

## BC817/BC818

### Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC807/BC808



1. Base 2. Emitter 3. Collector

### 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		
	: BC817	50	V
	: BC818	30	V
$V_{CEO}$	Collector Emitter Voltage		
	: BC817	45	V
	: BC818	25	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current (DC)	800	mA
$P_C$	Collector Power Dissipation	310	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 ~ 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	$I_C=10\text{mA}, I_B=0$				
	: BC817		45			V
	: BC818		25			V
$BV_{CES}$	Collector-Emitter Breakdown Voltage	$I_C=0.1\text{mA}, V_{BE}=0$				
	: BC817		50			V
	: BC818		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	$V_{CE}=25\text{V}, V_{BE}=0$			100	nA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB}=4\text{V}, I_C=0$			100	nA
$h_{FE1}$	DC Current Gain	$V_{CE}=1\text{V}, I_C=100\text{mA}$	100		630	
$h_{FE2}$		$V_{CE}=1\text{V}, I_C=300\text{mA}$	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	$V_{CB}=10\text{V}, f=1\text{MHz}$			12	pF

**h<sub>FE</sub> Classification**

Classification	16	25	40
h <sub>FE1</sub>	100 ~ 250	160 ~ 400	250 ~ 630
h <sub>FE2</sub>	60 ~	100 ~	170 ~

**Marking Code**

Type	817-16	817-25	817-40	818-16	818-25	818-40
Marking	8FA	8FB	8FC	8GA	8GB	8GC

# Package Dimensions

BC817/BC818

## SOT-23



Dimensions in Millimeters

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