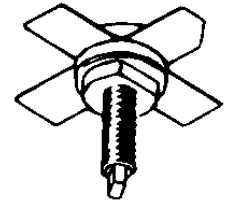


SD1015

RF AND MICROWAVE TRANSISTORS 108–152MHz APPLICATIONS

Features

- FM CLASS C TRANSISTOR
- FREQUENCY 150 MHz
- POWER OUT 30W
- POWER GAIN 10dB
- GOLD METALLIZATION
- COMMON EMITTER



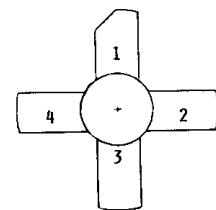
.380 4LSTUD(M135)
epoxy sealed

DESCRIPTION:

The SD1015 is a 28V gold metallized epitaxial silicon NPN planar transistor designed for 108–152MHz FM applications.

This device utilizes diffused emitter resistors to achieve infinite VSWR at rated operating conditions.

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	36.0	V
V _{CEO}	Collector-Emitter Voltage	18.0	V
V _{CES}	Collector-Emitter Voltage	36.0	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Collector Current	1.0	A
P _{TOT}	Total Power Dissipation	10.0	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	4.4	°C/W
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Revision B – June 2008

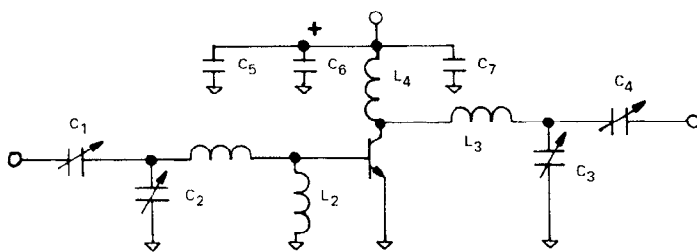
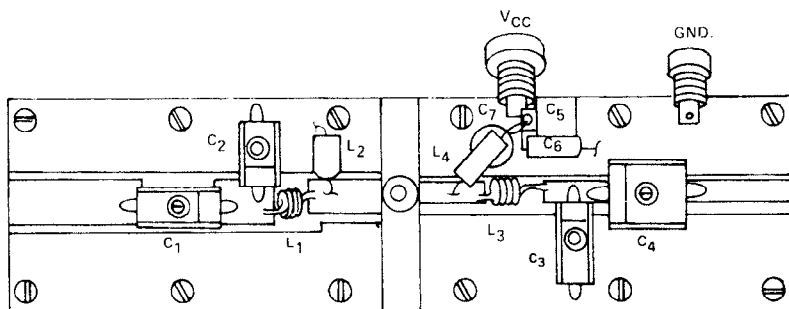
ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
BV_{CES}	I_C = 200 mA V_{BE} = 0 V	65.0			V
BV_{CEO}	I_C = 200 mA I_B = 0 mA	35.0			V
BV_{EBO}	I_E = 10.0 mA I_C = 0 mA	4			V
I_{CBO}	V_{CB} = 30.0 V I_E = 0			2.0	mA
h_{FE}	V_{CE} = 5 V I_C = 200 mA	35.0			—

DYNAMIC

Symbol	Test Conditions	Value			Units
		Min.	Typ.	Max.	
P_{OUT}	f = 150 MHz V_{CC} = 13.5 V	12.5			W
G_P	f = 150 MHz V_{CC} = 13.5 V	7			dB
P_{OUT}	f = 150 MHz V_{CC} = 28 V	30			W
G_P	f = 150 MHz V_{CC} = 28 V	10			dB
C_{OB}	f = 1 MHz V_{CB} = 30 V I_E = 0			250	pF
C_{Ib}	f = 1 MHz V_{EB} = 0.5 V I_C = 0		300		pF

TEST CIRCUIT

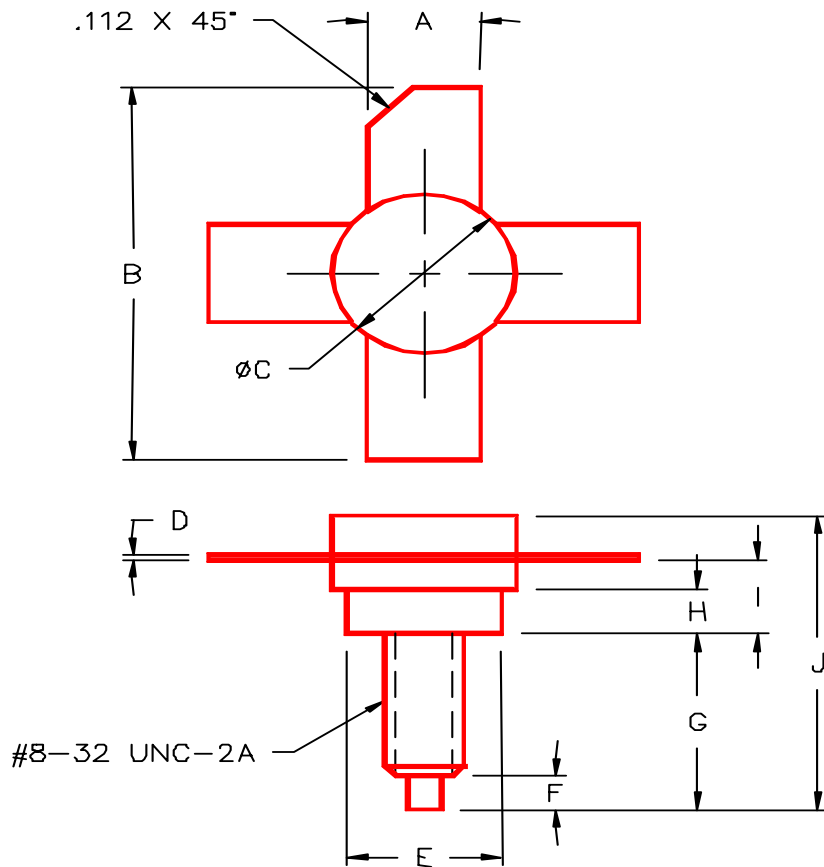


S88SD1015-09

COMPONENT LIST

C₁, C₂ ARCO 422
 C₃ ARCO 422
 C₄ ARCO 463
 C₅ 1000pF UNELCO
 C₆ 10μF ELECTROLYTIC 35V

C₇ .01pf CEREMIC DISC.
 L₁ 3T #22, 1/8 ID
 L₂ RFC FERROXCUBE
 L₃ 2T #18, 1/4 ID
 L₄ .47μH MOLDED CHOKE

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			