

SD1019

RF AND MICROWAVE TRANSISTORS VHF APPLICATIONS

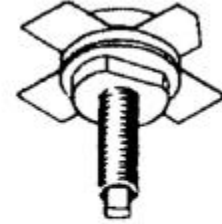
Features

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

DESCRIPTION:

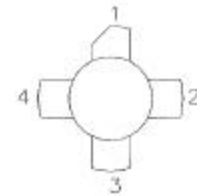
The SD1019 is a 28 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications.

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 ($T_{case} = 25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
T_j	Junction Temperature	+200	$^{\circ}\text{C}$

THERMAL DATA

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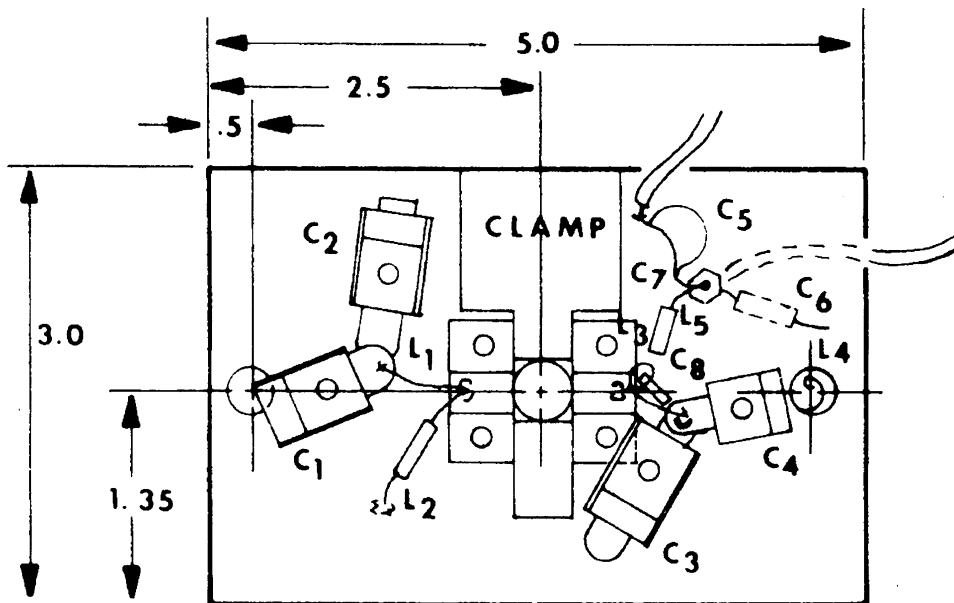
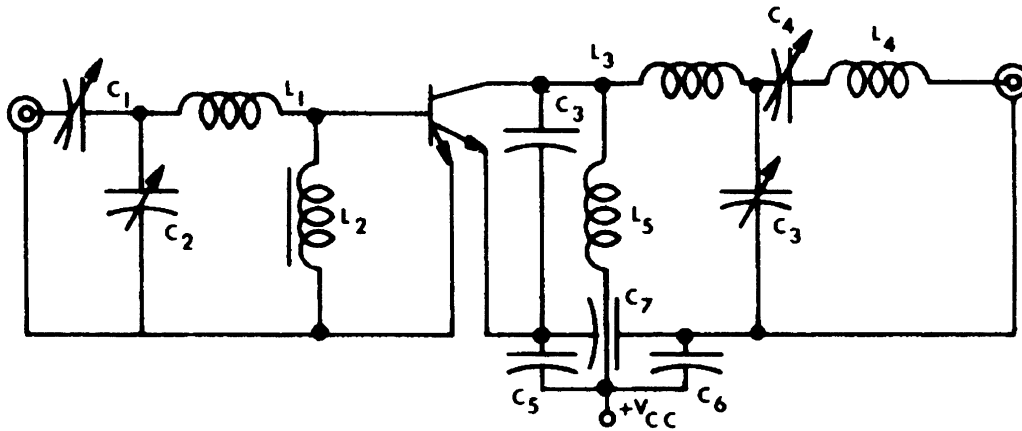
ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 20 mA I_E = 0	65	---	---	V
BV_{CEO}	I_C = 200 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

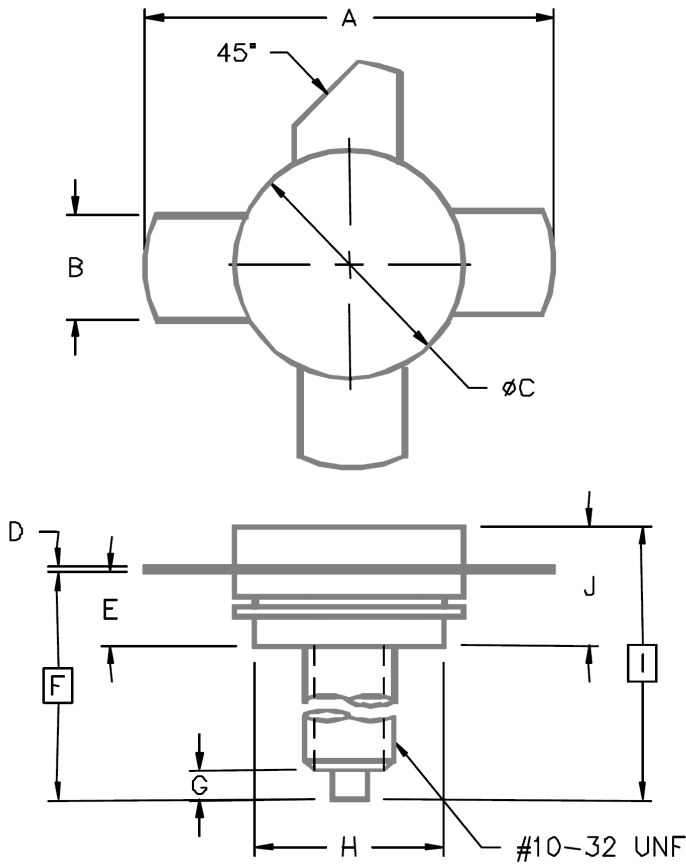
TEST CIRCUIT



- | | | | |
|----------|---------------------|----|--|
| C1 | : ARCO 462 | L1 | : #14 AWG. Wire, .3" Long |
| C2,C3,C4 | : ARCO 463 | L2 | : 12mH Choke |
| C5 | : .02μF Erie | L3 | : 1 Turn, #20 AWG. Wire, .3" I.D., .25" Long |
| C6 | : 15μF 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			