

# Advanced Monolithic Systems

## AMS232

### *NPN SILICON HIGH FREQUENCY TRANSISTOR*

#### FEATURES

- High Collector-Emitter Breakdown 120V Min.
- High Frequency of 1.2GHz at 50mA
- Available in TO-220 Package

#### APPLICATIONS

- High density Television
- Computer Monitors

#### GENERAL DESCRIPTION

The AMS232 is an RF type small signal bipolar transistor designed for use in high performance applications such as advanced color CRT monitor drivers that require both high frequency and high voltage. The use of fully ion implanted technology and silicon nitride passivation makes the AMS232 a highly reliable device. For a complimentary PNP transistor in applications where the matching characteristics are important use AMS264.

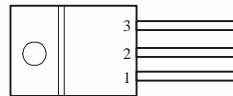
#### ORDERING INFORMATION:

PACKAGE TYPE	OPERATING JUNCTION TEMP. RANGE
TO-220	
AMS232	-40°C to +150°C

#### PIN CONNECTIONS

- 1- Emitter
- 2- Collector
- 3- Base

FRONT VIEW



#### ABSOLUTE MAXIMUM RATINGS (Note 1)

Collector - Emitter Voltage	125V	Operating Junction Temperature	150°C
Collector - Base Voltage	130V	Storage Temperature	-40°C to +150°C
Emitter - Base Voltage	3.5V	Power Dissipation @ T <sub>C</sub> =75°C	5 W
Collector Current	250mA	Thermal Resistance, Junction to Case	25°C/W

**Note1:** Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. For guaranteed specifications and test conditions, see the Electrical Characteristics. The guaranteed specifications apply only for the test conditions listed.

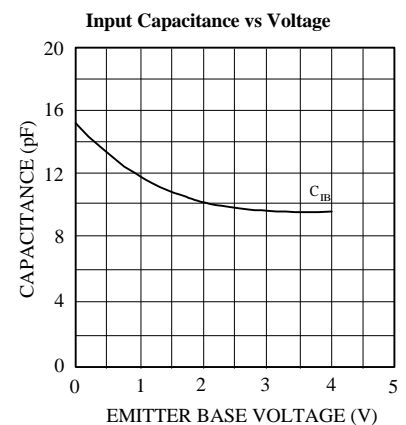
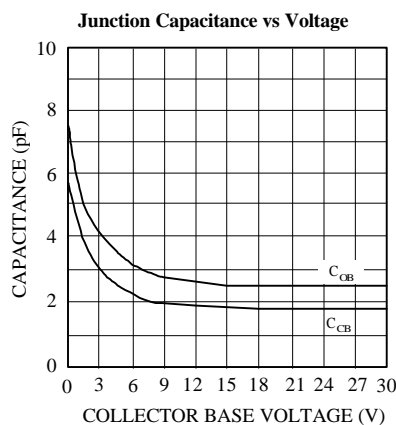
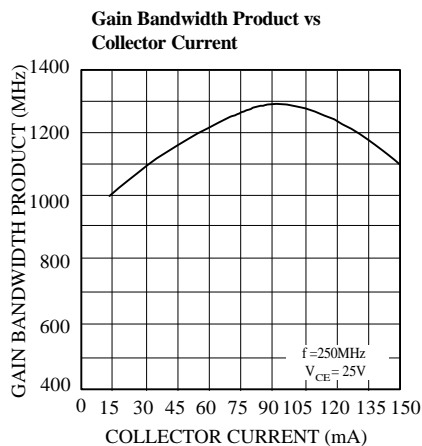


## ELECTRICAL CHARACTERISTICS

Electrical Characteristics at  $T_C = 25^\circ\text{C}$ , unless otherwise specified

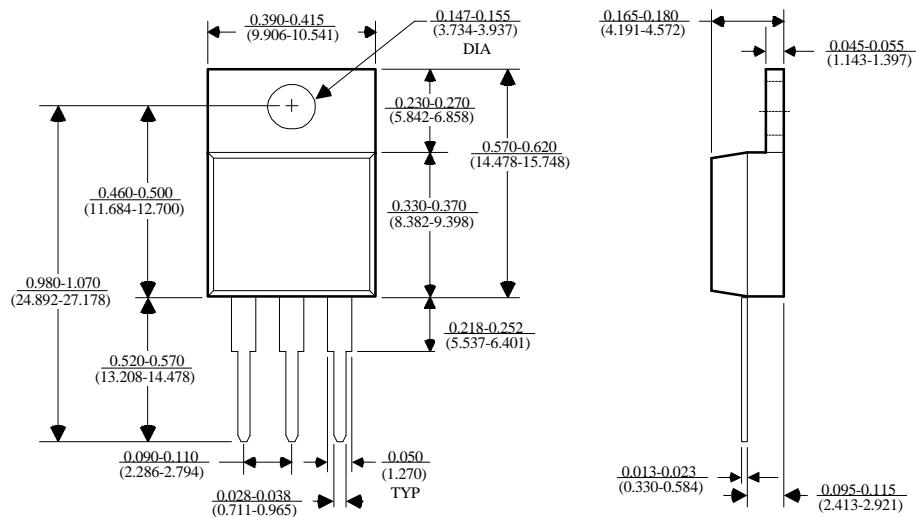
Parameter	Symbol	Conditions	AMS232			Units
			Min	Typ	Max	
<b>Off Characteristics</b>						
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	120			V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_B = 0$	120			V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\text{nA}, I_C = 0$	3			V
Collector Cutoff Current	$I_{CES}$	$V_{CE} = 110\text{V}, V_{BE} = 0$			100	nA
<b>On Characteristics</b>						
DC Current Gain	$H_{FE}$	$I_C = 50\text{mA}, V_{CE} = 15\text{V}$	50			-
<b>Dynamic Characteristics</b>						
Output Capacitance	$C_{OB}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		2.5		pF
Collector Base Capacitance	$C_{CB}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		1.8		pF
Input Capacitance	$C_{IB}$	$V_{EB} = 3\text{V}, f = 1\text{MHz}$		9		pF
Transistor Frequency	$f_T$	$V_{CE} = 15\text{V}, I_C = 50\text{mA}$	1.2			GHz

## TYPICAL PERFORMANCE CHARACTERISTICS



PACKAGE DIMENSIONS inches (millimeters) unless otherwise noted.

## 3 LEAD TO-220 PLASTIC PACKAGE (T)



T (TO-220) AMS DRW# 042193