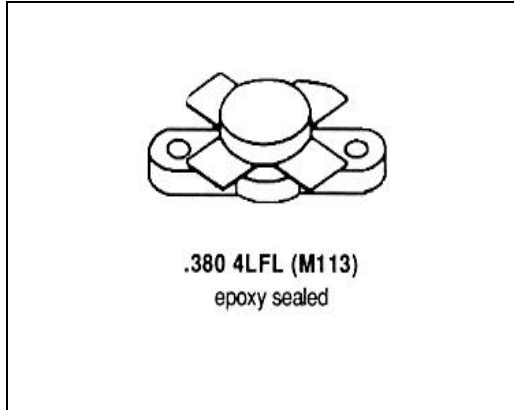


SD1013-03

RF & MICROWAVE TRANSISTORS VHF APPLICATIONS

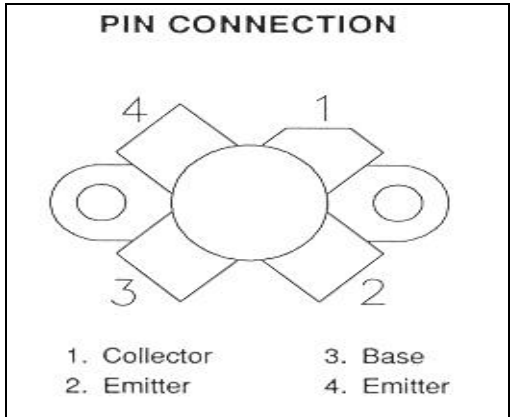
Features

- 150 MHz
- 28 VOLTS
- P_{OUT} = 10 WATTS
- G_P = 10 dB MINIMUM
- η = 50%
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

The SD1013-03 is a 28V epitaxial silicon NPN planar transistor designed primarily for FM communications. This device utilizes emitter ballasting for improved ruggedness and reliability.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-base Voltage	65	V
V _{CEO}	Collector-emitter Voltage	35	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _C	Device Current	1.0	A
P _{DISS}	Power Dissipation	13	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	13.5	°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 = 200 mA	I_E = 0 mA	65	---	---	V
BV_{CES}	I_C = 200 mA	V_{BE} = 0 V	65	---	---	V
BV_{CEO}	I_C = 200 mA	I_B = 0 mA	35	---	---	V
BV_{EBO}	I_E = 10 mA	I_C = 0 mA	4.0	---	---	V
I_{CBO}	V_{CB} = 30 V	I_E = 0 mA	---	---	1.0	mA
H_{FE}	V_{CE} = 5 V	I_C = 200 mA	10	---	200	---

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	f = 150 MHz	P_{IN} = 1.0W	V_{CE} = 28V	10	---	---	W
G_p	f = 150 MHz	P_{IN} = 1.0W	V_{CE} = 28V	10	---	---	dB
C_{OB}	f = 1 MHz	V_{CB} = 30V		---	---	15	pF

IMPEDANCE DATA

FREQ	Z _{IN} (Ω)	Z _{CL} (Ω)
150 MHz	3.0 + j0.5	31 + j19

P_{IN} = 1.0W
V_{CC} = 28V

SD1013-03

PACKAGE MECHANICAL DATA

