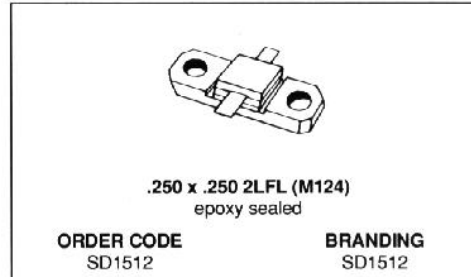


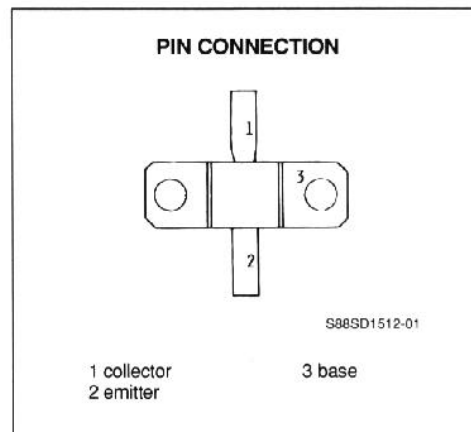
**RF & MICROWAVE TRANSISTORS
MODE-S/JTIDS APPLICATIONS**

- DESIGNED FOR USE IN LONG PULSE L-BAND APPLICATIONS LIKE RADAR, JTIDS, ETC.
- EXTREMELY RUGGED
- THERMALLY STABLE
- GOLD METALLIZATION
- CAPABLE OF OPERATION AT 400 μ s AND 20%
- STRIPLINE FLANGE PACKAGE



DESCRIPTION

The SD1512 is a gold metallized silicon NPN Planar Pulsed Transistor that has been designed for use in extended pulse width and duty cycle applications from 960 to 1220MHz. This device is extremely rugged, thermally stable, and is capable of operation at pulse widths of 400 μ s and a duty cycle of 20%.



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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	65.0	V
V_{CEO}	Collector - Emitter Voltage	30.0	V
V_{EBO}	Emitter - Base Voltage	4.0	V
I_C	Collector Current (max.)	2.0	A
P_{TOT}	Total Device Dissipation at + 25 $^{\circ}C$	53.0	W
T_{STG}	Storage Temperature	- 65 to + 150	$^{\circ}C$
T_J	Junction Temperature	+ 200	$^{\circ}C$

THERMAL DATA

$R_{TH(J-C)}$	Junction-case Thermal Resistance	3.3	$^{\circ}C/W$
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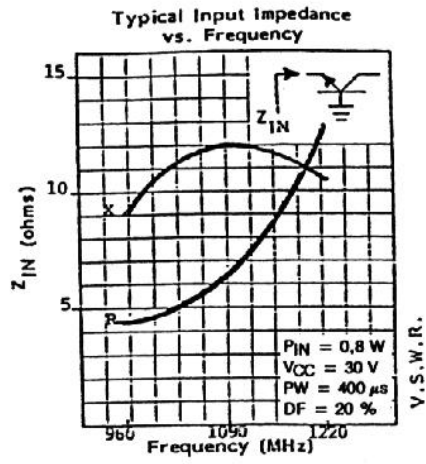
SD1512**ELECTRICAL CHARACTERISTICS** ($T_{\text{case}} = 25^{\circ}\text{C}$)

STATIC

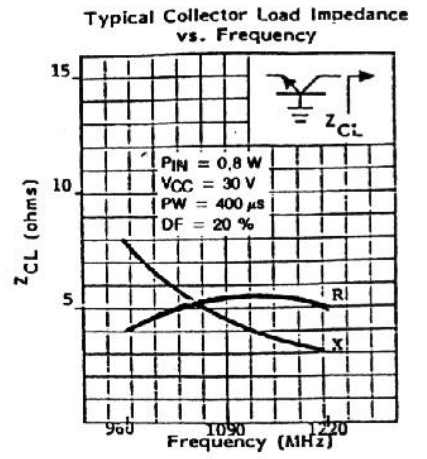
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CEO}	$I_{\text{C}} = 10\text{mA}$ $I_{\text{B}} = 0$	30.0			V
BV_{CES}	$I_{\text{C}} = 25\text{mA}$ $V_{\text{BE}} = 0$	65.0			V
BV_{EBO}	$I_{\text{E}} = 10\text{mA}$ $I_{\text{C}} = 0$	4.0			V
I_{CBO}	$V_{\text{CB}} = 28.0\text{V}$ $I_{\text{E}} = 0$			5.0	mA
h_{FE}	$V_{\text{CE}} = 5.0\text{V}$ $I_{\text{C}} = 100.0\text{mA}$	20.0			

