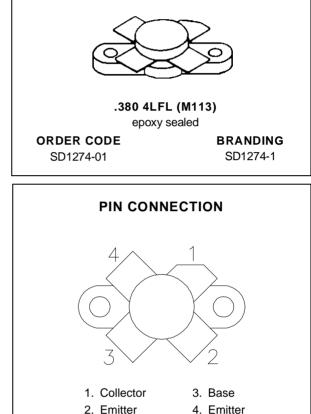


SD1274-01

RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

- ∎ 160 MHz
- 13.6 VOLTS
- COMMON EMITTER
- POUT = 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 ($T_{case} = 25^{\circ}C$)

Symbol	Parameter	Value	Unit		
Vсво	Collector-Base Voltage	36	V		
VCEO	Collector-Emitter Voltage	16	V		
VCES	Collector-Emitter Voltage	36	V		
V _{EBO}	Emitter-Base Voltage	4.0	V		
Ιc	Device Current	8.0	А		
P _{DISS}	Power Dissipation	70	W		
TJ	Junction Temperature	+200	°C		
T _{STG}	Storage Temperature	– 65 to +150	°C		
HERMAL DATA					
R _{TH} (j-c)	Junction-Case Thermal Resistance	1.2	°C/W		

June 1993

1/4

SD1274-01

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

Symbol	Test Conditions	Value			Unit		
Symbol			Min.	Тур.	Max.	Unit	
BVCES	$I_{C} = 15 mA$	$V_{BE} = 0mA$		36			V
BVCEO	$I_C = 50 mA$	$I_B = 0mA$		16	_	—	V
BV _{EBO}	$I_E = 5mA$	$I_{C} = 0 m A$		4.0	—	—	V
I _{CBO}	$V_{CB} = 15V$	$I_E = 0mA$				5	mA
h _{FE}	$V_{CE} = 5V$	$I_{\rm C} = 250 {\rm mA}$		20	_	_	

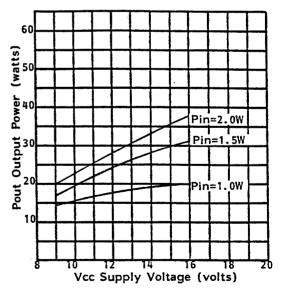
DYNAMIC

Symbol		Test Conditions	nditions		Value		
Symbol		Test conditions		Min.	Тур.	Max.	Unit
Роит	f = 160 MHz	$P_{IN} = 3.0 \text{ W}$	$V_{CE}=13.6\ V$	30	—	_	W
GP	f = 160 MHz	$P_{IN} = 3.0 \text{ W}$	$V_{CE} = 13.6 V$	10		_	dB
Сов	f = 1 MHz	$V_{CB} = 15 V$		_	95		pF

TYPICAL PERFORMANCE

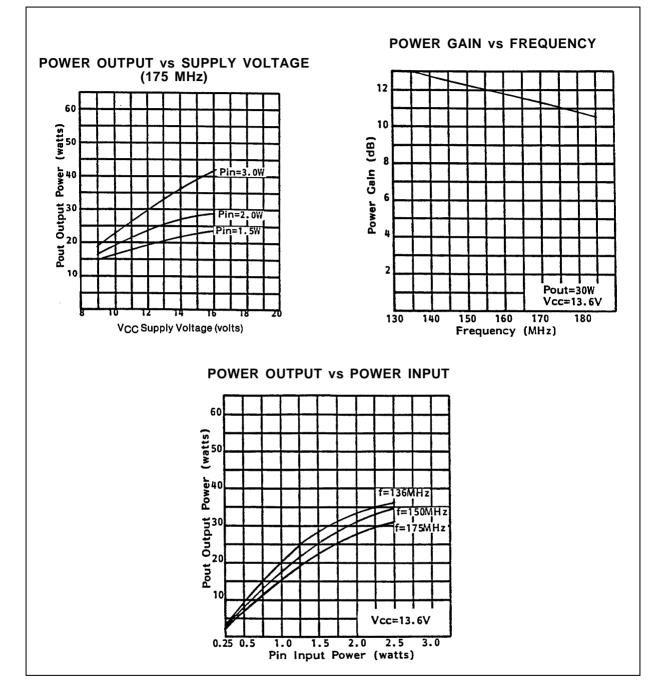
POWER OUTPUT vs SUPPLY VOLTAGE (136 MHz)

POWER OUTPUT vs SUPPLY VOLTAGE (150 MHz)





TYPICAL PERFORMANCE (cont'd)



IMPEDANCE DATA

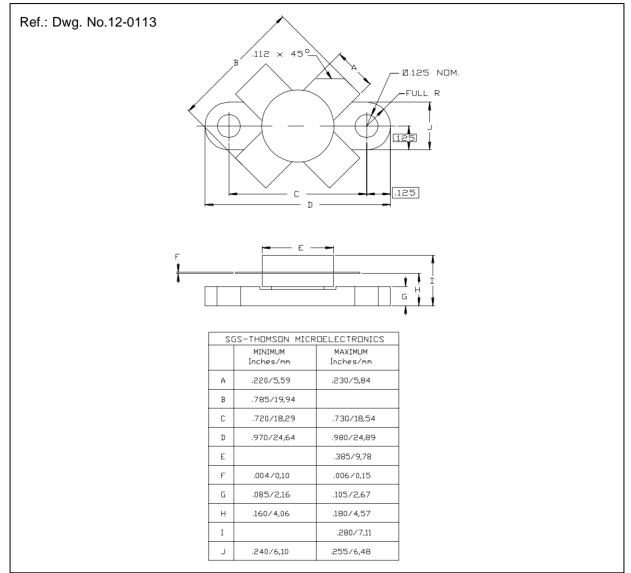
FREQ.	Z _{IN} (Ω)	Z _{CL} (Ω)			
175 MHz	1.0 + j 0.4	2.3 + j 0.1			
$P_{IN} = 3.0 \text{ W}$					
V _{CE} = 12.5 V					

SGS-THOMSON MICROELECTRONICS

57.



PACKAGE MECHANICAL DATA



Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsability for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may results from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectonics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -

Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A

