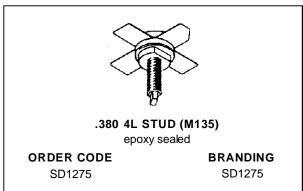
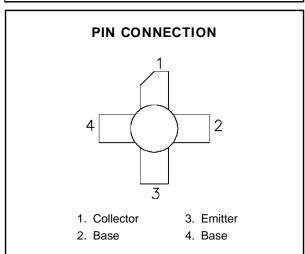


SD1275

RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

- 160 MHz
- 13.6 VOLTS
- COMMON EMITTER
- Pout = 40 W MIN. WITH 9.0 dB GAIN





DESCRIPTION

The SD1275 is a 13.6 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF communications. The SD1275 utilizes an emitter ballasted die geometry to withstand severe load mismatch conditions.

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

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
VEBO	Emitter-Base Voltage	4.0	V
Ic	Device Current	8.0	А
P _{DISS}	P _{DISS} Power Dissipation		W
TJ	T _J Junction Temperature		°C
T _{STG}	T _{STG} Storage Temperature		°C

THERMAL DATA

R _{TH(j-c)} Junction-Case Thermal Resistance	1.2	°C/W
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ELECTRICAL SPECIFICATIONS $(T_{case} = 25^{\circ}C)$

STATIC

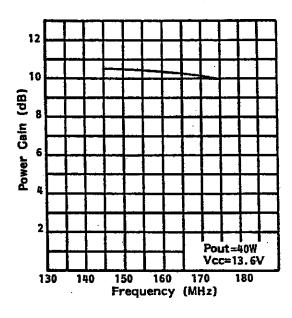
Symbol	Test Conditions	Value			Unit		
Symbol	rest Conditions		Min.	Тур.	Max.		
BVces	I _C = 15mA	$V_{BE} = 0mA$		36	_	_	V
BVCEO	I _C = 50mA	$I_B = 0mA$		16	_	_	V
BV _{EBO}	I _E = 5mA	$I_C = 0mA$		4.0	_		V
I _{CBO}	V _{CB} = 15V	$I_E = 0mA$		_	_	5	mA
hFE	V _{CE} = 5V	I _C = 250mA		20	_	_	_

DYNAMIC

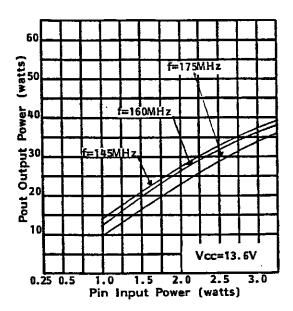
Symbol	Symbol Test Conditions		Value			Unit	
Symbol		rest Conditions			Тур.	Max.	Oiiit
Pout	f = 160 MHz	$P_{IN} = 5.0 W$	$V_{CE} = 13.6 \text{ V}$	40	_		W
G _P	f = 160 MHz	$P_{IN} = 5.0 W$	$V_{CE} = 13.6 \text{ V}$	9	_		dB
Сов	f = 1 MHz	V _{CB} = 15 V		_	95	_	pF

TYPICAL PERFORMANCE

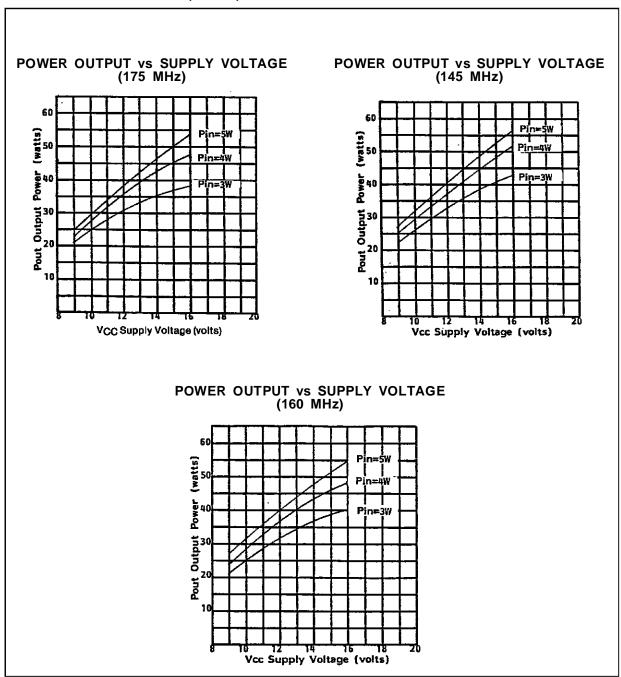
POWER GAIN vs FREQUENCY



POWER OUTPUT vs POWER INPUT



TYPICAL PERFORMANCE (cont'd)

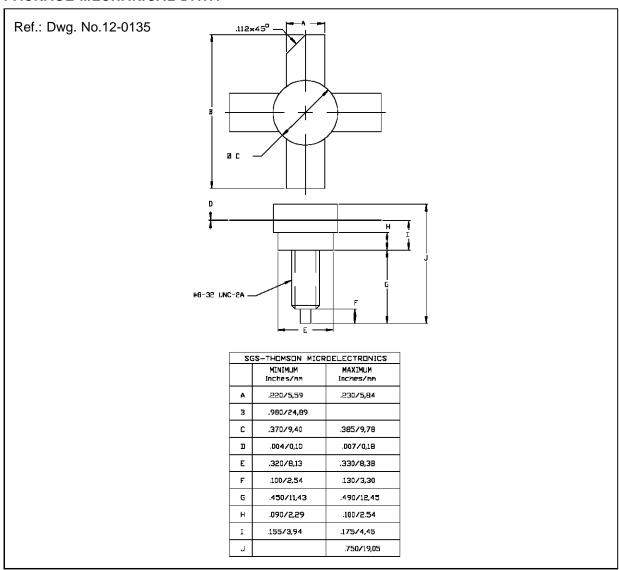


IMPEDANCE DATA

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

 $P_{IN} = 3.0 \text{ W}$ $V_{CE} = 12.5 \text{ V}$

PACKAGE MECHANICAL DATA



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