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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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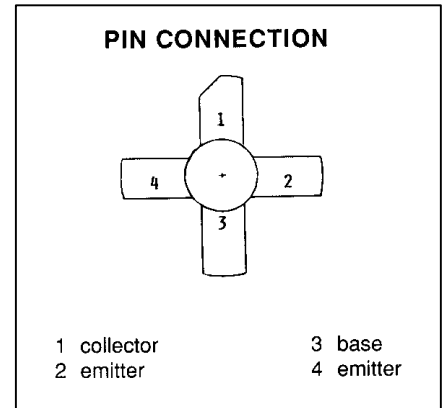
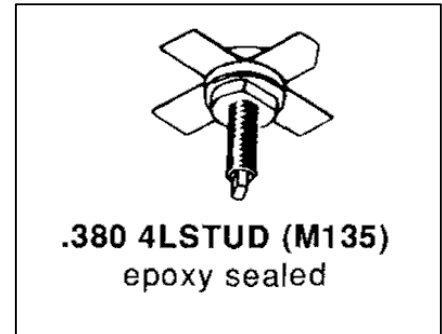


SD1224

**RF AND MICROWAVE TRANSISTORS
VHF FM APPLICATIONS**

Features

- 175 MHz
- 28 VOLTS
- CLASS C
- COMMON EMITTER
- EFFICIENCY 60% MIN.
- P_{OUT} = 40 W MIN.
- G_P = 7.6 dB GAIN



DESCRIPTION:

The SD1224 is an epitaxial silicon NPN planar transistor designed primarily for 28 V FM Class C RF amplifiers utilized in ground station transmitters. This device utilizes ballasted emitter resistors and improved metallization systems to achieve optimum load mismatch capability.

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	65	V
V _{CEO}	Collector-Emitter Voltage	35	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Device Current	5.0	A
P _{DISS}	Power Dissipation	60	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	2.9	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25 °C)
STATIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA I_B = 0 mA	65			V
BV_{CES}	I_C = 200 mA V_{BE} = 0 V	65		—	V
BV_{CEO}	I_C = 200 mA I_B = 0 mA	35			V
BV_{EBO}	I_E = 10 mA I_C = 0 mA	4.0			V
I_{CES}	V_{CE} = 30 V I_E = 0 mA			10	mA
I_{CBO}	V_{CB} = 30 V I_E = 0 mA			1	mA
h_{FE}	V_{CE} = 5 V I_C = 500 mA	5		200	—

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 175 MHz P_{IN} = 7.0 W V_{CE} = 28 V	40			W
G_P	f = 175 MHz P_{IN} = 7.0 W V_{CE} = 28 V	7.6			dB
η_C	f = 175 MHz P_{IN} = 7.0 W V_{CE} = 28 V	60			%
C_{OB}	f = 1 MHz V_{CB} = 30 V			65	pF

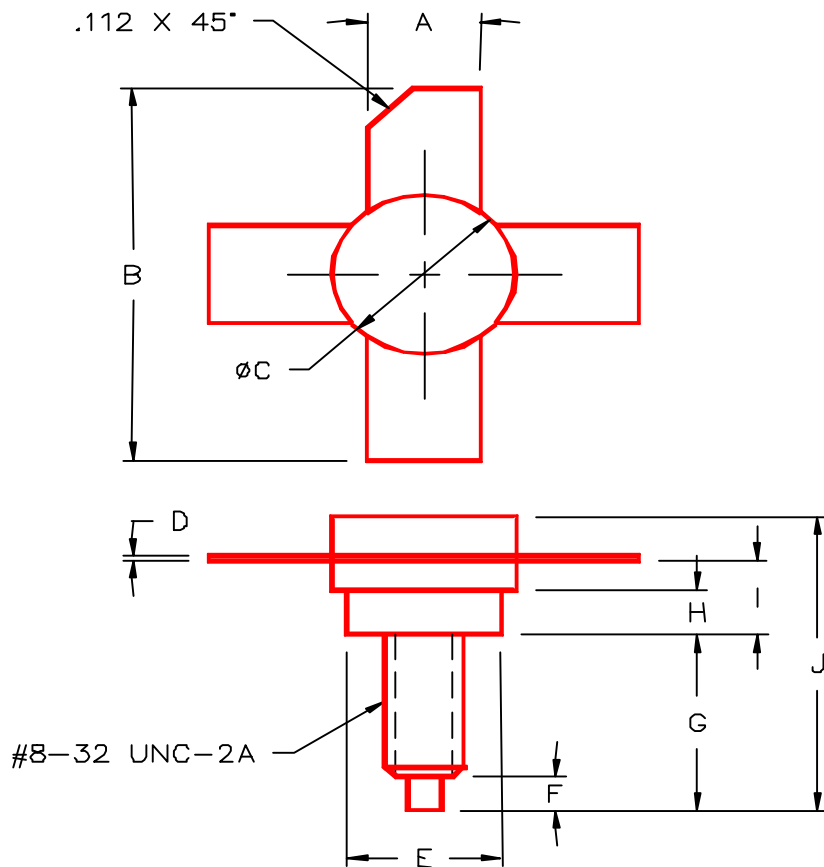
IMPEDANCE DATA

P_{IN} (W)	P_{OUT} (W)	Z_{IN} (Ω)	Z_{CL} (Ω)
2.0	28.5	0.85 + j 1.20	3.25 + j 7.05
4.0	43.0	1.02 + j 1.32	4.45 + j 5.40
6.0	53.0	1.01 + j 1.42	5.25 + j 4.42
8.0	60.5	1.05 + j 1.35	5.45 + j 4.12

Test Conditions: V_{CE} = 28 V
 f = 175 MHz

PACKAGE MECHANICAL DATA

PACKAGE STYLE M135



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.220/5,59	.230/5,84	I	.155/3,94	.175/4,45
B	.980/24,89		J		.750/19,05
C	.370/9,40	.385/9,78			
D	.004/0,10	.007/0,18			
E	.320/8,13	.330/8,38			
F	.100/2,54	.130/3,30			
G	.450/11,43	.490/12,45			
H	.090/2,29	.100/2,54			