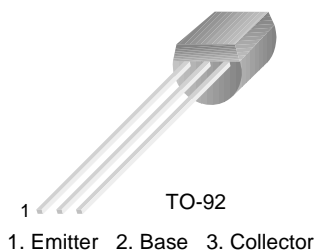


## MPS651

### Switching and Amplifier Applications



### NPN Epitaxial Silicon Transistor

#### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

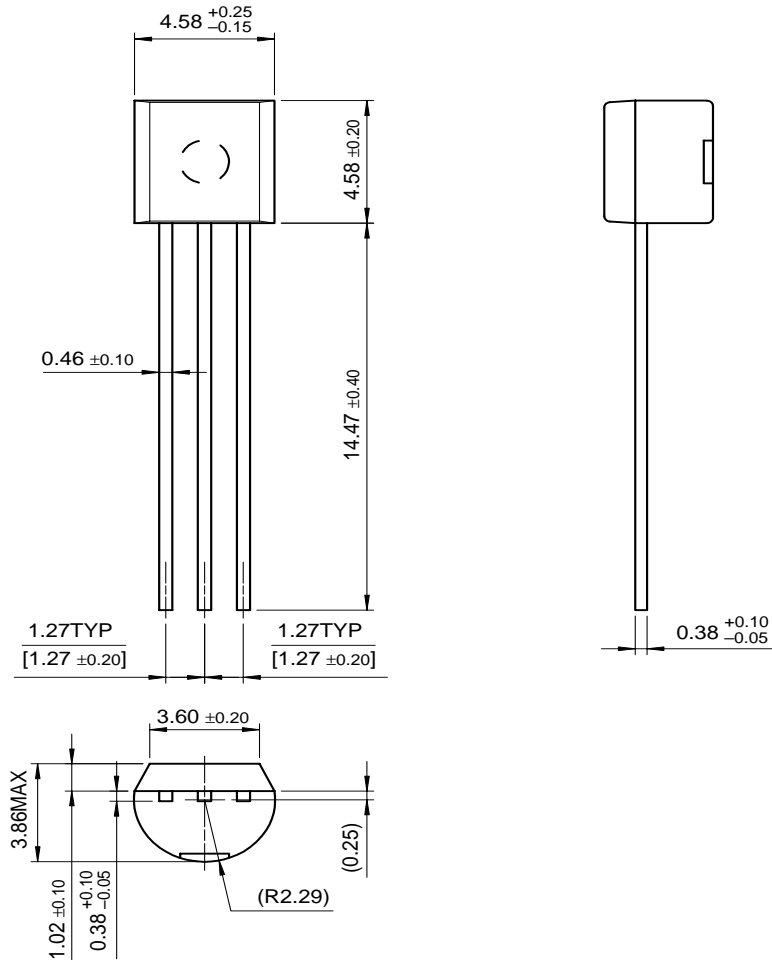
Symbol	Parameter	Ratings	Units
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current	0.8	A
$P_C$	Collector Dissipation	625	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CBO}$	Collector-Base Voltage	$I_C=100\mu\text{A}$ , $I_E=0$	80			V
$BV_{CEO}$	Collector-Emitter Voltage	$I_C=10\text{mA}$ , $I_B=0$	60			V
$BV_{EBO}$	Emitter-Base Voltage	$I_C=10\mu\text{A}$ , $I_C=0$	5			V
$I_{CBO}$	Collector Cut-off Current	$V_{CB}=80\text{V}$ , $I_E=0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=4.0\text{V}$ , $I_C=0$			0.1	$\mu\text{A}$
$h_{FE1}$	DC Current Gain	$V_{CE}=2\text{V}$ , $I_C=50\text{mA}$	75			
$h_{FE2}$		$V_{CE}=2\text{V}$ , $I_C=500\text{mA}$	75			
$h_{FE3}$		$V_{CE}=2\text{V}$ , $I_C=1.0\text{A}$	75			
$h_{FE4}$		$V_{CE}=2\text{V}$ , $I_C=2.0\text{A}$	40			
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=1.0\text{A}$ , $I_B=100\text{mA}$ $I_C=2.0\text{A}$ , $I_B=200\text{mA}$			300 500	mV
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C=1.0\text{A}$ , $I_B=100\text{mA}$			1.2	V
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE}=2.0\text{V}$ , $I_C=1.0\text{A}$			1.0	V
$f_T$	Current Gain Band Width Product	$V_{CE}=5.0\text{V}$ , $I_C=50\text{mA}$ , $f=100\text{MHz}$	75			MHz

# Package Dimensions

## TO-92



Dimensions in Millimeters

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EnSigna™	µC™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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