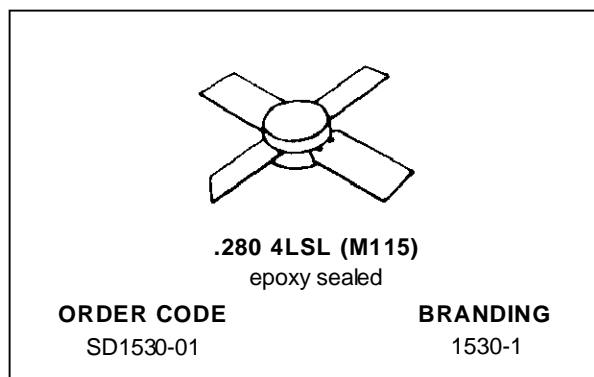
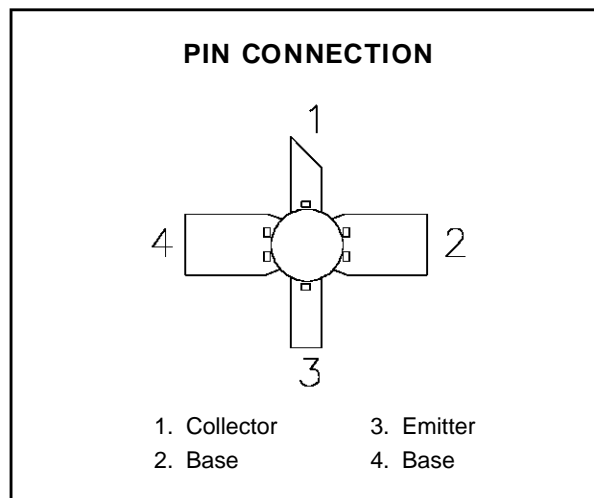


**RF & MICROWAVE TRANSISTORS
AVIONICS APPLICATIONS**

- DESIGNED FOR HIGH POWER PULSED IFF, DME, TACAN APPLICATIONS
- 40 WATTS (typ.) IFF 1030 - 1090 MHz
- 35 WATTS (min.) DME 1025 - 1150 MHz
- 25 WATTS (typ.) TACAN 960 - 1215 MHz
- 9.0 dB MIN. GAIN
- 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 SD1530-01 is a gold metallized silicon, NPN power transistor designed for applications requiring high peak power and low duty cycles such as IFF, DME and TACAN. The SD1530-01 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	65	V
V_{CES}	Collector-Emitter Voltage	65	V
V_{EBO}	Emitter-Base Voltage	3.5	V
I_C	Device Current	2.6	A
P_{DISS}	Power Dissipation	87.5	W
T_J	Junction Temperature	+200	$^{\circ}C$
T_{STG}	Storage Temperature	- 65 to +150	$^{\circ}C$

THERMAL DATA

$R_{TH(j-c)}$	Junction-Case Thermal Resistance	2.0	$^{\circ}C/W$
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SD1530-01

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CBO}	I _C = 20mA	I _E = 0mA	60	—	—	V
BV _{CES}	I _C = 20mA	V _{BE} = 0V	60	—	—	V
BV _{EBO}	I _E = 2mA	I _C = 0mA	3.5	—	—	V
I _{CBO}	V _{CB} = 50V	I _E = 0mA	—	—	2	mA
h _{FE}	V _{CB} = 5V	I _C = .5A				

