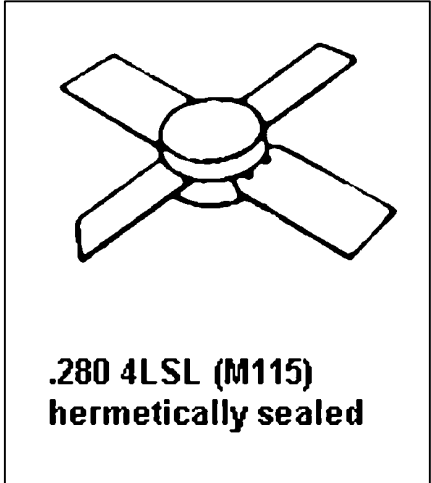


SD1526-01

**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

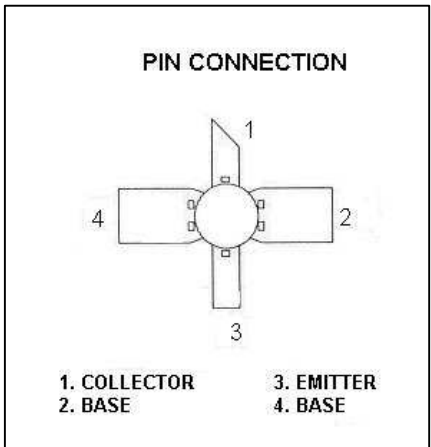
Features

- GOLD METALLIZATION
- 960 - 1215 MHz
- P_{OUT} = 5.0 WATTS
- G_P = 9.5 dB MINIMUM
- EMITTER BALLASTED
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



DESCRIPTION:

The SD1526-01 is a gold metallized, silicon NPN power transistor designed for pulsed applications with low duty cycles such as IFF, DME, and TACAN. Internal impedance matching is utilized for broadband performance and simplified external matching.



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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	45	V
V _{CES}	Collector-Emitter Voltage	45	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	1	A
P _{DISS}	Power Dissipation	21.9	W
T _{STG}	Storage Temperature	-65 to +150	°C
T _J	Junction Temperature	200	°C

Thermal Data

R _{TH(J-C)}	Thermal Resistance Junction-case	8.0	°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 = 10 mA	I_B = 0	45	---	---	V
BV_{CES}	I_C = 25 mA	V_{BE} = 0	45	---	---	V
BV_{EBO}	I_E = 10 mA	I_C = 0	3.5	---	---	V
I_{CES}	V_{CE} = 28 V	V_{BE} = 0	---	---	1.0	mA

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_{OUT} **	f = 1090 MHz	V_{CC} = 28 V	---	6.0	---	W
G_P	f = 1090 MHz	V_{CC} = 28 V	---	9.5	---	dB
P_{OUT} **	f = 1025–1150 MHz	V_{CC} = 28 V	5.0	---	---	W
G_P	f = 1025–1150 MHz	V_{CC} = 28 V	9.5	---	---	dB
P_{OUT} ***	f = 960–1215 MHz	V_{CC} = 28 V	---	4.0	---	W
G_P	f = 960–1215 MHz	V_{CC} = 28 V	---	9.0	---	dB

