



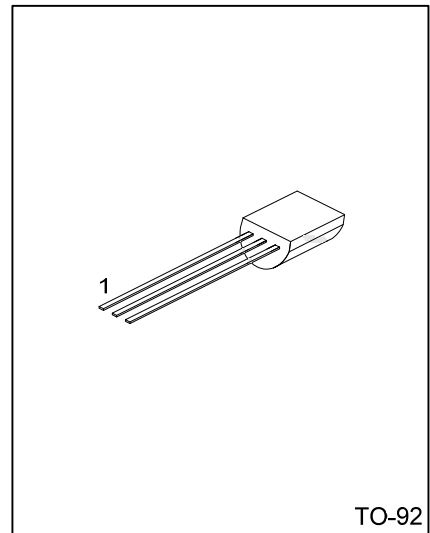
## BC337/BC338

## NPN SILICON TRANSISTOR

### SWITCHING AND AMPLIFIER APPLICATIONS

#### ■ FEATURES

- \* Suitable for AF-Driver stages and low power output stages
- \* Complement to UTC BC327/328



Lead-free: BC337L/BC338L  
Halogen-free: BC337G/BC338G

#### ■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free Plating	Halogen Free		1	2	3	
BC337-x-T92-B	BC337L-x-T92-B	BC337G-x-T92-B	TO-92	C	B	E	Tape Box
BC337-x-T92-K	BC337L-x-T92-K	BC337G-x-T92-K	TO-92	C	B	E	Bulk
BC338-x-T92-B	BC338L-x-T92-B	BC338G-x-T92-B	TO-92	C	B	E	Tape Box
BC338-x-T92-K	BC338L-x-T92-K	BC338G-x-T92-K	TO-92	C	B	E	Bulk

<p>BC337L-x-T92-B</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p>	<p>(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) x: refer to Classification of <math>h_{FE1}</math> (4) G: Halogen Free, L: Lead Free Plating, Blank: Pb/Sn</p>
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# BC337/BC338

## NPN SILICON TRANSISTOR

### ■ ABSOLUTE MAXIMUM RATING (Ta=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage	BC337	$V_{CES}$	50	V
	BC338		30	V
Collector-Emitter Voltage	BC337	$V_{CEO}$	45	V
	BC338		25	V
Emitter-Base Voltage		$V_{EBO}$	5	V
Collector Current (DC)		$I_C$	800	mA
Collector Dissipation Derate above 25°C		$P_C$	625	mW
			5	mW/°C
Junction Temperature		$T_J$	125	°C
Operating Temperature		$T_{OPR}$	-20 ~ +85	°C
Storage Temperature		$T_{STG}$	-40 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

### ■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	200	°C/W
Junction to Case	$\theta_{JC}$	83.3	°C/W

### ■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BC337	$BV_{CEO}$	$I_C=10mA, I_B=0$	45			V
	BC338			25			V
Collector-Emitter Breakdown Voltage	BC337	$BV_{CES}$	$I_C=0.1mA, V_{BE}=0$	50			V
	BC338			30			V
Emitter-Base Breakdown Voltage		$BV_{EBO}$	$I_E=0.1mA, I_C=0$	5			V
Collector Cut-off Current	BC337	$I_{CES}$	$V_{CE}=45V, I_B=0$		2	100	nA
	BC338		$V_{CE}=25V, I_B=0$		2	100	nA
DC Current Gain		$h_{FE1}$	$V_{CE}=1V, I_C=100mA$	100		630	
		$h_{FE2}$	$V_{CE}=1V, I_C=300mA$	60			
Collector-emitter saturation voltage		$V_{CE(SAT)}$	$I_C=500mA, I_B=50mA$			0.7	V
Base-emitter on voltage		$V_{BE(ON)}$	$V_{CE}=1V, I_C=300mA$			1.2	V
Output Capacitance		$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		12		pF
Current gain bandwidth product		$f_T$	$V_{CE}=5V, I_C=10mA, f=50MHz$		100		MHz

### ■ CLASSIFICATION OF $h_{FE1}$

RANK	16	25	40
$h_{FE1}$	100-250	160-400	250-630

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