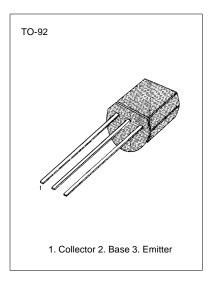
## **SWITCHING AND AMPLIFIER APPLICATIONS**

- Suitable for AF-Driver stages and low power output stages
- Complement to BC337/BC328

## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Emitter Voltage : BC337 : BC338 Collector-Emitter Voltage : BC337 : BC338 Emitter-Base Voltage Collector Current (DC) Collector Dissipation Junction Temperature Storage Temperature	VCES VCEO VEBO IC PC TJ TSTG	50 30 45 25 5 800 625 150 -55 ~ 150	°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°°



# **ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)**

Characteristic	Symbol	Test Conditions	Min	Тур	Max	Unit
Collector Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0				
: BC337			45 25			V
: BC338 Collector Emitter Breakdown Voltage	BV <sub>CES</sub>	I <sub>C</sub> =0.1mA, I <sub>B</sub> =0	25			•
: BC337 : BC338			50 30			V
Emitter Base Breakdown Voltage	BV <sub>FBO</sub>	I <sub>E</sub> =0.1mA, I <sub>C</sub> =0	-5			v
Collector Cut-off Current	I <sub>CES</sub>					
: BC337		V <sub>CE</sub> =45V, I <sub>B</sub> =0		2	100	nA
: BC338	1	$V_{CE}=25V$ , $I_{B}=0$		2	100	nA
DC Current Gain	h <sub>FE</sub> 1	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	100		630	
Collector-Emitter Saturation Voltage	V <sub>CE</sub> (sat)	V <sub>CE</sub> =1V, I <sub>C</sub> =300mA I <sub>C</sub> =500mA, I <sub>B</sub> =50mA	60		0.7	V
Base Emitter On Voltage	V <sub>BE</sub> (on)	V <sub>CF</sub> =1V, I <sub>C</sub> =300mA			1.2	V
Current Gain Bandwidth Product	f⊤	V <sub>CE</sub> =5V, I <sub>C</sub> =10mA		100		MHz
Collector Base Capacitance	Ссво	V <sub>CB</sub> =10V, f=1MHz		12		pF

# $h_{\text{FE}}$ CLASSIFICATION

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



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CROSSVOLT<sup>TM</sup> POP<sup>TM</sup>

E<sup>2</sup>CMOS<sup>™</sup> PowerTrench<sup>™</sup>

FACT<sup>TM</sup> QS<sup>TM</sup>

 $\begin{array}{lll} \mathsf{FACT} \ \mathsf{Quiet} \ \mathsf{Series^{\mathsf{TM}}} & \mathsf{Quiet} \ \mathsf{Series^{\mathsf{TM}}} \\ \mathsf{FAST}^{\$} & \mathsf{SuperSOT^{\mathsf{TM}}}\text{-}3 \\ \mathsf{FASTr^{\mathsf{TM}}} & \mathsf{SuperSOT^{\mathsf{TM}}}\text{-}6 \\ \mathsf{GTO^{\mathsf{TM}}} & \mathsf{SuperSOT^{\mathsf{TM}}}\text{-}8 \\ \mathsf{HiSeC^{\mathsf{TM}}} & \mathsf{TinyLogic^{\mathsf{TM}}} \\ \end{array}$ 

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

### **PRODUCT STATUS DEFINITIONS**

### **Definition of Terms**

Datasheet Identification	Product Status	Definition
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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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