DYNAMIC

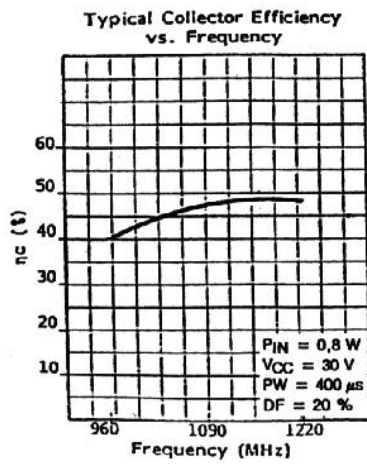
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{D}	$f = 960$ to 1220MHz $V_{\text{CE}} = 30.0\text{V}$ $PW = 400\mu\text{s}$ $DC = 20\%$	5.0			W
P_{G}	$f = 960$ to 1220MHz $V_{\text{CE}} = 30.0\text{V}$ $PW = 400\mu\text{s}$ $DC = 20\%$	7.0			dB



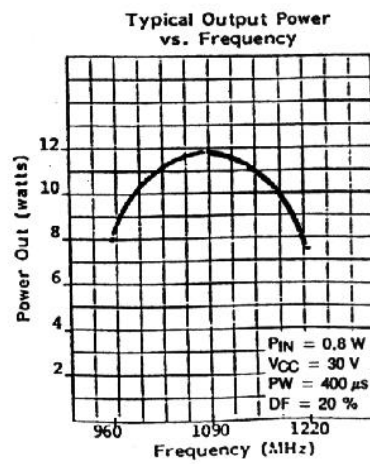
S88SD1512-02



S88SD1512-03

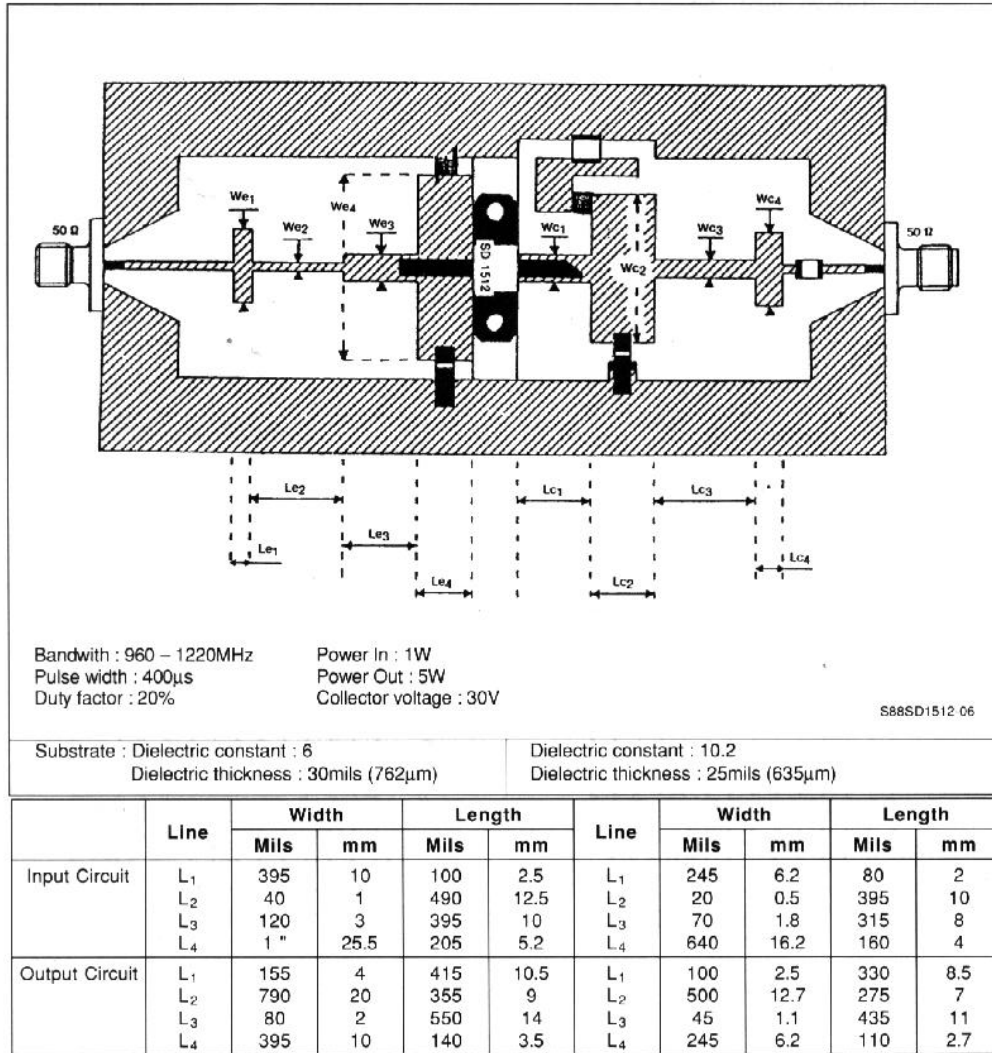


S88SD1512-04



