

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

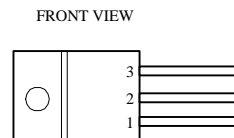
The AMS232 is an RF type small signal bipolar transistor designed for use in high performance applications such as advanced color CRT monitor drivers that require both high frequency and high voltage. The use of fully ion implanted technology and silicon nitride passivation makes the AMS232 a highly 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



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 _C =75°C	5 W
Collector Current	250mA	Thermal Resistance, Junction to Case	25°C/W

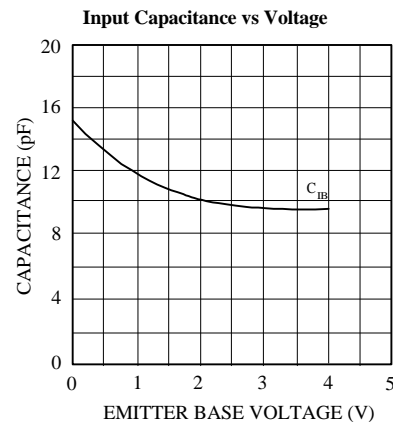
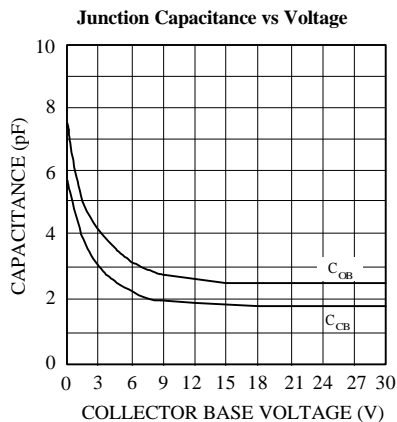
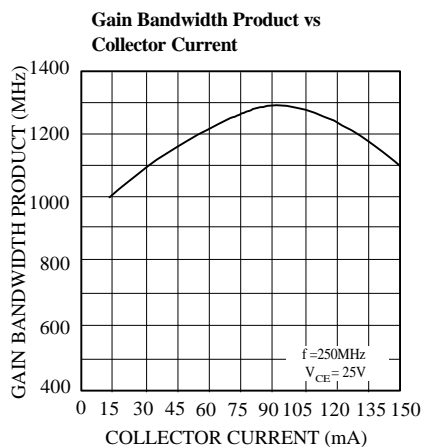
Note1: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. For guaranteed specifications and test conditions, see the Electrical Characteristics. The guaranteed specifications apply only for the test conditions listed.

ELECTRICAL CHARACTERISTICS

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

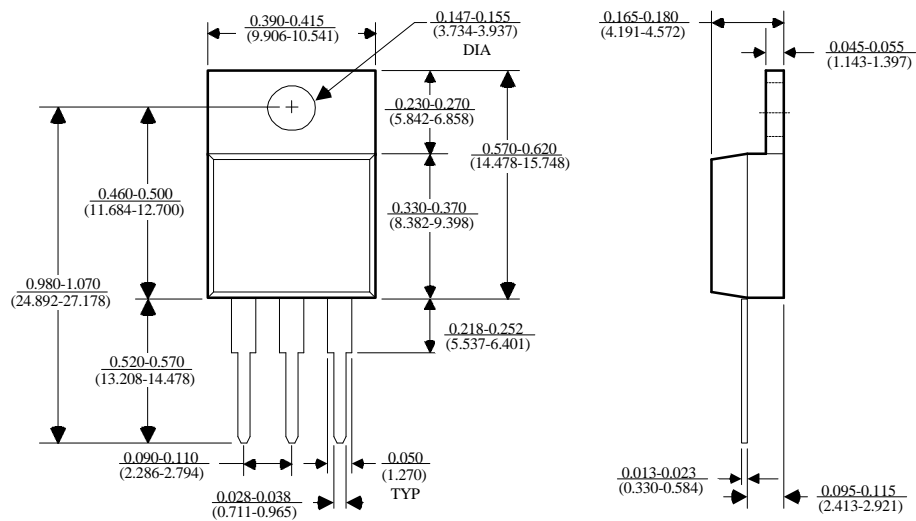
Parameter	Symbol	Conditions	AMS232			Units
			Min	Typ	Max	
Off Characteristics						
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	120			V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}, I_B = 0$	120			V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 100\text{nA}, I_C = 0$	3			V
Collector Cutoff Current	I_{CES}	$V_{CE} = 110\text{V}, V_{BE} = 0$			100	nA
On Characteristics						
DC Current Gain	H_{FE}	$I_C = 50\text{mA}, V_{CE} = 15\text{V}$	50			-
Dynamic Characteristics						
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