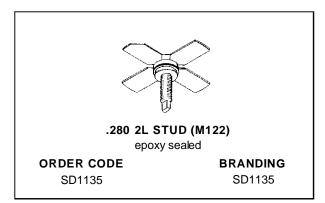
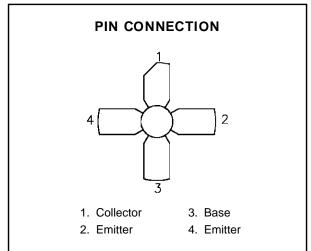


SD1135

RF & MICROWAVE TRANSISTORS UHF MOBILE APPLICATIONS

- 470 MHz
- 12.5 VOLTS
- EFFICIENCY 60%
- COMMON EMITTER
- Pout = 5.0 W MIN. WITH 8.5 dB GAIN





DESCRIPTION

The SD1135 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for UHF communications. This device utilizes improved metallization to achieve infinite VSWR at rated operating conditions.

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	V	
V _{CER}	Collector-Emitter Voltage	18	V
V _{CES}	Collector-Emitter Voltage	36	V
VEBO	Emitter-Base Voltage	4.0	V
Ic	Device Current	2.0	А
P _{DISS}	Power Dissipation	37	W
TJ	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 65 to +150	°C

THERMAL DATA

R _{TH(j-c)} Junction-Case Thermal Resistance	11.6	°C/W
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ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

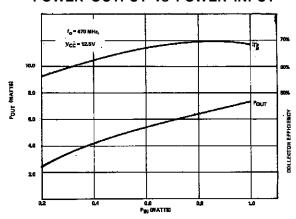
Symbol	Test Conditions	Value			Unit		
Syllibol		rest Conditions		Min.	Тур.	Max.	Ollit
BVces	I _C = 10mA	$V_{BE} = 0mA$		36	_	_	V
BVceo	I _C = 50mA	$I_B = 0mA$		16	_	_	V
BV _{EBO}	I _E = 2mA	$I_C = 0mA$		4.0	_	_	V
I _{CBO}	V _{CB} = 15V	$I_E = 0mA$		_		1	mA
hFE	V _{CE} = 5V	I _C = 200mA		20	_	_	_

DYNAMIC

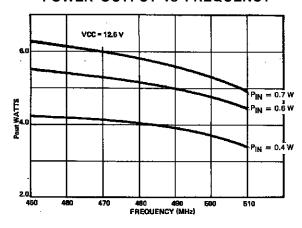
Symbol		Test Conditions		Value			Unit
Symbol		rest conditions		Min.	Тур.	Max.	Oiiit
Роит	f = 470 MHz	$P_{IN} = 0.70 W$	$V_{CC} = 12.5 V$	5.0	_	_	W
G _P	f = 470 MHz	$P_{IN} = 0.70 W$	$V_{CC} = 12.5 V$	8.5	_	_	dB
Сов	f = 1 MHz	V _{CB} = 12 V			19	_	pF

TYPICAL PERFORMANCE

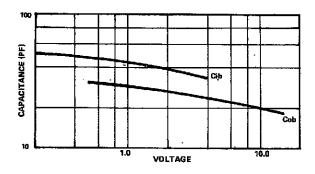
POWER OUTPUT vs POWER INPUT



POWER OUTPUT vs FREQUENCY

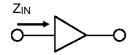


CAPACITANCE vs VOLTAGE

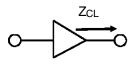


IMPEDANCE DATA

TYPICAL INPUT IMPEDANCE

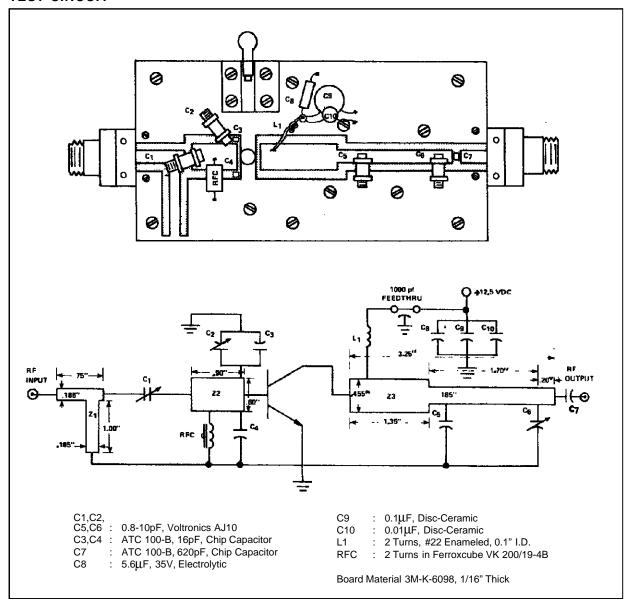


TYPICAL COLLECTOR LOAD IMPEDANCE



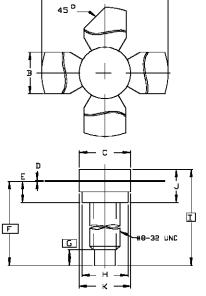
FREQ.	Z _{IN} (Ω)	$Z_CL \; (\Omega)$
450 MHz	1.4 + j 2.0	10.7 – j 6.9
470 MHz	1.4 + j 2.9	11.4 – j 5.8
512 MHz	1.5 + j 3.4	11.9 – j 3.2

TEST CIRCUIT



PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0122



SGS-THOMSON MICROELECTRONICS				
	MINIMUM	MAXIMUM		
	Inches/mm	Inches/mm		
Α	1.010/25,65	1.055/26,80		
В	.220/5,59	.230/5,84		
С	.270/6,86	285/7,24		
D	.003/0,08	.007/0,18		
Ε	.117/2,97	.137/3,48		
F	.572/14,53			
G	.130/3,30			
Н	.245/6,22 .255/6,48			
I	.640/16,26			
J	.175/4,45	.217/5,51		
ĸ	.275/6,99	285/7,24		

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