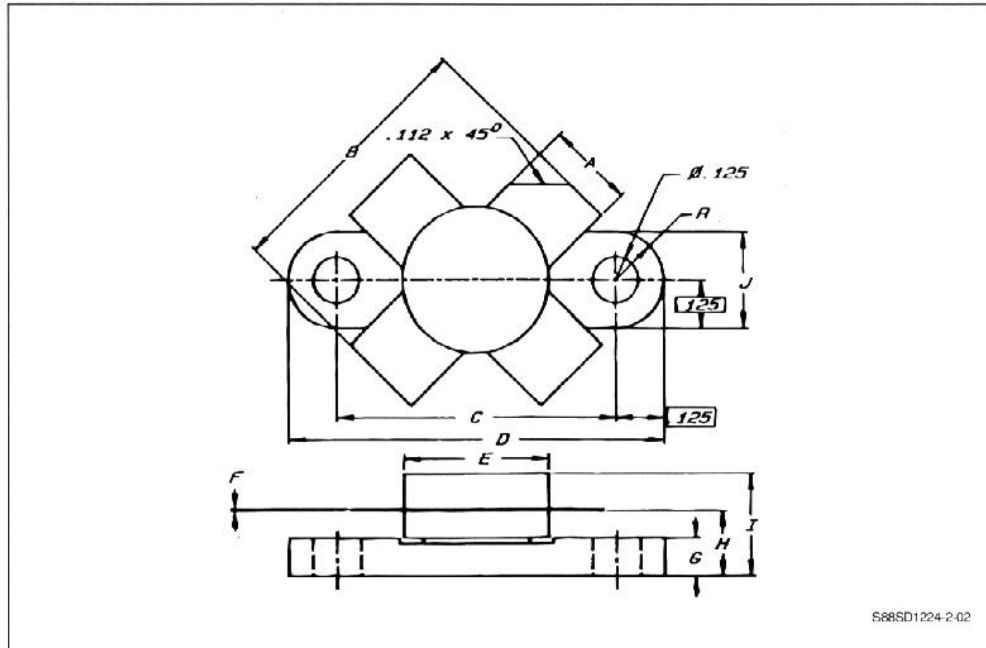
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CES}	$I_C = 200\text{mA}$	$V_{BE} = 0$	65.0			V
BV_{CEO}	$I_C = 200\text{mA}$	$I_B = 0$	35.0			V
BV_{FBO}	$I_E = 10\text{mA}$	$I_C = 0$	4.0			V
I_{CBO}	$V_{CB} = 30.0\text{V}$	$I_E = 0$			1	mA
h_{FE}	$V_{CE} = 5.0\text{V}$	$I_C = 500\text{mA}$	5.0			

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_O	$f = 175\text{MHz}$	$V_{CE} = 28.0\text{V}$	40.0				W
G_P	$f = 175\text{MHz}$	$V_{CE} = 28.0\text{V}$	7.6				dB
η_C	$f = 175\text{MHz}$	$V_{CE} = 28\text{V}$	$P_O = 40\text{W}$	60			%
C_{OB}	$f = 1\text{MHz}$	$V_{CB} = 30.0\text{V}$	$I_E = 0$			65.0	pF

PACKAGE MECHANICAL DATA

.380 4FL



S88SD1224-2-02

	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