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## BC337/338

### **Switching and Amplifier Applications**

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



1. Collector 2. Base 3. Emitter

# **NPN Epitaxial Silicon Transistor**

### **Absolute Maximum Ratings** T<sub>a</sub>=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V <sub>CES</sub>	Collector-Emitter Voltage		
	: BC337	50	V
	: BC338	30	V
V <sub>CEO</sub>	Collector-Emitter Voltage		
	: BC337	45	V
	: BC338	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
I <sub>C</sub>	Collector Current (DC)	800	mA
P <sub>C</sub>	Collector Power Dissipation	625	mW
TJ	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 ~ 150	°C

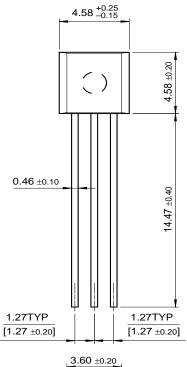
### Electrical Characteristics T<sub>a</sub>=25°C unless otherwise noted

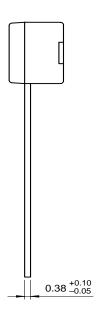
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV <sub>CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =10mA, I <sub>B</sub> =0				
	: BC337		45			V
	: BC338		25			V
BV <sub>CES</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> =0.1mA, V <sub>BE</sub> =0				
	: BC337		50			V
	: BC338		30			V
BV <sub>EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> =0.1mA, I <sub>C</sub> =0	5			V
I <sub>CES</sub>	Collector Cut-off Current					
	: BC337	$V_{CE}=45V$ , $I_{B}=0$		2	100	nA
	: BC338	V <sub>CE</sub> =25V, I <sub>B</sub> =0		2	100	nA
h <sub>FE1</sub>	DC Current Gain	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	100		630	
$h_{FE2}$		V <sub>CE</sub> =1V, I <sub>C</sub> =300mA	60			
V <sub>CE</sub> (sat)	Collector-Emitter Saturation Voltage	I <sub>C</sub> =500mA, I <sub>B</sub> =50mA			0.7	V
V <sub>BE</sub> (on)	Base Emitter On Voltage	V <sub>CE</sub> =1V, I <sub>C</sub> =300mA			1.2	V
f <sub>T</sub>	Current Gain Bandwidth Product	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA, f=50MHz		100		MHz
C <sub>ob</sub>	Output Capacitance	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz		12		pF

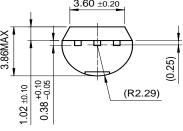
# **h**<sub>FE</sub> Classification

Classification	16	25	40
h <sub>FE1</sub>	100 ~ 250	160 ~ 400	250 ~ 630
h <sub>FE2</sub>	60-	100-	170-

TO-92







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Across the board.	. Around the world.™	OCXPro™	RapidConnect™	UltraFET <sup>®</sup>
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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