

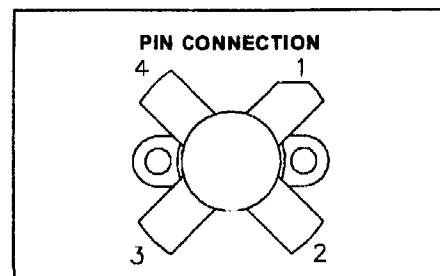
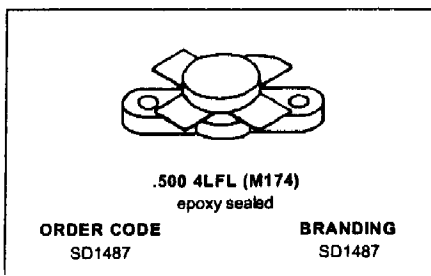
SD1487

RF & MICROWAVE TRANSISTORS HF SSB APPLICATIONS

- 30 MHz
- 12.5 VOLTS
- IMD -30 dB
- COMMON EMITTER
- GOLD METALLIZATION
- P_{OUT} = 100 W MIN. WITH 12.0 dB GAIN

DESCRIPTION

The SD1487 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for HF communications. This device utilizes state-of-the-art diffused emitter ballasting to achieve extreme ruggedness under severe operating conditions.



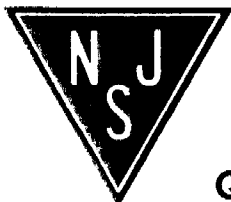
1. Collector
2. Emitter
3. Base
4. Emitter

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	36	V
V _{CEO}	Collector-Emitter Voltage	18	V
V _{EB0}	Emitter-Base Voltage	4.0	V
I _c	Device Current	20	A
P _{DISS}	Power Dissipation	290	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	0.6	°C/W
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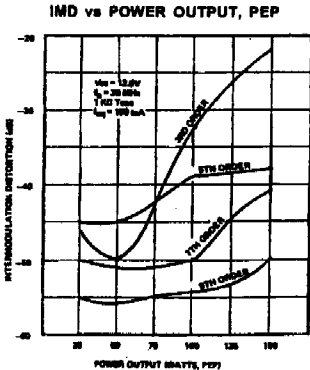


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ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)

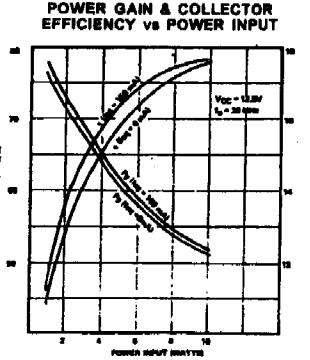
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 100mA$	$I_E = 0mA$	36	—	—	V
BV_{CES}	$I_C = 100mA$	$V_{BE} = 0V$	36	—	—	V
BV_{CEO}	$I_C = 100mA$	$I_B = 0mA$	18	—	—	V
BV_{EBO}	$I_E = 20mA$	$I_C = 0mA$	4.0	—	—	V
I_{CES}	$V_{CE} = 15V$	$I_E = 0mA$	—	—	20	mA
h_{FE}	$V_{CE} = 5V$	$I_C = 5A$	10	—	200	—



DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 30 MHz$	$V_{CE} = 12.5 V$	$I_{CQ} = 150mA$	100	—	—	W
G_P	$f = 30 MHz$	$V_{CE} = 12.5 V$	$I_{CQ} = 150mA$	11	13	—	dB
IMD_3^*	$P_{OUT} = 100WPEP$	$V_{CE} = 12.5 V$	$I_{CQ} = 150mA$	—	—	-30	dBc
C_{OB}	$f = 1 MHz$	$V_{CB} = 12.5 V$		—	400	—	pF



*Note: $f = 30 + 30.001MHz$