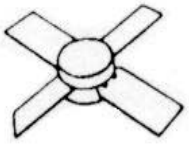
ADVANCED POWER TECHNOLOGY RF®

SD1526-01

RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS

Features

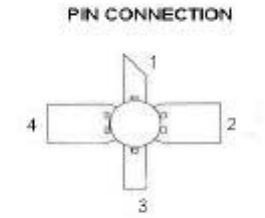
- GOLD METALLIZATION
- 960 - 1215 MHz
- P_{OUT} = 5.0 WATTS
- G_P = 9.5 dB MINIMUM
- EMITTER BALLASTED
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



.280 4LSL (M115)
hermetically sealed

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 (Tcase = 25°C)

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation	21.9	W
V_{CES}	Collector-Emitter Voltage	45	V
T_J	Junction Temperature	200	°C
I_C	Device Current	1	A
T_{STG}	Storage Temperature	-65 to +150	°C
V_{CBO}	Collector-Base Voltage	45	V
V_{EBO}	Emitter-Base Voltage	3.5	V

Thermal Data

$R_{TH(J-C)}$	Thermal Resistance Junction-case	8.0	°C/W

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140 COMMERCE DRIVE
MONTGOMERYVILLE, PA
18936-1013
PHONE: (215) 631-9840
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions		Value			
			Min.	Typ.	Max.	Unit
BV_{CBO}	I_C = 1 mA	I_E = 0 mA	45	---	---	V
BV_{CES}	I_C = 1 mA	V_{BE} = 0 V	45	---	---	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	3.5	---	---	V
I_{CES}	V_{CE} = 28 V		---	---	1.0	mA
HFE	V_{CE} = 5 V	I_C = 100 mA	15	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			
				Min.	Typ.	Max.	Unit
P_{OUT}	f =1025 - 1150 MHz	P_{IN} = .55W	V_{CE} =28V	5	---	---	W
G_P	f =1025 - 1150 MHz	P_{IN} = .55W	V_{CE} =28V	9.5	---	---	dB
Condition	Pulse Width = 10 μs Duty Cycle = 1%						

IMPEDANCE DATA

Frequency	Z_{IN} (Ω)	Z_{CL} (Ω)
1025 MHz	11.0+ j11.6	15 + j.022
1090 MHz	12.5+ j12.0	19 + j19.5
1150 MHz	12.2+ j8.2	16 + j20.5

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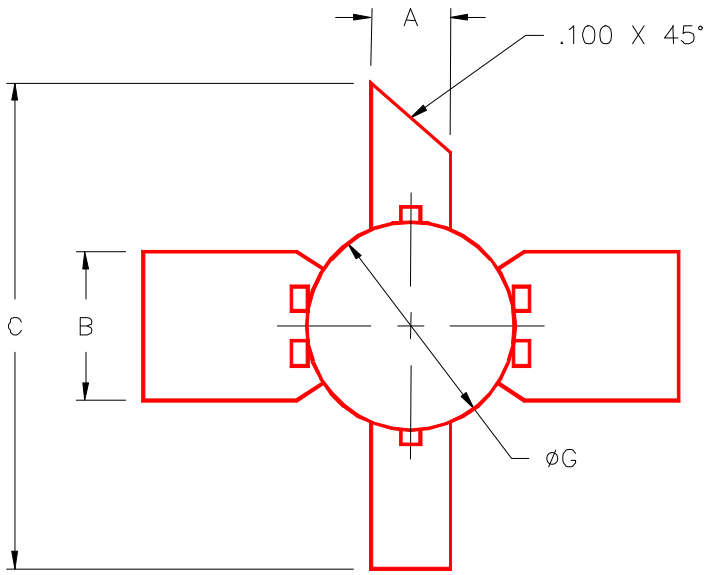
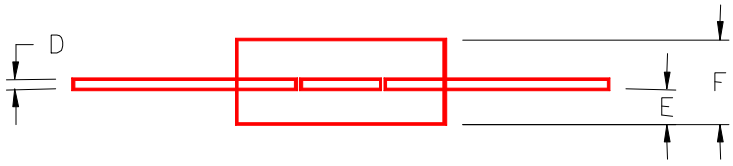
PACKAGE MECHANICAL DATA

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			