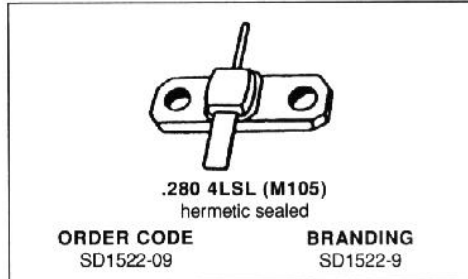


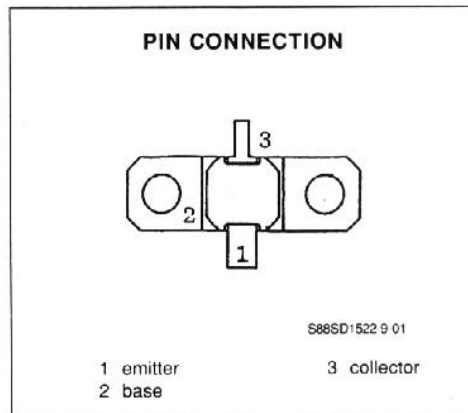
**RF & MICROWAVE TRANSISTORS
 IFF/DME APPLICATIONS**

- DESIGNATED FOR PULSE POWER IFF, DME, TACAN
- 1.7 WATTS (typ) IFF 1030-1090MHz
- 1.5 WATTS (min) DME 1025-1150MHz
- 1.2 WATTS (typ) TACAN 960-1215MHz
- GREATER THAN 6.2dB GAIN @ IFF
- REFRACTORY GOLD METALLIZATION
- EMITTER BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- INFINITE LOAD — VSWR CAPABILITY AT SPECIFIED OPERATION CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



DESCRIPTION

The SD1522-9 is a gold metallized silicon NPN power transistor. The SD1522-9 is designed for applications requiring peak power and low duty cycles such as IFF, DM TACAN. The SD1522-9 is packaged in the .250" input matched hermetic stripline flange package resulting in improved broadband performance and a low thermal resistance.



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

Symbol	Parameter	Value	Unit
V _{CB0}	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.)	0.5	A
P _{TOT}	Total Device Dissipation at + 25°C	5.8	W
T _{STG}	Storage Temperature	- 65 to + 200	°C
T _J	Junction Temperature	+ 200	°C

THERMAL DATA

R _{TH(J-C)}	Junction-case Thermal Resistance	30.0	°C/W
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SD1522-9**ELECTRICAL CHARACTERISTICS** ($T_{case} = 25^{\circ}C$)**STATIC**

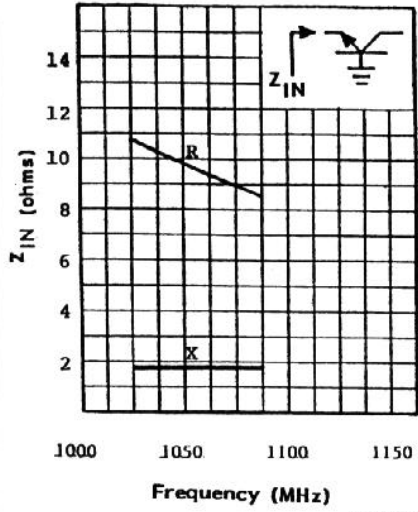
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 10mA$	$I_B = 0$	45.0			V
BV_{CES}	$I_C = 25mA$	$V_{BE} = 0$	45.0			V
BV_{EBO}	$I_E = 10mA$	$I_C = 0$	3.5			V

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_O^{**}	$f = 1090MHz$	$V_{CE} = 35.0V$		1.7		W
P_G	$f = 1090MHz$	$V_{CE} = 35.0V$		6.2		dB
P_O^{**}	$f = 1025/1150MHz$	$V_{CE} = 35.0V$	1.5			W
P_g	$f = 1025/1150MHz$	$V_{CE} = 35.0V$	6.0			dB
P_O^{***}	$f = 960/1215MHz$	$V_{CE} = 35.0V$		1.2		W
P_g	$f = 960/1215MHz$	$V_{CE} = 35.0V$		5.0		dB

