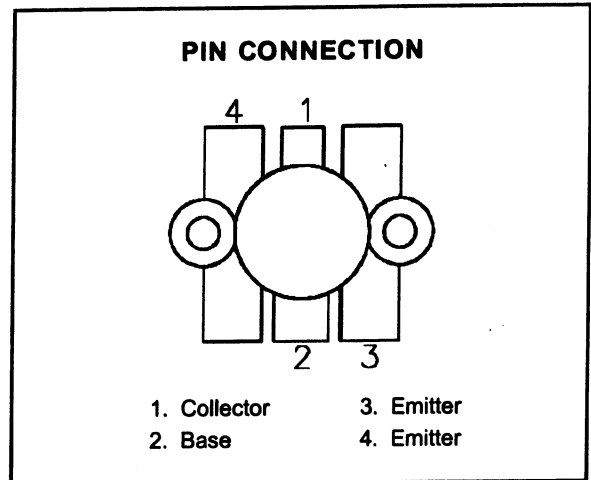
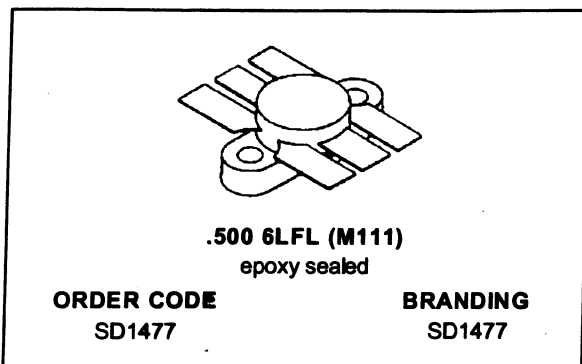


SD1477

RF & MICROWAVE TRANSISTORS VHF MOBILE APPLICATIONS

- 175 MHz
- 12.5 VOLTS
- COMMON EMITTER
- P_{OUT} = 100 W MIN. WITH 6.0 dB GAIN



DESCRIPTION

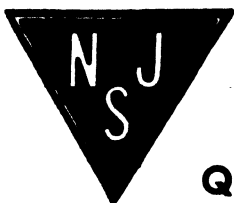
The SD1477 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for VHF FM communications. This device utilizes diffused emitter resistors to withstand extremely high VSWR under rated operating conditions, and is internally input matched to optimize power gain and efficiency over the 136 - 175 MHz band.

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	36	V
V _{CEO}	Collector-Emitter Voltage	18	V
V _{CES}	Collector-Emitter Voltage	36	V
V _{EBO}	Emitter-Base Voltage	4.0	V
I _c	Device Current	20	A
P _{DISS}	Power Dissipation	270	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	0.65	°C/W
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ELECTRICAL SPECIFICATIONS ($T_{case} = 25^{\circ}C$)**STATIC**

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	$I_C = 50mA$	$I_E = 0mA$	36	—	—	V
BV_{CES}	$I_C = 100mA$	$V_{BE} = 0V$	36	—	—	V
BV_{CEO}	$I_C = 100mA$	$I_B = 0mA$	18	—	—	V
BV_{EBO}	$I_E = 10mA$	$I_C = 0mA$	4.0	—	—	V
I_{CES}	$V_{CE} = 15V$	$I_E = 0mA$	—	—	15	mA
h_{FE}	$V_{CE} = 5V$	$I_C = 5A$	10	—	—	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
P_{OUT}	$f = 175 MHz$	$P_{IN} = 25 W$	$V_{CC} = 12.5 V$	100	—	—	W
G_P	$f = 175 MHz$	$P_{IN} = 25 W$	$V_{CC} = 12.5 V$	6.0	—	—	dB
C_{OB}	$f = 1 MHz$	$V_{CB} = 12.5 V$		—	350	—	pF