FAIRCHILD
SEMICONDUCTOR®

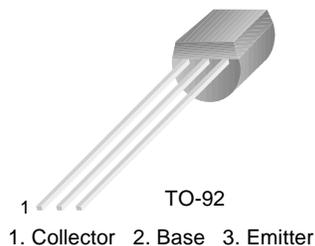# BC337/338

Switching and Amplifier Applications

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

TO-92

1. Collector 2. Base 3. Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage : BC337 : BC338	50 30	V V
V_{CEO}	Collector-Emitter Voltage : BC337 : BC338	45 25	V 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	°C
T_{STG}	Storage Temperature	-55 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage : BC337 : BC338	I_C=10mA, I_B=0	45 25			V V
BV_{CES}	Collector-Emitter Breakdown Voltage : BC337 : BC338	I_C=0.1mA, V_{BE}=0	50 30			V V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E=0.1mA, I_C=0	5			V
I_{CES}	Collector Cut-off Current : BC337 : BC338	V_{CE}=45V, I_B=0 V_{CE}=25V, I_B=0		2 2	100 100	nA nA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE}=1V, I_C=100mA V_{CE}=1V, I_C=300mA	100 60		630	
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C=500mA, I_B=50mA			0.7	V
V_{BE} (on)	Base Emitter On Voltage	V_{CE}=1V, I_C=300mA			1.2	V
f_T	Current Gain Bandwidth Product	V_{CE}=5V, I_C=10mA, f=50MHz		100		MHz
C_{ob}	Output Capacitance	V_{CB}=10V, I_E=0, f=1MHz		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

4.58 $^{+0.25}_{-0.15}$

4.58 ±0.20

0.46 ±0.10

14.47 ±0.40

1.27TYP
[1.27 ±0.20]

1.27TYP
[1.27 ±0.20]

0.38 $^{+0.10}_{-0.05}$

3.60 ±0.20

3.86MAX

1.02 ±0.10

0.38 $^{+0.10}_{-0.05}$

(0.25)

(R2.29)
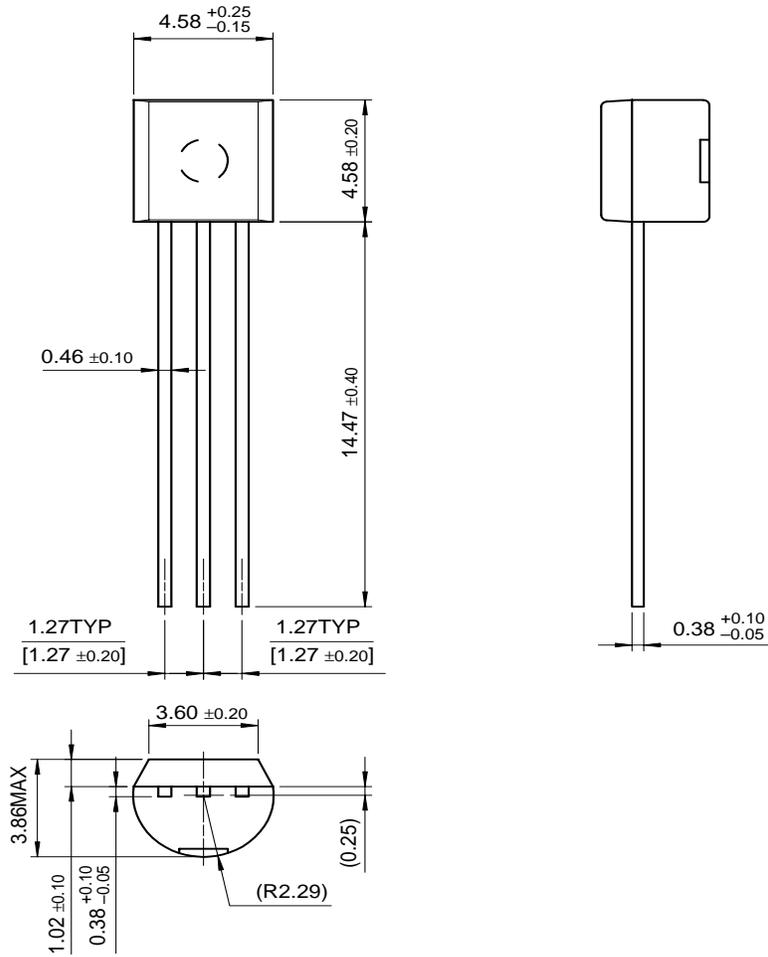
Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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EnSigna™	I^{2}C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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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
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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BC338
NPN Epitaxial Silicon Transistor

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Features

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

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Applications

Switching and Amplifier

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Product status/pricing/packaging   [BUY]

BUY

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Support

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Quality and reliability

Design center

Product	Product status	Pb-free Status	Pricing*	Package type	Leads	Packing method	Package Marking Convention**
BC338	Full Production	Full Production	$0.079	TO-92	3	BULK	Line 1: **$Y** (Fairchild logo) **&Z** (Asm. Plant Code) **&3** (3-Digit Date Code) Line 2: BC338
BC33816BU	Full Production	Full Production	$0.0296	TO-92	3	BULK	Line 1: BC338 Line 2: 16 Line 3: -&3
BC33816TA	Full Production		$0.0296	TO-92	3	AMMO	Line 1: BC338 Line 2: 16 Line 3: -&3

		Full Production					
BC33825BU	Full Production	Full Production	$0.0296	TO-92	3	BULK	Line 1: BC338 Line 2: 25 Line 3: -&3
BC33825TA	Full Production	Full Production	$0.0296	TO-92	3	AMMO	Line 1: BC338 Line 2: 25 Line 3: -&3
BC33840BU	Full Production	Full Production	$0.0296	TO-92	3	BULK	Line 1: BC338 Line 2: 40 Line 3: -&3
BC33840TA	Full Production	Full Production	$0.0296	TO-92	3	AMMO	Line 1: BC338 Line 2: 40 Line 3: -&3
BC338BU	Full Production	Full Production	$0.0296	TO-92	3	BULK	Line 1: BC338 Line 3: -&3
BC338TF	Full Production	Full Production	$0.0296	TO-92	3	TAPE REEL	Line 1: BC338 Line 3: -&3
BC338TFR	Full Production	Full Production	$0.0296	TO-92	3	TAPE REEL	Line 1: BC338 Line 3: -&3

* Fairchild 1,000 piece Budgetary Pricing
** A sample button will appear if the part is available through Fairchild's on-line samples program. If there is no sample button, please contact a Fairchild distributor to obtain samples

Indicates product with Pb-free second-level interconnect. For more information click here.

Package marking information for product BC338 is available. Click here for more information .

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Qualification Support

Click on a product for detailed qualification data

Product
BC338
BC33816BU
BC33816TA
BC33825BU
BC33825TA
BC33840BU
BC33840TA
BC338BU
BC338TF
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