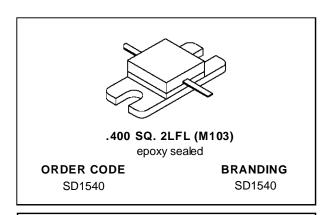
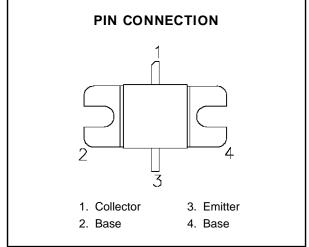


SD1540

RF & MICROWAVE TRANSISTORS AVIONICS APPLICATIONS

- DESIGNED FOR HIGH POWER PULSED IFF, DME, TACAN APPLICATIONS
- 350 WATTS (typ.) IFF 1030 1090 MHz
- 300 WATTS (min.) DME 1025 1150 MHz
- 2900 WATTS (typ.) TACAN 960 1215 MHz
- 6.3 dB MIN. GAIN
- REFRACTORY GOLD METALLIZATION
- EMITTER BALLASTING AND LOW THERMAL RESISTANCE FOR RELIABILITY AND RUGGEDNESS
- 30:1 LOAD VSWR CAPABILITY AT SPECIFIED OPERATING CONDITIONS
- INPUT/OUTPUT MATCHED, COMMON BASE CONFIGURATION





DESCRIPTION

The SD1540 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 SD1540 is packaged in a metal/ceramic package with internal input/output matching resulting in improved broadband performance and a low thermal resistance.

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

Symbol	Parameter	Value	Unit	
VcBo	Collector-Base Voltage	65	V	
V _{CES}	Collector-Emitter Voltage	65	V	
V _{EBO}	Emitter-Base Voltage	3.5	V	
lc	Device Current	22	А	
Poiss	Power Dissipation	875	W	
TJ	Junction Temperature	+200	°C	
T _{STG}	Storage Temperature	– 65 to +150	°C	

THERMAL DATA

R _{TH(j-c)} Junction-Case Thermal Resistance	0.20	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit		
		Min.	Тур.	Max.			
ВУсво	I _C = 10mA	$I_E = 0mA$		65	_	_	V
BVEBO	I _E = 5mA	I _C = 0mA		3.5	_	_	V
I _{CES}	V _{CE} = 50V	I _E = 0mA		_	_	25	mA

DYNAMIC

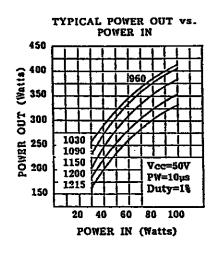
Svmbol	Test Conditions		Value			Unit
Symbol			Min.	Тур.	Max.	
Pout	f = 1025 — 1150MHz P _{IN} = 70 W V _{CE} = 5	V C	300	_		W
G _P	f = 1025 — 1150MHz P _{IN} = 70 W V _{CE} = 5	O V	6.3			dB

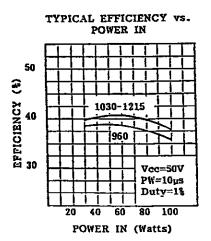
Note: Pulse Width = $10\mu Sec$, Duty Cycle = 1%

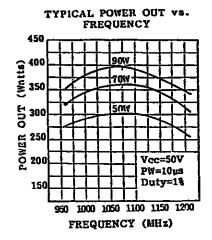
This device is suitable for use under other pulse width/duty cycle conditions.

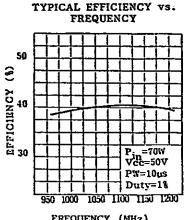
Please contact the factory for specific applications asistance.

TYPICAL PERFORMANCE



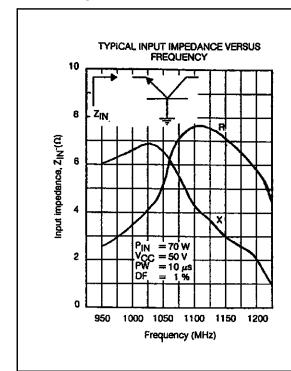


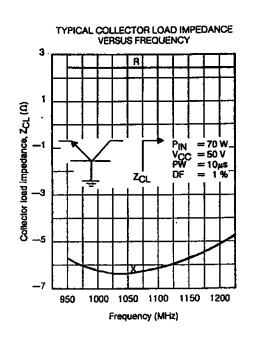




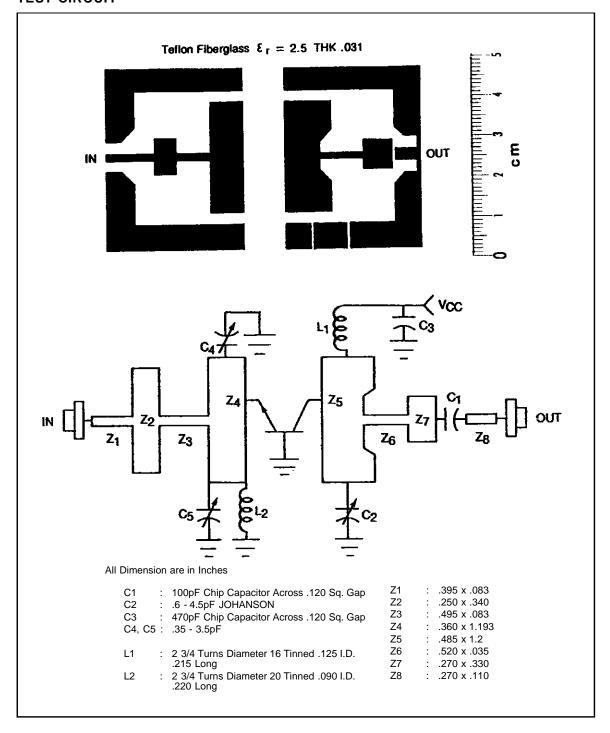
FREQUENCY (MHz)

IMPEDANCE DATA

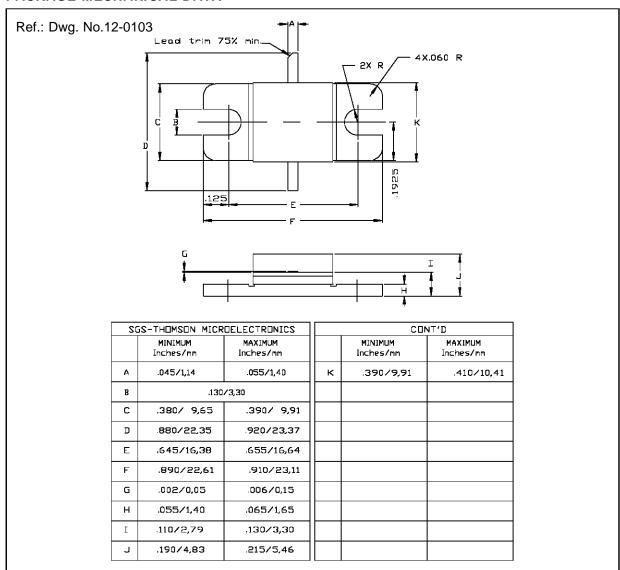




TEST CIRCUIT



PACKAGE MECHANICAL DATA



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