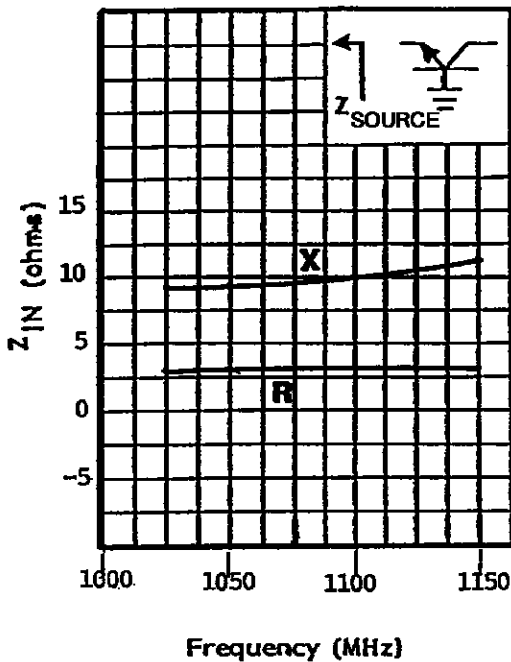
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 1025 – 1150MHz	P _{IN} = 5.6 W	V _{CE} = 50 V	35	—	—	W
G _P	f = 1025 – 1150MHz	P _{IN} = 5.6 W	V _{CE} = 50 V	9.0	—	—	dB

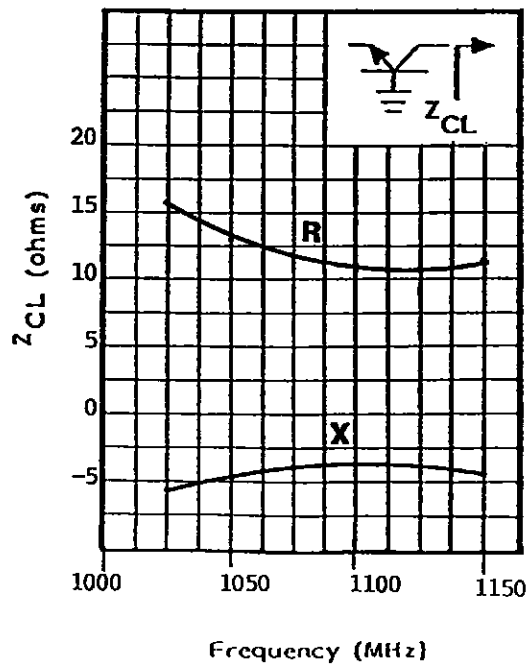
Note: Pulse Width = 10μSec, Duty Cycle = 1%
 This device is suitable for use under other pulse width/duty cycle conditions.
 Please contact the factory for specific applications assistance.

IMPEDANCE DATA

TYPICAL INPUT IMPEDANCE

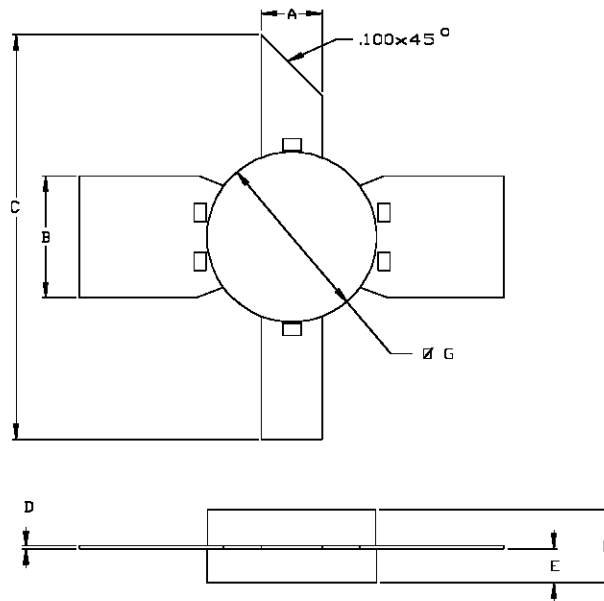


TYPICAL COLLECTOR LOAD IMPEDANCE



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0115



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.095/2,41	.105/2,67
B	.195/4,95	.205/5,21
C	1.000/25,40	
D	.004/0,10	.007/0,18
E	.050/1,27	.065/1,65
F		.145/3,68
G	.275/6,99	.285/7,21