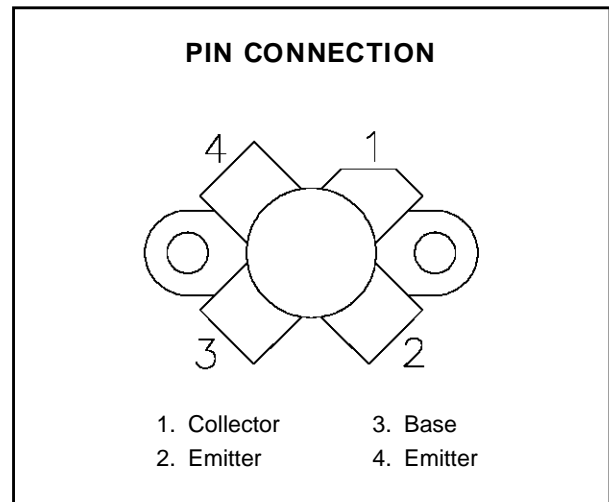
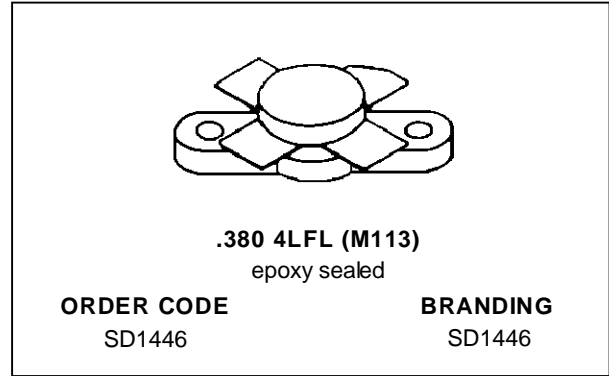


- 50 MHz
- 12.5 VOLTS
- EFFICIENCY 55%
- COMMON EMITTER
- GOLD METALLIZATION
- P<sub>OUT</sub> = 70 W MIN. WITH 10 dB GAIN



### DESCRIPTION

The SD1446 is a 12.5 V Class C epitaxial silicon NPN planar transistor designed primarily for land mobile transmitter applications. This device utilizes emitter ballasting and is extremely stable and capable of withstanding high VSWR under operating conditions.

### ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25<sup>o</sup>C)

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	36	V
V <sub>CEO</sub>	Collector-Emitter Voltage	18	V
V <sub>EBO</sub>	Emitter-Base Voltage	3.5	V
I <sub>c</sub>	Device Current	12.0	A
P <sub>DISS</sub>	Power Dissipation	183	W
T <sub>J</sub>	Junction Temperature	+200	°C
T <sub>STG</sub>	Storage Temperature	- 65 to +150	°C

### THERMAL DATA

R <sub>TH(j-c)</sub>	Junction-Case Thermal Resistance	1.05	°C/W
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Note : Above parameters , ratings , limits and conditions are subject to change.

**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
$BV_{CEO}$	$I_C = 50mA$	$I_B = 0mA$		18	—	—	V
$BV_{EBO}$	$I_E = 10mA$	$I_C = 0mA$		3.5	—	—	V
$I_{CES}$	$V_{CE} = 15V$	$I_E = 0mA$		—	—	10	mA
$h_{FE}$	$V_{CE} = 5V$	$I_C = 5A$		10	—	—	—

DYNAMIC

Symbol	Test Conditions			Value			Unit
				Min.	Typ.	Max.	
$P_{OUT}$	$f = 50\text{ MHz}$	$P_{IN} = 7\text{ W}$	$V_{CE} = 12.5\text{ V}$	70	—	—	W
$G_P$	$f = 50\text{ MHz}$	$P_{IN} = 7\text{ W}$	$V_{CE} = 12.5\text{ V}$	10	—	—	dB
$\eta_C$	$f = 50\text{ MHz}$	$P_{IN} = 7\text{ W}$	$V_{CE} = 12.5\text{ V}$	—	55	—	%
$C_{OB}$	$f = 1\text{ MHz}$	$V_{CB} = 12.5V$		—	—	300	pF

Note : Above parameters , ratings , limits and conditions are subject to change.