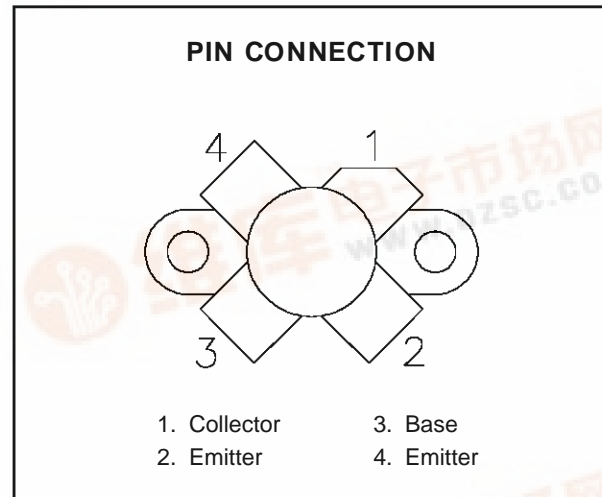
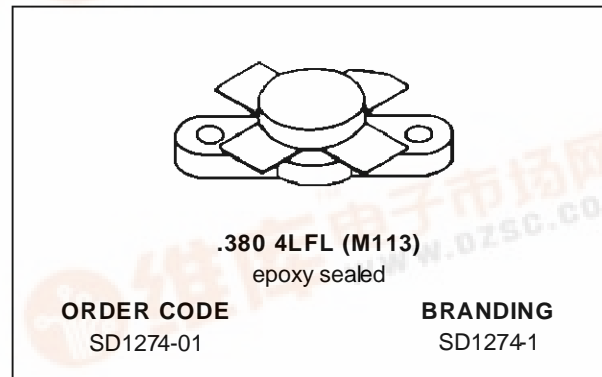




SD1274-01

**RF & MICROWAVE TRANSISTORS
VHF MOBILE APPLICATIONS**

- 160 MHz
- 13.6 VOLTS
- COMMON EMITTER
- P_{OUT} = 30 W MIN. WITH 10 dB GAIN



DESCRIPTION

The SD1274-01 is a 13.6 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications. The SD1274-01 utilizes an emitter ballasted die geometry to withstand severe load mismatch conditions.

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	36	V
V _{CEO}	Collector-Emitter Voltage	16	V
V _{CES}	Collector-Emitter Voltage	36	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _c	Device Current	8.0	A
P _{DISS}	Power Dissipation	70	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 65 to +150	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance	1.2	°C/W
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SD1274-01

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

STATIC

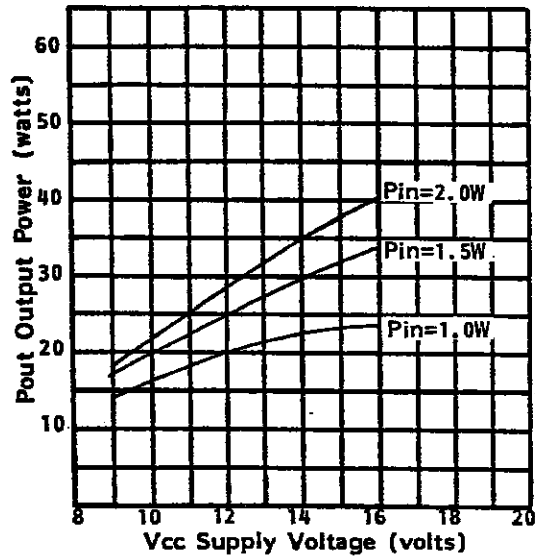
Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CES}	I _C = 15mA	V _{BE} = 0mA	36	—	—	V
BV _{CEO}	I _C = 50mA	I _B = 0mA	16	—	—	V
BV _{EBO}	I _E = 5mA	I _C = 0mA	4.0	—	—	V
I _{CBO}	V _{CB} = 15V	I _E = 0mA	—	—	5	mA
h _{FE}	V _{CE} = 5V	I _C = 250mA	20	—	—	—

DYNAMIC

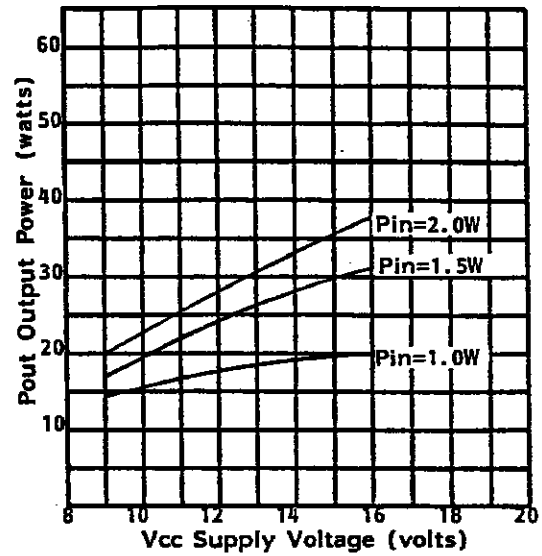
Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 160 MHz	P _{IN} = 3.0 W	V _{CE} = 13.6 V	30	—	—	W
G _P	f = 160 MHz	P _{IN} = 3.0 W	V _{CE} = 13.6 V	10	—	—	dB
C _{OB}	f = 1 MHz	V _{CB} = 15 V		—	95	—	pF

