

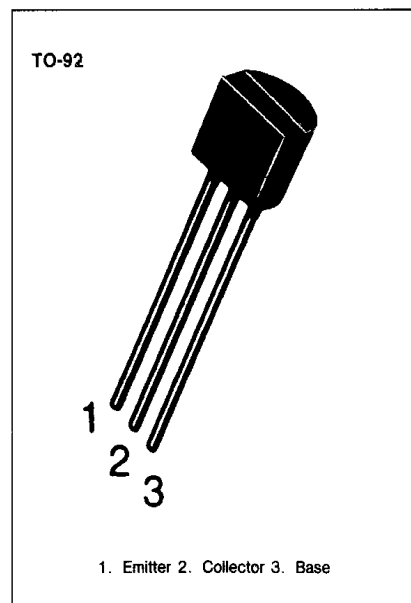
Transistors

BC638

SWITCHING AND AMPLIFIER APPLICATIONS

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

Characteristic	Symbol	Rating	Unit
Collector Emitter Voltage at $R_{BE} = 1\text{Kohm}$	V_{CER}	-60	V
Collector Emitter Voltage	V_{CES}	-60	V
Collector Emitter Voltage	V_{CEO}	-60	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Peak Collector Current	I_{CP}	-1.5	A
Base Current	I_B	-100	mA
Collector Dissipation	P_c	1	W
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 ~ 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}	$I_C = -10\text{mA}, I_B = 0$	-60			V
Collector Cutoff Current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -2\text{V}, I_C = -5\text{mA}$ $V_{CE} = -2\text{V}, I_C = -150\text{mA}$	25			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	40		160	V
Base Emitter On Voltage	$V_{BE(on)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	25		-0.5	V
Current Gain Bandwidth Product	f_T	$V_{CE} = -2\text{V}, I_C = -500\text{mA}$ $V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 50\text{MHz}$		100	-1	MHz

