

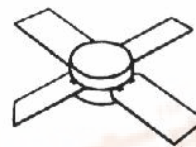


140 Commerce Drive
Montgomeryville, PA 18936-1013
Tel: (215) 631-9840

SD1526-1

RF & MICROWAVE TRANSISTORS IFF/DME APPLICATIONS

- DESIGNED FOR HIGH POWER PULSE IFF, DME, TACAN
- 6.0W (typ) IFF 1030-1090MHz
- 5.0W (min) DME 1025-1150MHz
- 4.0W (typ) TACAN 960-1215MHz
- GREATER THAN 9.5dB GAIN
- REFRACTORY BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- INFINITE LOAD — VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



.280 4LSL (M115)
epoxy sealed

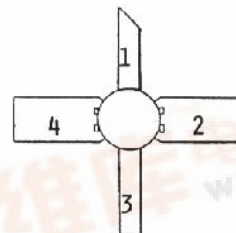
ORDER CODE
SD1526-01

BRANDING
SD1526-1

DESCRIPTION

The SD1526-1 is a gold metallized, silicon NPN power transistor. The SD1526-1 is designed for applications requiring peak power and low duty cycles such as IFF, DME TACAN. The SD1526-1 is packaged in the .280" input matched stripline package resulting in improved broadband performance and a low thermal resistance.

PIN CONNECTION



S88SD1526-1-01

1 collector
2 base

3 emitter
4 base

ABSOLUTE MAXIMUM RATINGS ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	45.0	V
V_{CES}	Collector - Emitter Voltage	45.0	V
V_{EBO}	Emitter - Base Voltage	3.5	V
I_C	Collector Current (max.)	1.0	A
P_{TOT}	Total Device Dissipation at + 25°C	21.9	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	8.0	°C/W
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May 1989

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SD1526-1**ELECTRICAL CHARACTERISTICS** ($T_{case} = 25^{\circ}\text{C}$)**STATIC**

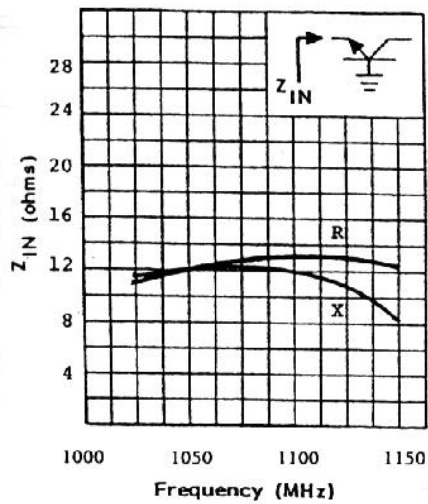
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 10\text{mA}$	$I_B = 0$	45.0			V
BV_{CES}	$I_C = 25\text{mA}$	$V_{BE} = 0$	45.0			V
BV_{EBO}	$I_E = 10\text{mA}$	$I_C = 0$	3.5			V
I_{CES}	$V_{CB} = 28.0\text{V}$	$V_{BE} = 0$			1.0	mA

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_O^{**}	$f = 1090\text{MHz}$	$V_{CE} = 28.0\text{V}$		6.0		W
P_G	$f = 1090\text{MHz}$	$V_{CE} = 28.0\text{V}$		9.5		dB
P_O^{**}	$f = 1025/1150\text{MHz}$	$V_{CE} = 28.0\text{V}$	5.0			W
P_g	$f = 1025/1150\text{MHz}$	$V_{CE} = 28.0\text{V}$	9.5			dB
P_O^{***}	$f = 960/1215\text{MHz}$	$V_{CE} = 28.0\text{V}$		4.0		W
P_g	$f = 960/1215\text{MHz}$	$V_{CE} = 28.0\text{V}$		9.0		dB

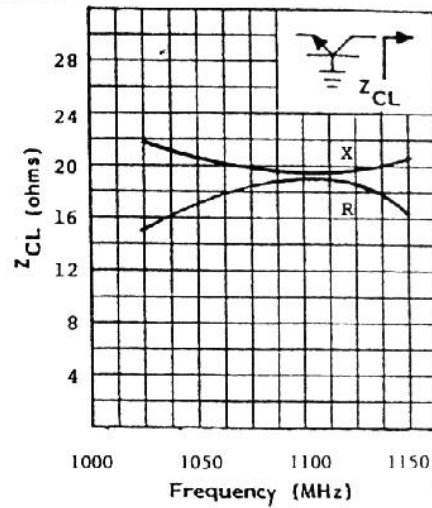
** Pulse width 10 μs , duty cycle 1%.*** Pulse width 10 μs , duty cycle 10%.

TYPICAL INPUT IMPEDANCE vs. FREQUENCY



S88SD1526-1-02

TYPICAL COLLECTOR LOAD IMPEDANCE vs. FREQUENCY



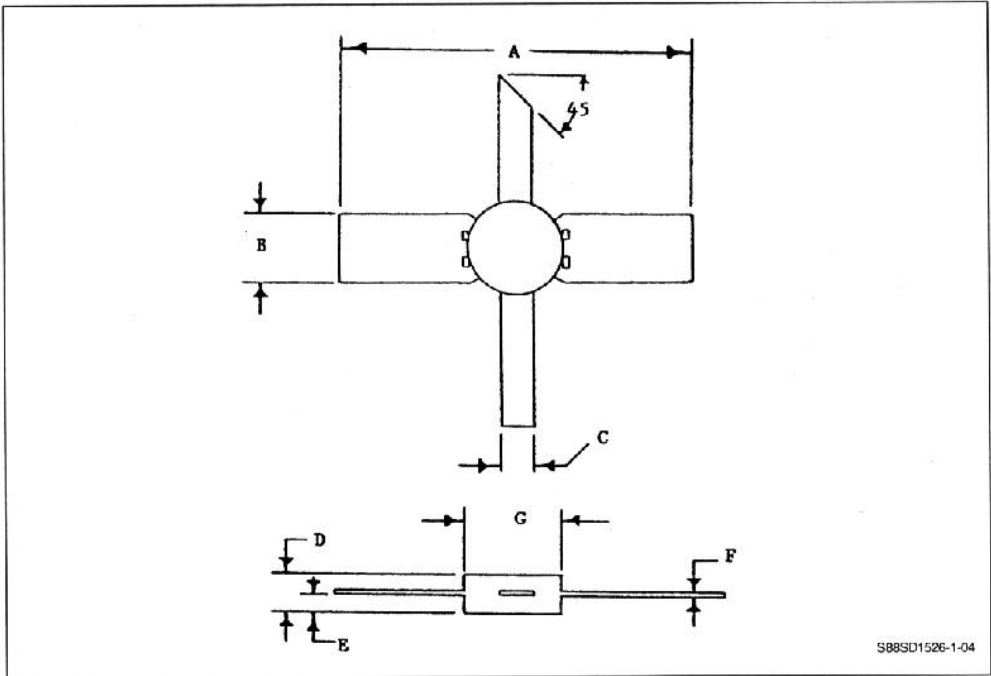
S88SD1526-1-03

$P_{in} = 0.5W$
 $V_{CE} = 28V$
 $P.W. = 10\mu s$
 $D.F. = 1\%$

SD1526-1

PACKAGE MECHANICAL DATA

.280 4LSL



S88SD1526-1-04

	Minimum Inches	Maximum Inches
A	1.000	
B	.195	.205
C	.095	.105
D	.120	.135
E	.050	.065
F	.004	.007
G	.275	.285