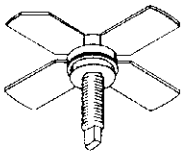
SGS-THOMSON MICROELECTRONICS

SD1437

RF & MICROWAVE TRANSISTORS UHF TV/LINEAR APPLICATIONS

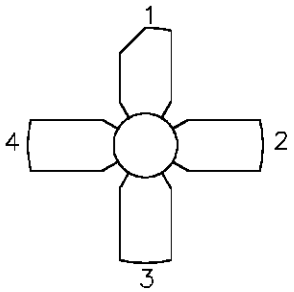
- 860 MHz
- COMMON EMITTER
- GOLD METALLIZATION
- CLASS A LINEAR OPERATION
- P_{OUT} = 2 W MIN. WITH 8.5 dB GAIN



.280 4L STUD (M122)
epoxy sealed

ORDER CODE	BRANDING
SD1437	TCC593

PIN CONNECTION



1. Collector
2. Emitter
3. Base
4. Emitter

DESCRIPTION

The SD1437 is a silicon NPN bipolar device specifically designed for high linearity applications in the UHF frequency range including TV Bands IV and V.

Gold metallization and emitter ballasting assure high reliability under Class A linear amplifier operation.

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

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	4.0	V
I_C	Device Current	1.2	A
P_{DISS}	Power Dissipation	19.4	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	9.0	°C/W

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

STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 10 mA	I_E = 0 mA	45	—	—	V
BV_{CEO}	I_C = 80 mA	I_B = 0 mA	25	—	—	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	4.0	—	—	V
I_{CBO}	V_{CB} = 28 V	I_E = 0 mA	—	—	0.45	mA
h_{FE}	V_{CE} = 20 V	I_C = 250 mA	10	—	100	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}[1]	f = 860 MHz	V_{CE} = 25 V	I_C = 450 mA	2	—	—	W
G_P[2]	f = 860 MHz	V_{CE} = 25 V	I_C = 450 mA	8.5	—	—	dB
IMD_3[3]	P_{SYNC} = 2 W	V_{CE} = 25 V	I_C = 450 mA	—	–60	—	dBc
C_{OB}	f = 1 MHz	V_{CB} = 25 V		—	—	10	pF

Note 1: P_{IN} = 0.3 W

Note 2: P_{OUT} = 2 W

Note 3: Levels relative to P_{SYNC}

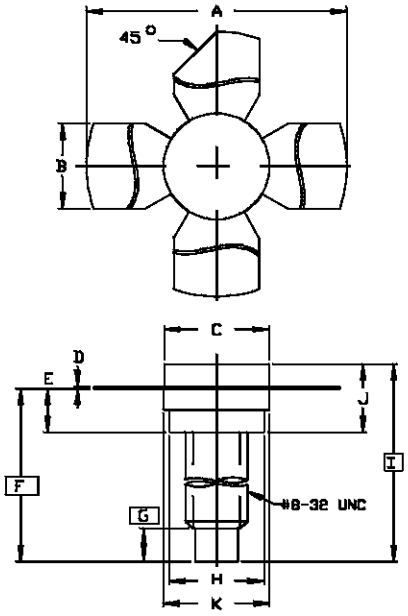
f_1 = 860.0 MHz –8dBc

f_1 = 863.5 MHz –16dBc

f_1 = 864.5 MHz –7dBc

PACKAGE MECHANICAL DATA

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



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	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