

Transistors

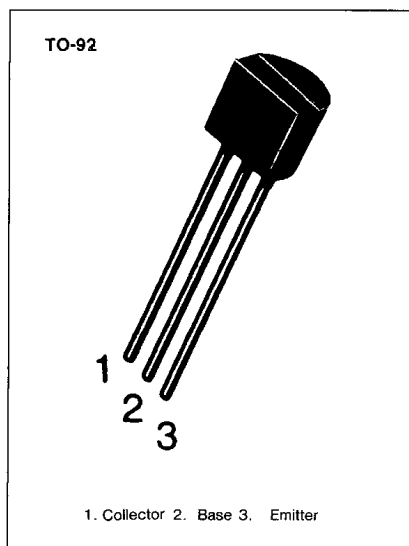
BC338

SWITCHING AND AMPLIFIER APPLICATIONS

- SUITABLE FOR AF-DRIVER STAGES AND LOW POWER OUTPUT STAGES
- Complement to BC327/BC328

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage	V_{CES}	30	V
Collector Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current (DC)	I_C	800	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55~150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Collector Emitter Breakdown Voltage	BV_{CEO}	$I_C = 10\text{mA}, I_B = 0$	25			V
Collector Emitter Breakdown Voltage	BV_{CES}	$I_C = 0.1\text{mA}, I_B = 0$	30			V
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E = 0.1\text{mA}, I_C = 0$	5			V
Collector Cutoff Current	I_{CES}	$V_{CE} = 25\text{V}, I_B = 0$		2	100	nA
DC Current Gain	h_{FE} h_{FE2}	$V_{CE} = 1\text{V}, I_C = 100\text{mA}$ $V_{CE} = 1\text{V}, I_C = 300\text{mA}$	100 60		630	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}, I_B = 50\text{mA}$			0.7	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE} = 1\text{V}, I_C = 300\text{mA}$			1.2	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 10\text{mA}$		100		MHz
Collector Base Capacitance	C_{CBO}	$V_{CB} = 10\text{V}, f = 1\text{MHz}$		12		pF

h_{FE} CLASSIFICATION

Classification	16	25	40
h_{FE}	100-250	160-400	250-630
h_{FE2}	60-	100-	170-