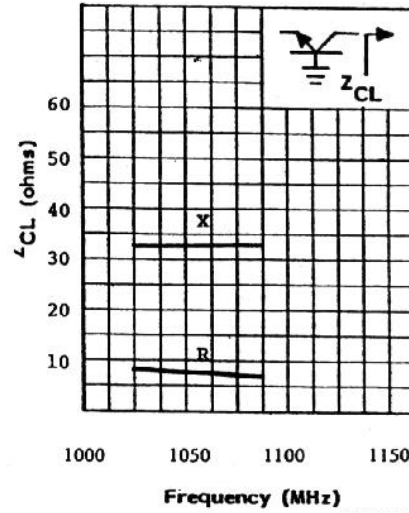
** Pulse width 10 μ s, duty cycle 1%.*** Pulse width 10 μ s, duty cycle 10%.

TYPICAL INPUT IMPEDANCE vs. FREQUENCY



S88SD1522-9-02

TYPICAL COLLECTOR LOAD IMPEDANCE vs. FREQUENCY



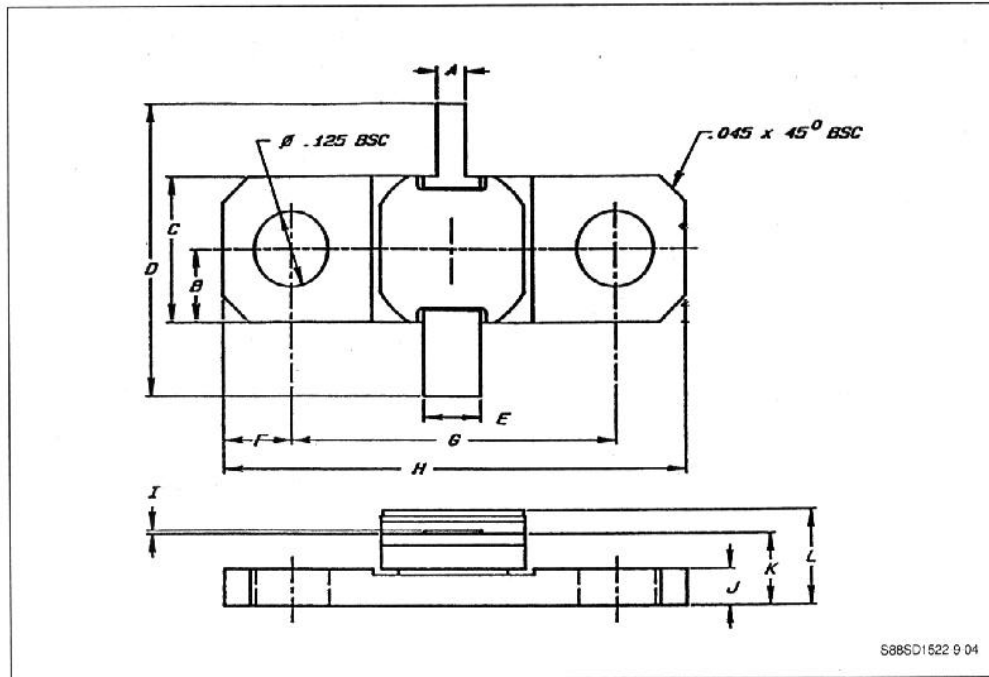
S88SD1522-9-03

P_{IN} = 0.2W
 V_{CE} = 28V
 P.W. = 10μs
 D.F. = 1%

SD1522-9

PACKAGE MECHANICAL DATA

.280 4LSL



	Minimum Inches/mm	Maximum Inches/mm
A	.045/1.14	.055/1.40
B	.125/3.18 BSC	
C	.245/6.22	.255/6.48
D	1.235/31.37	
E	.095/2.41	.105/2.67
F	.119/3.02 BSC	

	Minimum Inches/mm	Maximum Inches/mm
G	.557/14.15	.567/14.40
H	.795/20.19	.805/20.45
I	.002/0.05	.006/0.15
J	.057/1.45	.067/1.70
K	.112/2.84	.132/3.35
L		.175/4.45