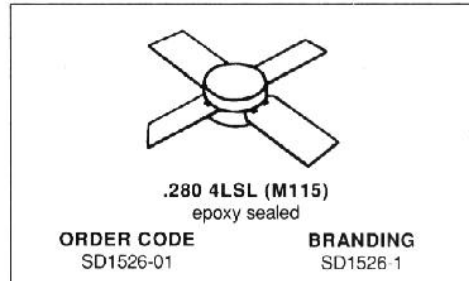


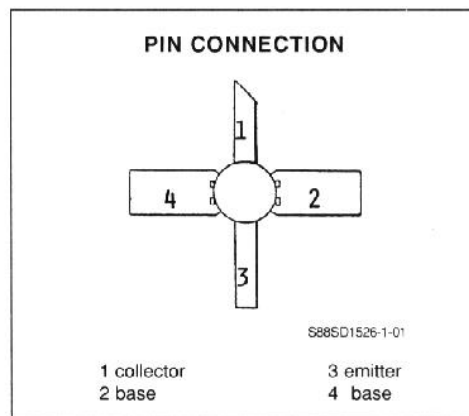
**RF & MICROWAVE TRANSISTORS  
IFF/DME APPLICATIONS**

- 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



**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.



**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CB0</sub>	Collector - Base Voltage	45.0	V
V <sub>CES</sub>	Collector - Emitter Voltage	45.0	V
V <sub>EB0</sub>	Emitter - Base Voltage	3.5	V
I <sub>C</sub>	Collector Current (max.)	1.0	A
P <sub>TOT</sub>	Total Device Dissipation at + 25°C	21.9	W
T <sub>STG</sub>	Storage Temperature	- 65 to + 150	°C
T <sub>J</sub>	Junction Temperature	+ 200	°C

**THERMAL DATA**

R <sub>TH(J-C)</sub>	Junction-case Thermal Resistance	8.0	°C/W
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**SD1526-1****ELECTRICAL CHARACTERISTICS** ( $T_{\text{case}} = 25^{\circ}\text{C}$ )**STATIC**

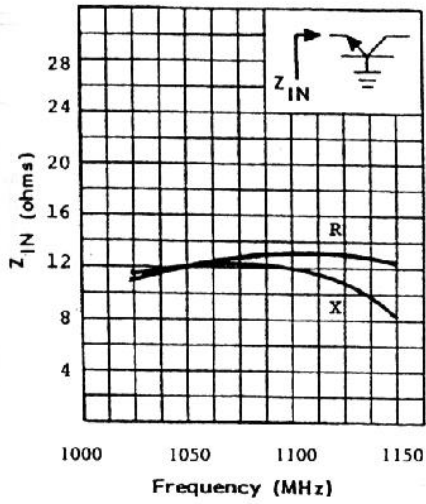
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
$BV_{\text{CBO}}$	$I_{\text{C}} = 10\text{mA}$	$I_{\text{B}} = 0$	45.0			V
$BV_{\text{CES}}$	$I_{\text{C}} = 25\text{mA}$	$V_{\text{BE}} = 0$	45.0			V
$BV_{\text{EBO}}$	$I_{\text{E}} = 10\text{mA}$	$I_{\text{C}} = 0$	3.5			V
$I_{\text{CES}}$	$V_{\text{CB}}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

**DYNAMIC**

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

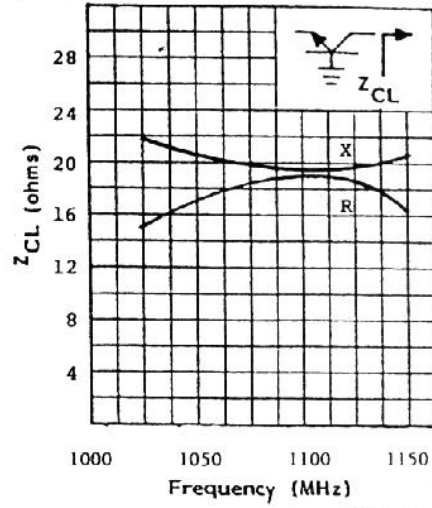
\*\* Pulse width 10 $\mu\text{s}$ , duty cycle 1%.\*\*\* Pulse width 10 $\mu\text{s}$ , duty cycle 10%.

TYPICAL INPUT IMPEDANCE vs. FREQUENCY



S88SD1526-1-02

TYPICAL COLLECTOR LOAD IMPEDANCE vs. FREQUENCY



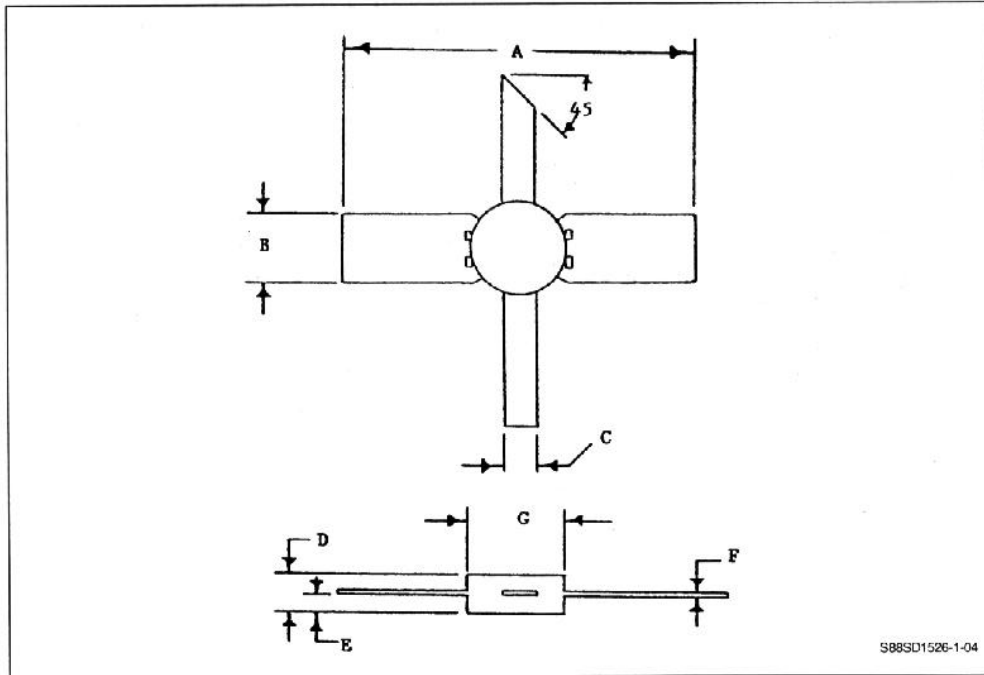
S88SD1526-1-03

Pin = 0.5W  
 VCE = 28V  
 P.W. = 10μs  
 D.F. = 1%

**SD1526-1**

**PACKAGE MECHANICAL DATA**

.280 4LSL



	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