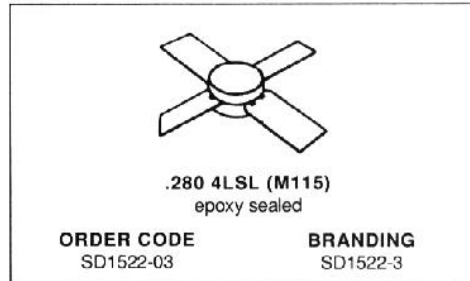


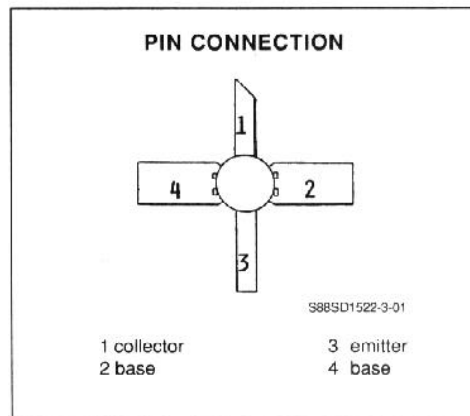
**RF & MICROWAVE TRANSISTORS
 IFF/DME APPLICATION**

- DESIGNED FOR PULSE POWER IFF, DME, TACAN
- 1.7 WATT (typ) IFF 1030-1090MHz
- 1.5 WATT (min) DME 1025-1150MHz
- 1.25 WATT (typ) TACAN 960-1215MHz
- GREATER THAN 9.3dB @IFF
- REFRACTORY GOLD METALLIZATION
- EMITTER BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- INFINITE LOAD — VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT MATCHED, COMMON BASE CONFIGURATION



DESCRIPTION

The SD1522-3 is a gold metallized, silicon NPN power transistor. The SD1522-3 is designed for applications requiring peak power and low duty cycles such as IFF, DME, TACAN. The SD1522-3 is packaged in the .280 input matched stripline package resulting in improved broadband performance and a low thermal resistance.



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.)	0.5	A
P_{TOT}	Total Device Dissipation at + 25°C	8.0	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	21.9	°C/W
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SD1522-3**ELECTRICAL CHARACTERISTICS** ($T_{\text{case}} = 25^{\circ}\text{C}$)

STATIC

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

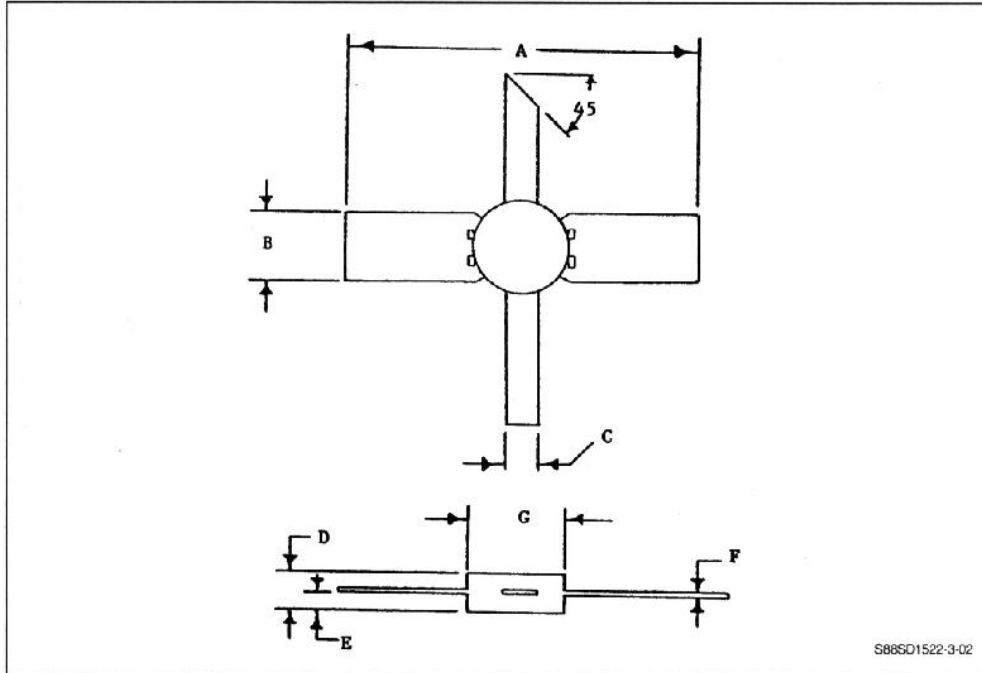
DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
P_{O}^{**}	$f = 1090\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$		1.7		W
P_{G}	$f = 1090\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$		9.3		dB
P_{O}^{***}	$f = 1025/1150\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$	1.5			W
P_{G}	$f = 1025/1150\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$	8.75			dB
P_{O}^{***}	$f = 960/1215\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$		1.25		W
P_{G}	$f = 960/1215\text{MHz}$	$V_{\text{CE}} = 35.0\text{V}$		8.25		dB

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

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