

SD1019

RF AND MICROWAVE TRANSISTORS VHF APPLICATIONS

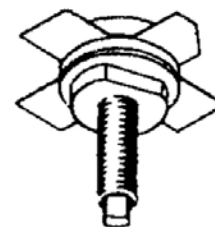
Features

- 136 MHz
- 13.5 V
- COMMON EMITTER
- $P_{OUT} = 30 \text{ W MIN.}$
- GAIN = 4.5 dB

DESCRIPTION:

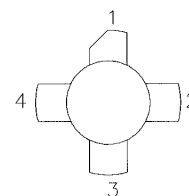
The SD1019 is a 28 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications.

It uses nichrome aluminum metallization to achieve infinite VSWR at rated operating conditions.



.500 4L STUD (M130)
epoxy sealed

PIN CONNECTION



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

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	V
I_C	Collector Current	9	A
P_{DISS}	Total Power Dissipation	117	W
T_{stg}	Storage Temperature	-65 to +150	°C
T_j	Junction Temperature	+200	°C

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	1.7	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

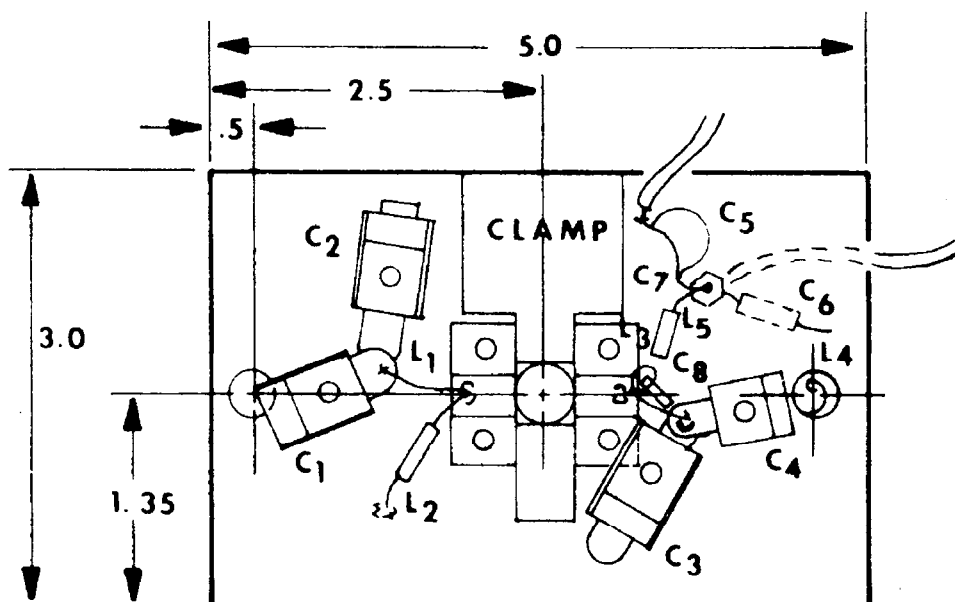
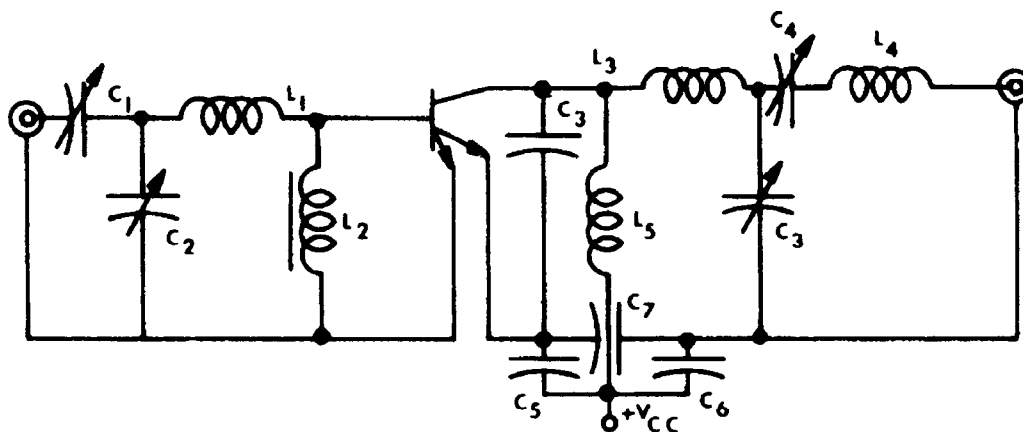
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 200 mA I_E = 0	65	---	---	V
BV_{CEO}	I_C = 20 mA I_B = 0	35	---	---	V
BV_{EBO}	I_E = 10 mA I_C = 0	4	---	---	V
I_{CBO}	V_{CB} = 30 V I_E = 0	---	1.5	---	mA
h_{FE}	V_{CE} = 5 V I_C = 500 mA	5	---	---	---

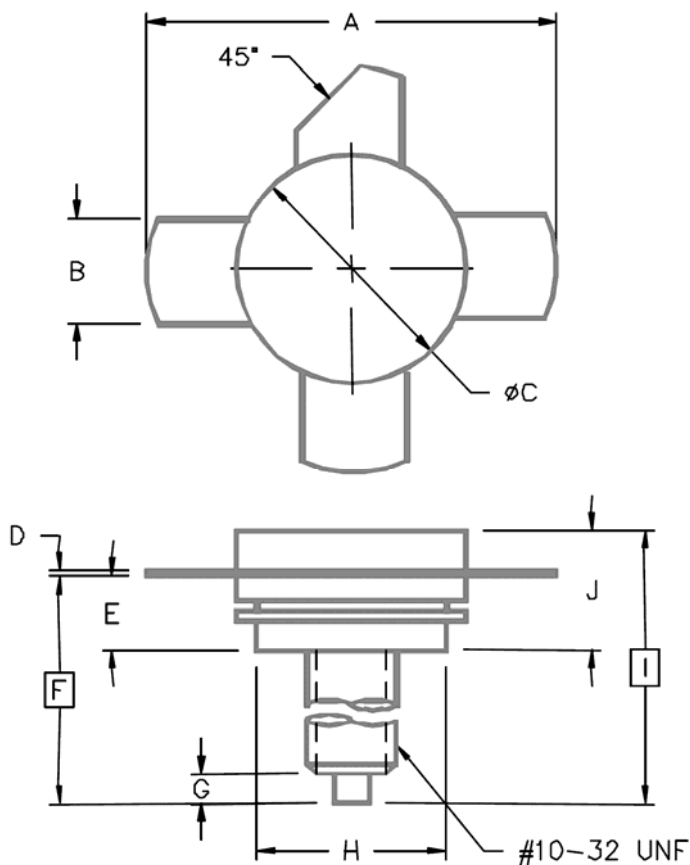
DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 150 MHz P_{IN} = 10.6 W V_{CE} = 13.5 V	30	---	---	W
G_P	f = 150 MHz P_{IN} = 10.6 W V_{CE} = 13.5 V	4.5	---	---	dB
C_{OB}	f = 1MHz V_{CB} = 30 V	---	---	150	pF

TEST CIRCUIT



C1	: ARCO 462	L1	: #14 AWG. Wire, .3" Long
C2,C3,C4	: ARCO 463	L2	: 12mH Choke
C5	: .02 μ F Erie	L3	: 1 Turn, #20 AWG. Wire, .3" I.D., .25" Long
C6	: 15 μ F Semcor	L4	: 1 Turn, #16 AWG. Wire, .23" I.D., .1" Long
C7	: AB 220pF Feedthru	L5	: .22mH Deci-Ductor
C8	: 150pF Unelco		

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			