ADVANCED POWER TECHNOLOGY RF®

140 COMMERCE DRIVE
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MS1204

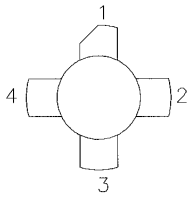
RF AND MICROWAVE TRANSISTORS
HF SSB APPLICATIONS

.500 4L STUD (M130)
epoxy sealed

Features

- **CLASS C TRANSISTOR**
- **FREQUENCY 136MHz**
- **VOLTAGE 28V**
- **POWER OUT 80W**
- **POWER GAIN 9.0dB**
- **COMMON EMITTER**

PIN CONNECTION



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

DESCRIPTION:

The SD1019 is a 28 volt epitaxial silicon NPN planar transistor designed primarily for VHF communications. This device utilizes nichrome aluminum metallization to achieve infinite VSWR at rated operating conditions.

ABSOLUTE MAXIMUM RATINGS (Tcase = 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**	**V**
I_C	**Device Current**	**9**	**A**
P_{DISS}	**Power Dissipation**	**117**	**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**	**1.7**	**°C/W**

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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 20 mA I_E = 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			V
I_{CBO}	V_{CB} = 30 V I_E = 0 V		1.5		mA
h_{FE}	V_{CE} = 5 V I_C = 500 Ma	5			

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 136 MHz VCE = 28 V	80			W
G_P	f = 136 MHz VCE = 28 V	9			dB
C_{OB}	f = 1 MHz VCB = 30 V IE = 0 V			150	PF

IMPEDANCE DATA

Freq.	Z_S (Ω)	Z_{CL} (Ω)
136 MHz	.85 – j 0.5 W	4.5 + j 1.9 W

V_{CE}= 28 V
P_O = 80 W

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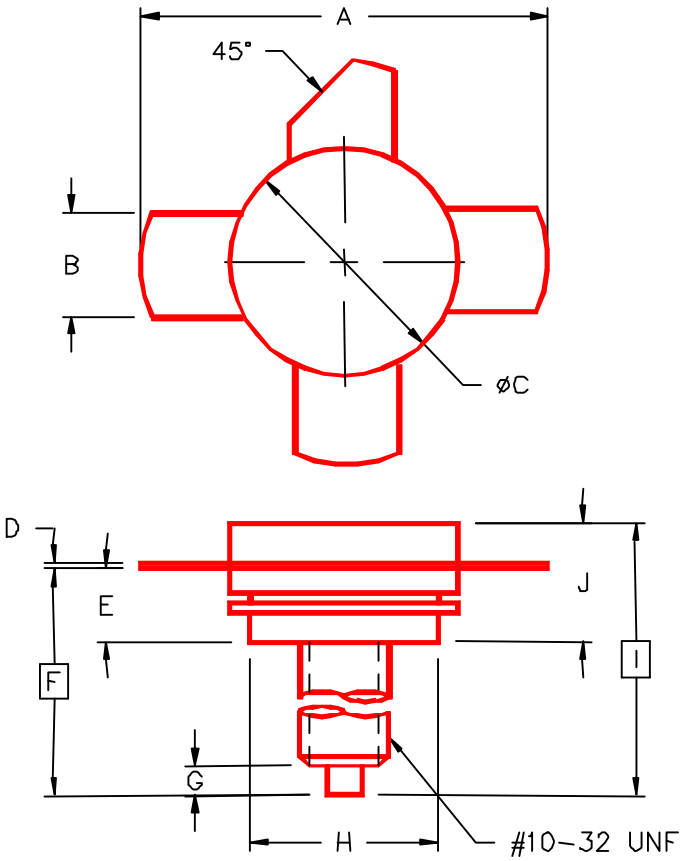
PACKAGE MECHANICAL DATA

PACKAGE STYLE M130



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	1.010/25,65	1.050/26,67	I	.720/18,29	
B	.220/5,59	.230/5,84	J	.250/6,35	.290/7,37
C	.495/12,57	.505/12,83			
D	.003/0,08	.007/0,18			
E	.160/4,06	.180/4,57			
F	.622/15,80				
G	.100/2,54	.130/3,31			
H	.415/10,54	.425/10,80			