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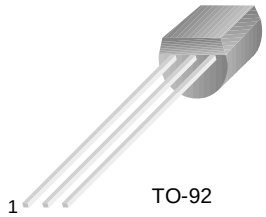
MPSA43

NPN High Voltage Amplifier

- This device is designed for application as a video output to drive color CRT and other high voltage applications.
- Sourced from process 48.
- See MPSA42 for characteristics.



TO-92

1. Emitter 2. Base 3. Collector

Absolute Maximum Ratings * T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage	200	V
V_{CBO}	Collector-Base Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current - Continuous	200	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +150	°C

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1. These ratings are based on a maximum junction temperature of 150 degrees C.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Electrical Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage *	I_C = 1.0mA, I_B = 0	200		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 100µA, I_E = 0	200		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_C = 100µA, I_C = 0	6.0		V
I_{CBO}	Collector Cutoff Current	V_{CB} = 160V, I_E = 0		0.1	µA
I_{EBO}	Emitter Cutoff Current	V_{EB} = 4.0V, I_C = 0		0.1	µA
On Characteristics *					
h_{FE}	DC Current Gain	I_C = 1.0mA, V_{CE} = 10V I_C = 10mA, V_{CE} = 10V I_C = 30mA, V_{CE} = 10V	25 40 50	 200	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 20mA, I_B = 2.0mA		0.4	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 20mA, I_B = 2.0mA		0.9	V
Small Signal Characteristics *					
f_T	Current Gain Dandwidth Product	I_C = 10mA, V_{CE} = 20V, f = 100MHz	50		MHz
C_{cb}	Collector-Base Capacitance	V_{CB} = 20V, I_E = 0, f = 1.0MHz		4.0	pF

* Pulse Test: Pulse Width ≤ 300µs, Duty Cycle ≤ 2.0%

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	625 5.0	mW mW/°C
$R_{\theta JC}$	Thermal Resistance, Junction to Case	83.3	°C/W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	200	°C/W

Package Dimensions

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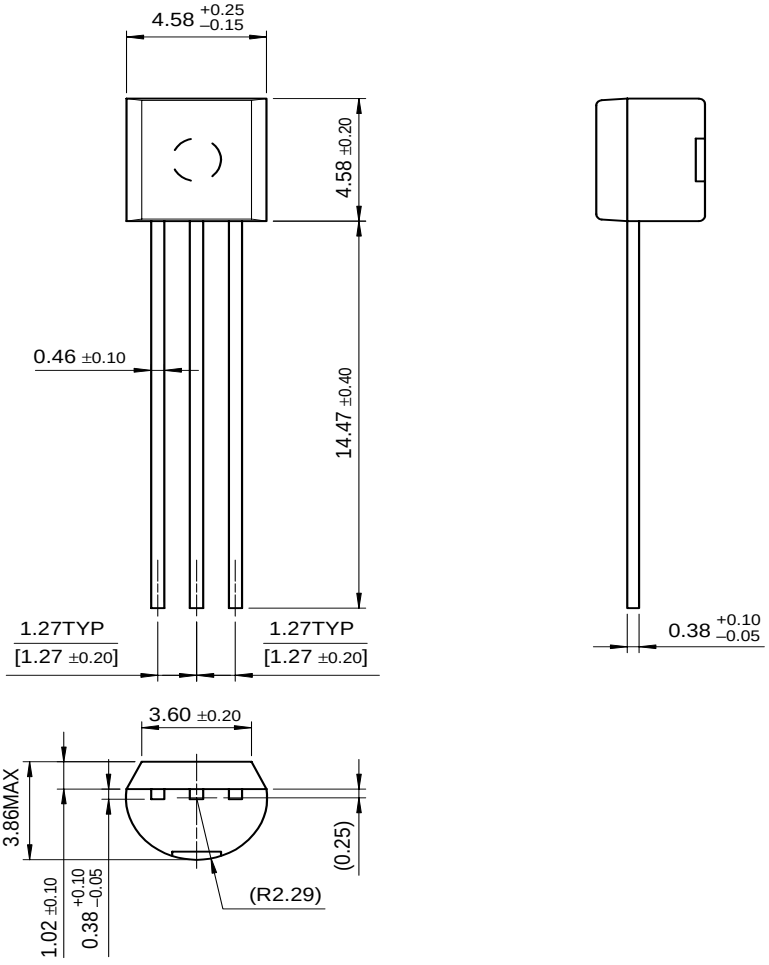

Dimensions in Millimeters

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CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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Definition of Terms

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