

SD1075

RF & MICROWAVE TRANSISTORS UHF TV/LINEAR APPLICATIONS

Features

- 130 - 400 MHz
- 28 VOLTS
- $P_{OUT} = 10$ WATTS
- $G_P = 4.0$ dB MINIMUM
- HIGH POWER GAIN
- HIGH EFFICIENCY
- COMMON EMITTER CONFIGURATION

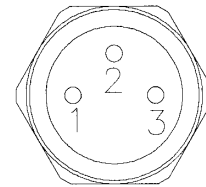


TO 60 (M137)

DESCRIPTION:

This line of silicon epitaxial NPN planar high frequency transistor employs a multi emitter electrode design. This feature together with a heavily diffused base matrix located between the individual emitters results in high RF current handling capability, high power gain, low base resistance and low output capacitance. These transistors are intended for Class A, B, or C amplifier, oscillator or frequency multiplier circuits and are specifically designed for operation in the VHF-UHF region.

PIN CONNECTION



1. Emitter
2. Base
3. Collector

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	65	V
V _{CES}	Collector-Emitter Voltage	40	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Device Current	3.0	A
P _{DISS}	Power Dissipation	23.0	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	7.6	°C/W
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ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

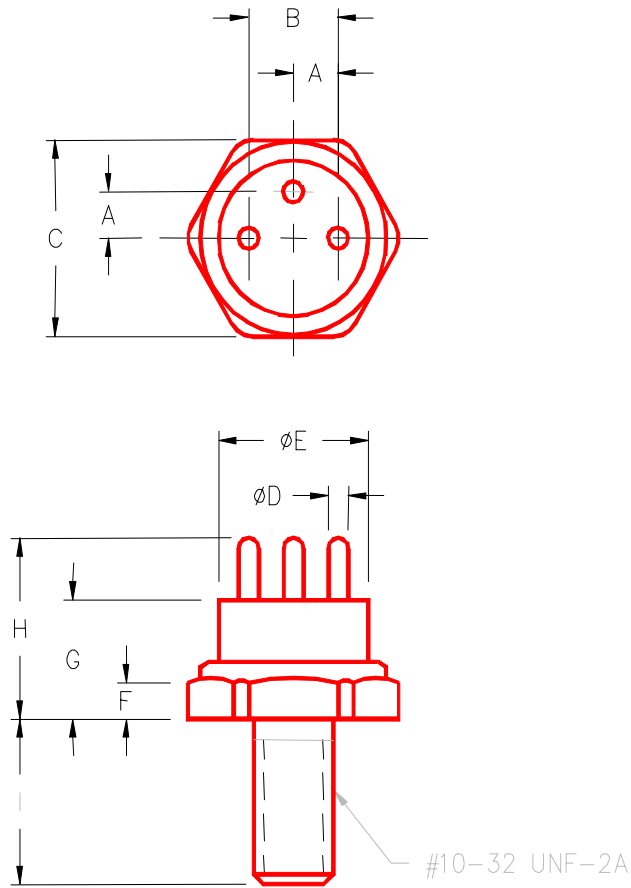
Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
BV_{CBO}	I_C = 0.5 mA	65	---	---	V
BV_{EBO}	I_E = 0.25 mA	4	---	---	V
BV_{CEO}	I_C = 200 mA	40	---	---	V
I_{CEO}	V_{CE} = 30 V	---	---	0.25	mA
h_{FE}	V_{CE} = 5 V I_C = 250 mA	10	---	150	---

DYNAMIC

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
P_{OUT}	f = 400 MHz P_{IN} = 4 V V_{CC} = 28 V	10	---	---	W
η_C	f = 400 MHz P_{IN} = 4 V V_{CC} = 28 V	45	---	---	%
G_P	f = 400 MHz P_{IN} = 4 V V_{CC} = 28 V	4.0	---	---	dB
C_{OB}	f = 1 MHz V_{CB} = 30 V	---	---	20	pF

PACKAGE MECHANICAL DATA

PACKAGE STYLE M137



	MINIMUM INCHES/MM	MAXIMUM INCHES/MM		MINIMUM INCHES/MM	MAXIMUM INCHES/MM
A	.090/2,29	.110/2,79	I	.420/10,67	.455/11,56
B	.185/4,70	.215/5,46	I	.140/3,56	.160/4,06
C	.420/10,67	.440/11,18			
D	.030/0,76	.046/1,17			
E	.320/8,13	.360/9,14			
F	.090/2,29	.135/3,43			
G	.215/5,46	.320/8,13			
H		.480/12,19			

STANDARD STUD
SHORT STUD