TYPICAL PERFORMANCE

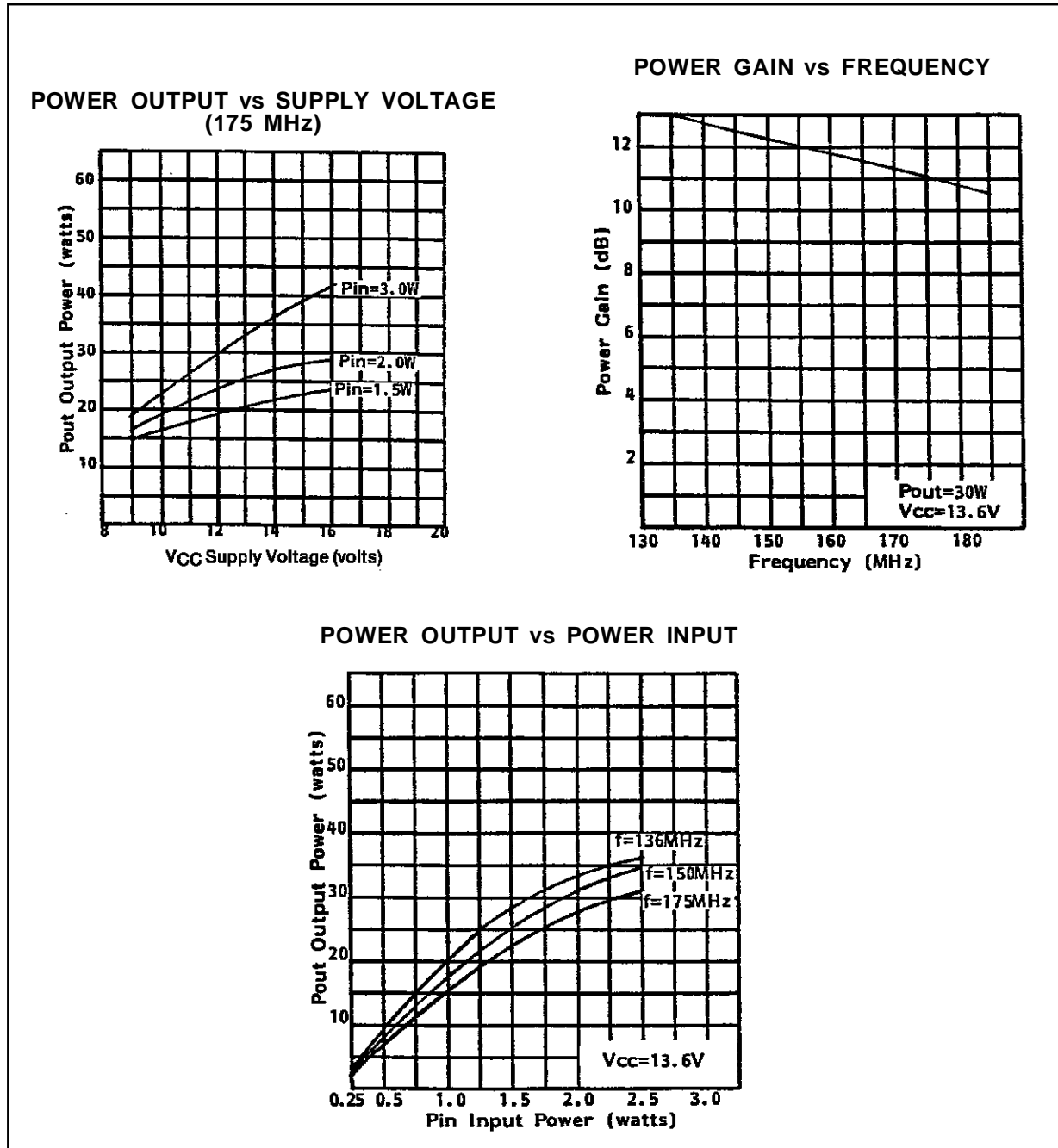
POWER OUTPUT vs SUPPLY VOLTAGE
(136 MHz)



POWER OUTPUT vs SUPPLY VOLTAGE
(150 MHz)



TYPICAL PERFORMANCE (cont'd)



IMPEDANCE DATA

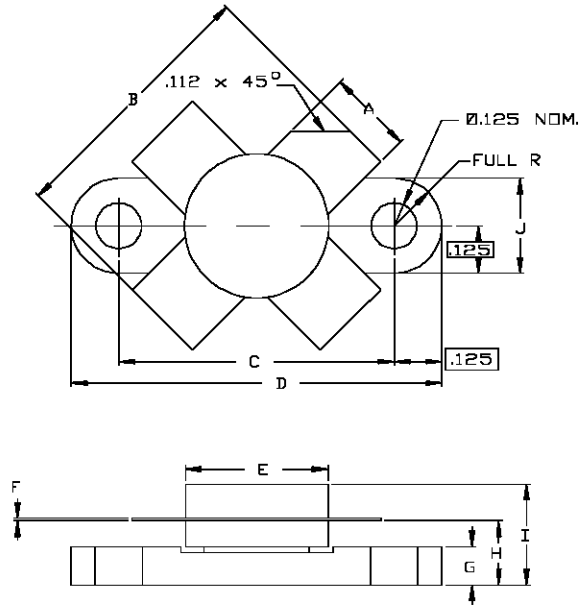
FREQ.	Z _{IN} (Ω)	Z _{CL} (Ω)
175 MHz	1.0 + j 0.4	2.3 + j 0.1

P_{IN} = 3.0 W
 V_{CE} = 12.5 V

SD1274-01

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0113



SGS-THOMSON MICROELECTRONICS		
	MINIMUM Inches/mm	MAXIMUM Inches/mm
A	.220/5,59	.230/5,84
B	.785/19,94	
C	.720/18,29	.730/18,54
D	.970/24,64	.980/24,89
E		.385/9,78
F	.004/0,10	.006/0,15
G	.085/2,16	.105/2,67
H	.160/4,06	.180/4,57
I		.280/7,11
J	.240/6,10	.255/6,48

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