

RF & MICROWAVE TRANSISTORS
860-960MHz CLASS AB BASE STATION

- FREQUENCY 860 - 960MHz
- POWER OUT 2.1W
- VOLTAGE 24V
- POWER GAIN 9.0dB
- CLASS AB
- DESIGNED FOR LINEAR OPERATION
- GOLD METALLIZATION FOR HIGH RELIABILITY
- COMMON EMITTER CONFIGURATION

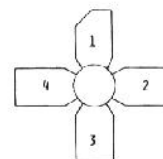


.280 4LSTUD (M122)
epoxy sealed

ORDER CODE
SD1420

BRANDING
SD1420

PIN CONNECTION



S88SD1420-01

1 collector
2 emitter

3 base
4 emitter

DESCRIPTION

The SD1420 is a gold metallized epitaxial silicon NPN Planar Transistor designed for high linearity Class AB operation for Cellular Base Station applications. The SD1420 was developed as a driver for the SD1423. The SD1420 is available in a studless package as the SD1420-01.

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector - Base Voltage	40.0	V
V_{CEO}	Collector - Emitter Voltage	28.0	V
V_{EBO}	Emitter - Base Voltage	3.5	V
I_C	Collector Current (max.)	.250	A
P_{TOT}	Total Device Dissipation at + 25°C	7.0	W
T_{STG}	Storage Temperature	- 55 to + 150	°C
T_J	Junction Temperature	+ 200	°C

THERMAL DATA

$R_{th(J-C)}$	Junction-case Thermal Resistance	20.0	°C/W
---------------	----------------------------------	------	------

SD1420**ELECTRICAL CHARACTERISTICS** ($T_{case} = 25^{\circ}C$)**STATIC**

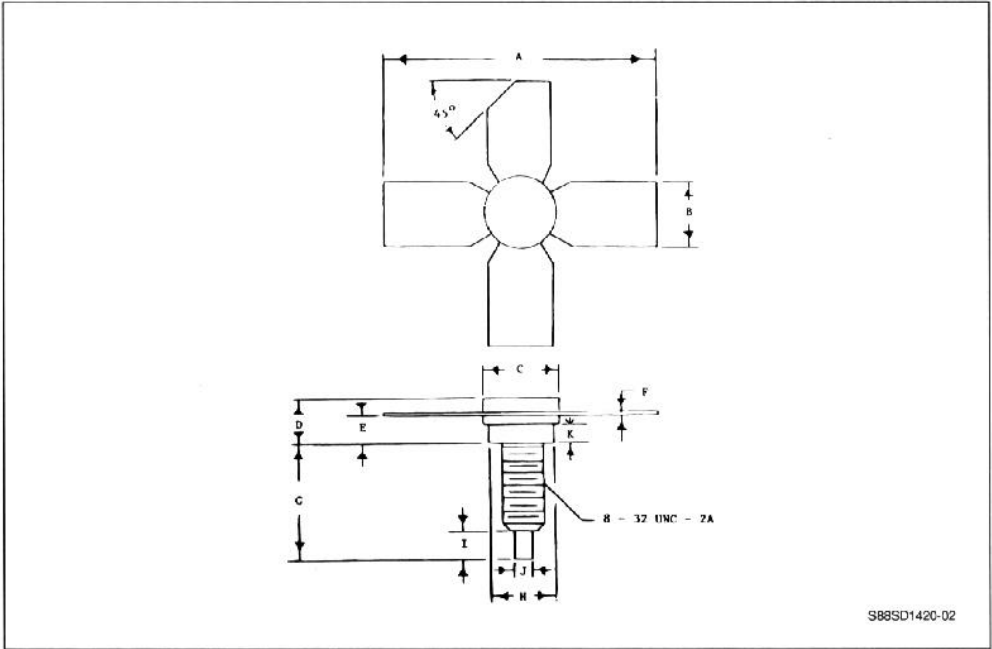
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CEO}	$I_C = 1mA$	28	30		V
BV_{CBO}	$I_C = 1mA$	40.0			V
BV_{EBO}	$I_E = .25mA$	3.5			V
I_{CEO}	$V_{CB} = 24.0V$			.5	mA
h_{FE}	$V_C = 5.0V$ $I_C = .1A$	20		120	

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_O	$f = 960MHz$ $V_{CE} = 24V$ $I_{CE} = .2A$	2.1			W
P_G	$f = 960MHz$ $V_{CE} = 24V$	8.9	9.0		dB
C_{ob}	$f = 1MHz$ $V_{CB} = 28.0V$			5.0	pF

PACKAGE MECHANICAL DATA

.280 4LSTUD



	Minimum Inches	Maximum Inches
A		1.055
B	.220	.230
C	.275	.285
D	.178	.192
E	.110	.125
F	.004	.006

	Minimum Inches	Maximum Inches
G	.445	.465
H	.245	.255
I	.120	.140
J	.055	.065
K	.055	.065