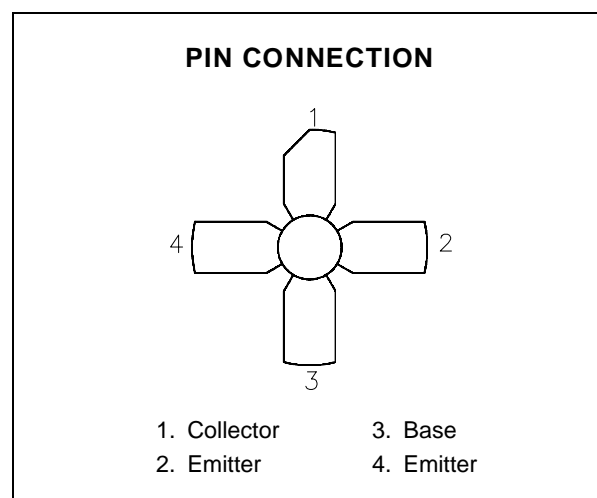
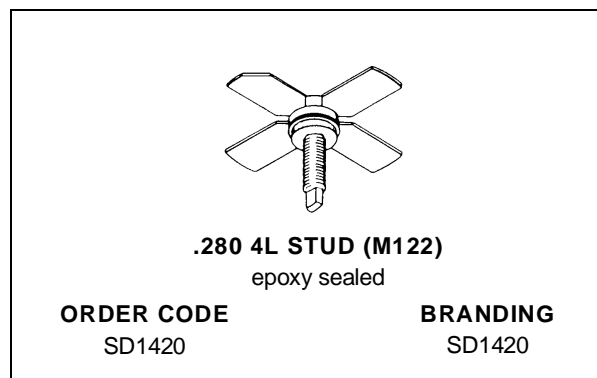


RF & MICROWAVE TRANSISTORS
800-900 MHz BASE STATION APPLICATIONS

- 860 - 960 MHz
- 24 VOLTS
- COMMON EMITTER
- GOLD METALLIZATION
- CLASS A LINEAR OPERATION
- P_{OUT} = 2.1 W MIN. WITH 9.0 dB GAIN


DESCRIPTION

The SD1420 is a gold metallized epitaxial silicon NPN planar transistor designed for high linearity Class A operation Cellular Base Station applications. The SD1420 is also available in a studless package as the SD1420-01.

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	40	V
V _{CEO}	Collector-Emitter Voltage	28	V
V _{EBO}	Emitter-Base Voltage	3.5	V
I _C	Device Current	.250	A
P _{DISS}	Power Dissipation	8.75	W
T _J	Junction Temperature	+200	°C
T _{STG}	Storage Temperature	- 55 to +150	°C

THERMAL DATA

R _{TH(j-c)}	Junction-Case Thermal Resistance	20	°C/W
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SD1420

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV _{CB0}	I _C = 1 mA	I _E = 0 mA	40	—	—	V
BV _{CEO}	I _C = 1 mA	I _B = 0 mA	28	—	—	V
BV _{EBO}	I _E = 1 mA	I _C = 0 mA	3.5	—	—	V
I _{CB0}	V _{CB} = 24 V	I _E = 0 mA	—	—	.5	mA
h _{FE}	V _{CE} = 5 V	I _C = 100 mA	20	—	120	—

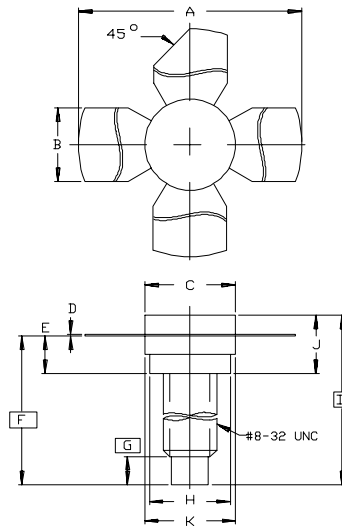
DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P _{OUT}	f = 960 MHz	V _{CE} = 24 V	I _{CQ} = 200 mA	2.1	—	—	W
P _G	f = 960 MHz	V _{CE} = 24 V	I _{CQ} = 200 mA	8.9	9.0	—	dB
C _{OB}	f = 1 MHz	V _{CB} = 28 V		—	—	5	pF

Note: *P_{IN} = 0.27 W

PACKAGE MECHANICAL DATA

Ref.: Dwg. No.12-0122 rev. B



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

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