

BC337/338

Switching and Amplifier Applications

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



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

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

Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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



Dimensions in Millimeters

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