** Pulse width 10 μSec, duty cycle 1%.

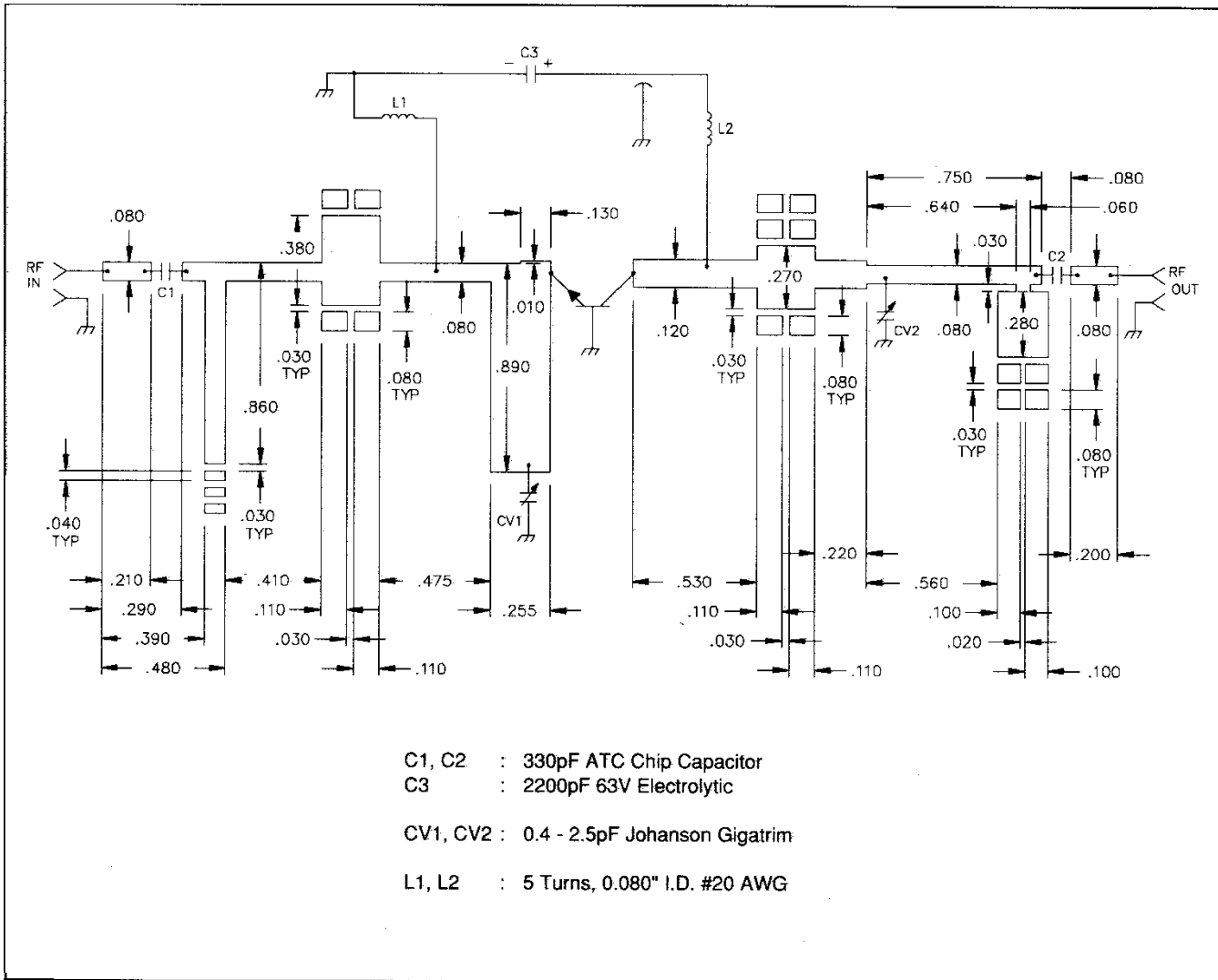
*** Pulse width 10 μSec, duty cycle 10%.

IMPEDANCE DATA

Frequency	Z _{IN} (Ω)	Z _{CL} (Ω)
1025 MHz	11.0+ j 11.6	15 + j 22.0
1090 MHz	12.5+ j 12.0	19 + j 19.5
1150 MHz	12.2+ j 8.2	16 + j 20.5

SD1526-01

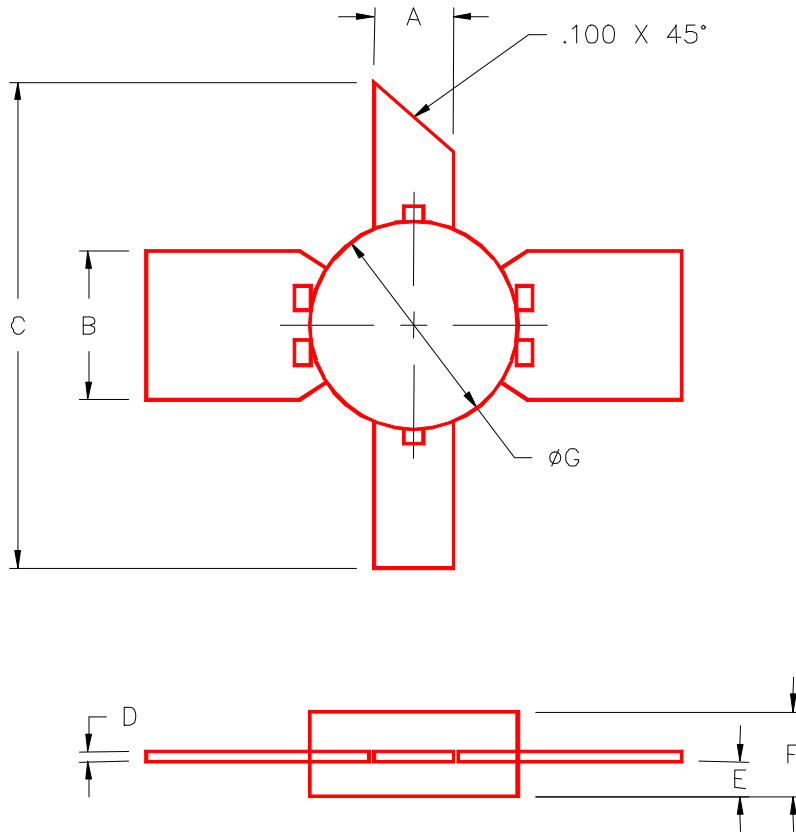
TEST CIRCUIT



SD1526-01

PACKAGE MECHANICAL DATA

PACKAGE STYLE M115



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.095/2,41	.105/2,67			
B	.195/4,95	.205/5,21			
C	1.000/25,40				
D	.004/0,10	.007/0,18			
E	.050/1,27	.065/1,65			
F	.120/3,05	.135/3,43			
G	.275/6,99	.285/7,21			