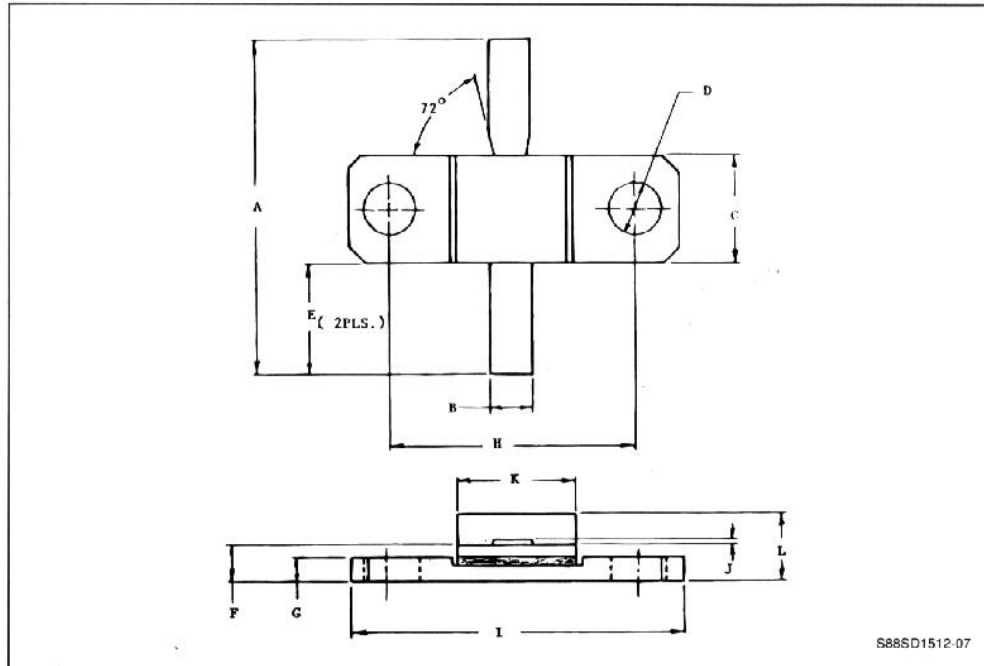
S88SD1512-05

SD1512



PACKAGE MECHANICAL DATA

.250 x .250 2LFL



	Minimum Inches/mm	Maximum Inches/mm
A	.750/19.05	
B	.095/2.41	.105/2.67
C	.245/6.22	.255/6.48
D	.120/3.05	.130/3.30
E	.350/8.89	
F	.075/1.91	.100/2.54

	Minimum Inches/mm	Maximum Inches/mm
G	.058/1.47	.064/1.63
H	.555/14.10	.570/14.48
I	.795/20.19	.805/20.45
J	.003/0.08	.006/0.15
K	.245/6.22	.255/6.48
L	.150/3.81	.160/4.06