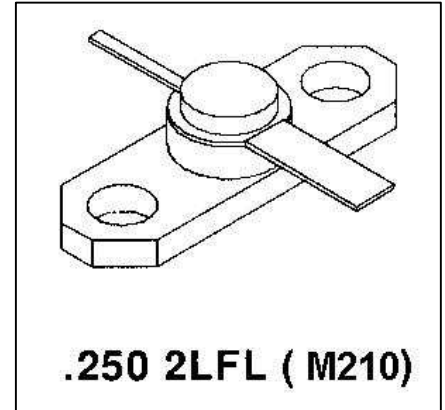
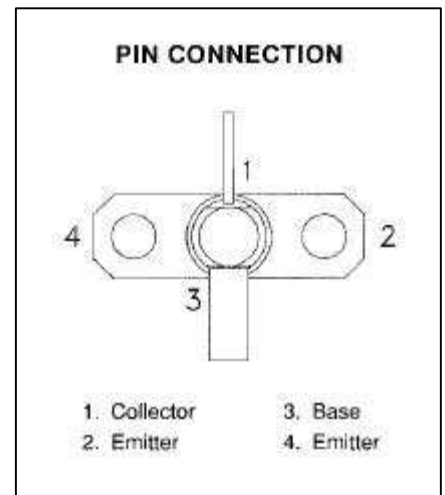


MSC80064
**RF & MICROWAVE TRANSISTORS
GENERAL PURPOSE LINEAR APPLICATIONS**
Features

- 2.0 GHz
- CLASS A LINEAR OPERATION
- 20:1 VSWR CAPABILITY @ RATED CONDITIONS
- $P_{OUT} = 20.5$ dBm MINIMUM
- COMMON EMITTER CONFIGURATION


DESCRIPTION:

The MSC80064 is a hermetically sealed NPN power transistor specifically designed for Class A linear applications requiring high gain and high output power at the 1.0 dB compression point.


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

Symbol	Parameter	Value	Unit
P_{DISS}	Power Dissipation (see Safe Area)	---	W
I_C	Device Bias Current	100	mA
V_{CE}	Collector-Supply Bias Voltage*	20	V
T_J	Junction Temperature	200	°C
T_{STG}	Storage Temperature	- 65 to +200	°C

Thermal Data

$R_{TH(J-C)}$	Junction-case Thermal Resistance*	45	°C/W
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*Applies only to RF amplifier operation.

ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)
STATIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
BV_{CBO}	I_C = 1 mA	I_E = 0 mA	50	---	---	V
BV_{EBO}	I_E = 1 mA	I_C = 0 mA	3.5	---	---	V
BV_{CEO}	I_C = 5 mA	I_B = 0 mA	20	---	---	V
I_{CEO}	V_{CE} = 18 V		---	---	0.5	mA
H_{FE}	V_{CE} = 5 V	I_C = 50 mA	15	---	120	---

DYNAMIC

Symbol	Test Conditions		Value			Unit
			Min.	Typ.	Max.	
G_P	f = 2.0 GHz	P_{OUT} = 20.5 dBm	9.0	10.0	---	dB
ΔG_P	f = 2.0 GHz	P_{OUT} = 20.5 dBm	---	---	1	dB
C_{OB}	f = 1 MHz	V_{CB} = 28 V	---	---	2.5	pf

Conditions: V_{CE} = 18V I_E = 50 mA

Table 1. Common Emitter S-Parameters, @ V_{CE} = 18 V, I_C = 50 mA

f (MHz)	S11		S21		S12		S22	
	S11	∠ φ	S21	∠ φ	S12	∠ φ	S22	∠ φ
1.0	0.68	168	3.8	43	0.04	45	0.03	-70
2.0	0.60	139	2.0	18	0.065	42	0.04	-100
3.0	0.40	72	1.0	-47	0.1051	18	0.60	-133

PACKAGE MECHANICAL DATA

