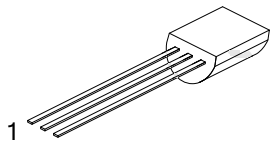
BC337/BC338

NPN SILICON TRANSISTOR

SWITCHING AND AMPLIFIER APPLICATIONS



TO-92

■ FEATURES

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

■ ORDERING INFORMATION

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

Note: Pin Assignment: C: Collector B: Base E: Emitter

BC337L-xx-T92-B (1)Packing Type (2)Package Type (3)Rank (4)Green Package	(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) xx: refer to CLASSIFICATION OF h_{FE1} (4) L: Lead Free, G: Halogen Free and Lead Free

■ MARKING

BC337	BC338
UTC BC337□ □□□ 1 L: Lead Free G: Halogen Free Data Code	UTC BC338□ □□□ 1 L: Lead Free G: Halogen Free Data Code

■ ABSOLUTE MAXIMUM RATING (T_A=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		P_C	625	mW
Derate Above 25°C			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	θ_{JA}	200	°C/W
Junction to Case	θ_{Jc}	83.3	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A=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

■ TYPICAL CHARACTERISTICS