

**BC817 SERIES
BC818 SERIES**

**SURFACE MOUNT SILICON
NPN TRANSISTORS**



SOT-23 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC817 and BC818 series devices are silicon NPN transistors, epoxy molded in a surface mount package, designed for general purpose switching and amplifier applications.

MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

	SYMBOL	BC817	BC818	UNITS
Collector-Base Voltage	V_{CBO}	50	30	V
Collector-Emitter Voltage	V_{CEO}	45	25	V
Emitter-Base Voltage	V_{EBO}	5.0		V
Continuous Collector Current	I_C	500		mA
Peak Collector Current	I_{CM}	1.0		A
Peak Base Current	I_{BM}	200		mA
Power Dissipation	P_D	350		mW
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +150		$^\circ\text{C}$
Thermal Resistance	θ_{JA}	357		$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I_{CBO}	$V_{CB}=20\text{V}$			100	nA
I_{CBO}	$V_{CB}=20\text{V}, T_J=150^\circ\text{C}$			5.0	μA
I_{EBO}	$V_{EB}=5.0\text{V}$			100	nA
BV_{CES}	$I_C=10\mu\text{A}$ (BC817)	50			V
BV_{CES}	$I_C=10\mu\text{A}$ (BC818)	30			V
BV_{CEO}	$I_C=10\text{mA}$ (BC817)	45			V
BV_{CEO}	$I_C=10\text{mA}$ (BC818)	25			V
BV_{EBO}	$I_E=1.0\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=500\text{mA}, I_B=50\text{mA}$			0.7	V
$V_{BE(ON)}$	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$			1.2	V
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		10		pF

	TEST CONDITIONS	BC817		BC817-16		BC817-25		BC817-40	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
h_{FE}	$V_{CE}=1.0\text{V}, I_C=100\text{mA}$	100	600	100	250	160	400	250	600
h_{FE}	$V_{CE}=1.0\text{V}, I_C=500\text{mA}$	40	-	40	-	40	-	40	-

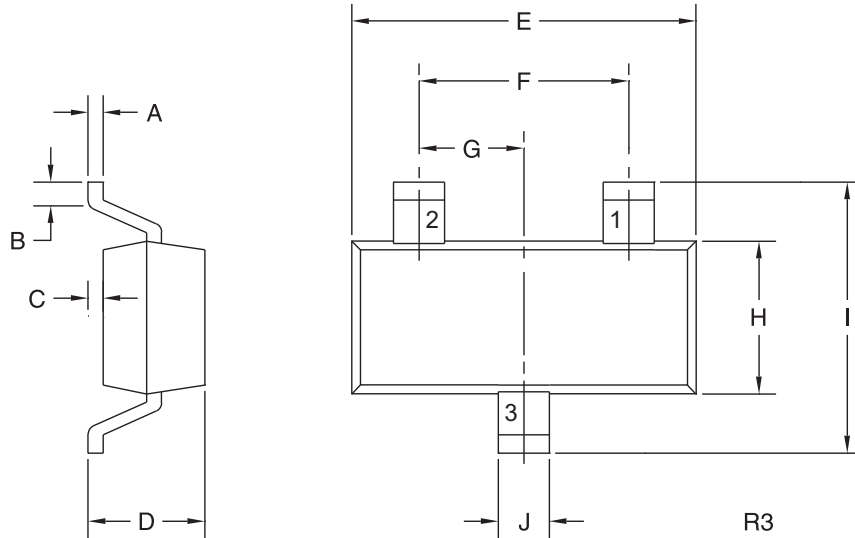
R1 (11-November 2013)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) Base
- 2) Emitter
- 3) Collector

DEVICE	MARKING CODE
BC817	6A or 6B or 6C or 6D
BC817-16	6A
BC817-25	6B
BC817-40	6C
BC818	6E or 6F or 6G or 6H
BC818-16	6E
BC818-25	6F
BC818-40	6G

SYMBOL	DIMENSIONS		DIMENSIONS	
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

R1 (11-November 2013)