

**MS2203**

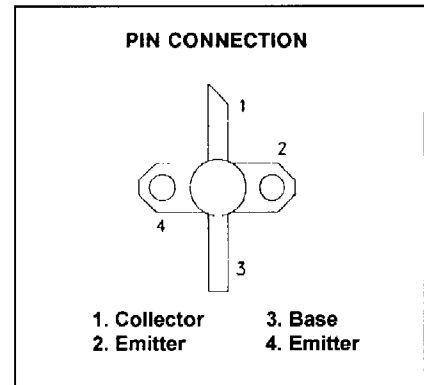
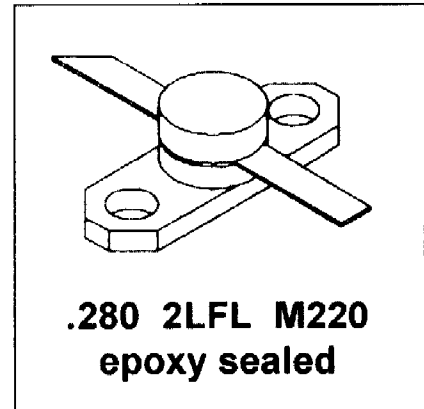
**RF & MICROWAVE TRANSISTORS  
AVIONICS APPLICATIONS**

**Features**

- 1090 MHz
- 18 VOLTS
- P<sub>OUT</sub> = 0.6 WATTS
- G<sub>p</sub> = 10.8 dB MINIMUM
- CLASS A OPERATION
- INFINITE VSWR CAPABILITY @ RATED CONDITIONS
- COMMON EMITTER CONFIGURATION

**DESCRIPTION:**

The MS2203 is a common emitter, silicon NPN, microwave transistor designed for Class A driver applications under DME or IFF pulse conditions. This device is capable of withstanding an infinite load VSWR at any phase angle under rated conditions.



**ABSOLUTE MAXIMUM RATINGS (T<sub>case</sub> = 25°C)**

Symbol	Parameter	Value	Unit
V <sub>CE</sub>	Collector-Emitter	20	V
I <sub>c</sub>	Collector Current	300	mA
P <sub>D</sub>	Total Device Dissipation	5	W
T <sub>J</sub>	Junction Temperature	200	°C
T <sub>stg</sub>	Storage Temperature Range	-65 + 150	°C

**Thermal Data**

R <sub>TH(J-C)</sub>	Thermal Resistance Junction-case	35	°C/W
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**MS2203****ELECTRICAL SPECIFICATIONS (T<sub>case</sub> = 25°C)****STATIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
$BV_{CEO}$	$I_C = 5.0 \text{ mA}$ $I_B = 0 \text{ mA}$	20	---	---	V
$BV_{CBO}$	$I_C = 1.0 \text{ mA}$ $I_E = 0 \text{ mA}$	50	---	---	V
$BV_{EBO}$	$I_E = 1.0 \text{ mA}$ $I_C = 0 \text{ mA}$	3.5	---	---	V
$I_{CES}$	$V_{CE} = 28 \text{ V}$	---	---	1.0	mA
$h_{FE}$	$V_{CE} = 5.0 \text{ V}$ $I_C = 100 \text{ mA}$	15	---	120	---

**DYNAMIC**

Symbol	Test Conditions	Value			Unit
		Min.	Typ.	Max.	
$P_{OUT}$	$f = 1025 - 1150 \text{ MHz}$ $P_{IN} = 50 \text{ mW}$	0.6	0.85	---	W
$G_{PE}$	$f = 1025 - 1150 \text{ MHz}$ $P_{IN} = 50 \text{ mW}$	10.8	12.3	---	dB

Conditions:  $V_{CE} = 18 \text{ V}$   
 $I_{CQ} = 120 \text{ mA}$