

# BC337/338

## Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC327/BC328



## NPN Epitaxial Silicon Transistor

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

Symbol	Parameter	Value	Units
$V_{CES}$	Collector-Emitter Voltage		
	: BC337	50	V
	: BC338	30	V
$V_{CEO}$	Collector-Emitter Voltage		
	: BC337	45	V
	: BC338	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	800	mA
$P_C$	Collector Power 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

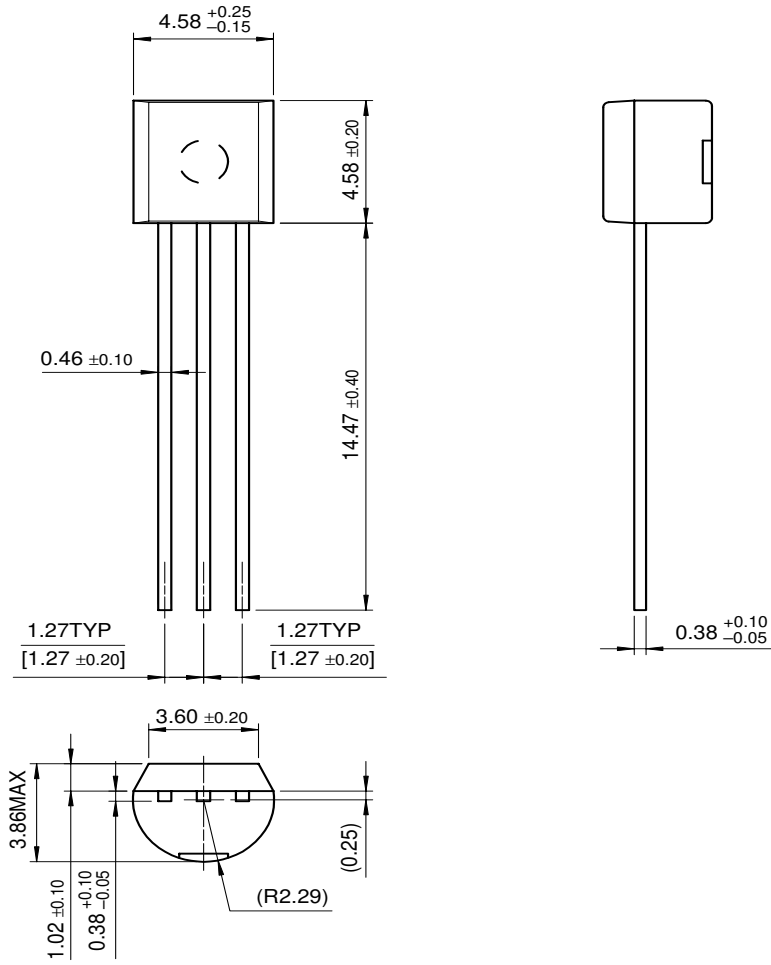
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	45			V
			25			V
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C=0.1\text{mA}, V_{BE}=0$	50			V
			30			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E=0.1\text{mA}, I_C=0$	5			V
$I_{CES}$	Collector Cut-off Current	$V_{CE}=45\text{V}, I_B=0$ $V_{CE}=25\text{V}, I_B=0$		2	100	nA
				2	100	nA
$h_{FE1}$	DC Current Gain	$V_{CE}=1\text{V}, I_C=100\text{mA}$ $V_{CE}=1\text{V}, I_C=300\text{mA}$	100		630	
$h_{FE2}$			60			
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C=500\text{mA}, I_B=50\text{mA}$			0.7	V
$V_{BE}(\text{on})$	Base Emitter On Voltage	$V_{CE}=1\text{V}, I_C=300\text{mA}$			1.2	V
$f_T$	Current Gain Bandwidth Product	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=50\text{MHz}$		100		MHz
$C_{ob}$	Output Capacitance	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		12		pF

### $h_{FE}$ Classification

Classification	16	25	40
$h_{FE1}$	100 ~ 250	160 ~ 400	250 ~ 630
$h_{FE2}$	60-	100-	170-

# Package Dimensions

## TO-92



Dimensions in Millimeters

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CoolFET™	FAST <sub>r</sub> ™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
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