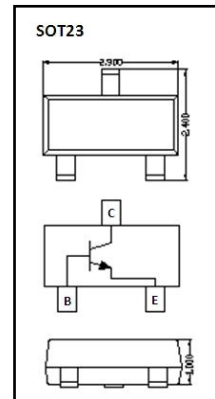


DATA SHEET

BC817 TRANSISTOR (NPN)

- ◇ Capable of 300mWatts of Power Dissipation
- ◇ Operating and Storage Junction Temperatures: -55°C to 150°C
- ◇ Surface Mount SOT-23 Package
- ◇ RoHS compliant / Green EMC



MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	50	V
V_{CE0}	Collector-Emitter Voltage	45	V
V_{EB0}	Emitter-Base Voltage	5	V
I_C	Collector Current	500	mA
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	$^{\circ}\text{C}/\text{W}$
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	$-55 \sim +150$	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS @ 25°C Unless Otherwise Specified

Symbol	Parameter	Test Conditions	Min	Max	Units
V_{CE0}	Collector-Emitter Breakdown Voltage	$I_C=10\text{mA}, I_B=0$	45		V
V_{CB0}	Collector-Base Breakdown Voltage	$I_C=10\mu\text{A}, I_E=0$	50		V
V_{EB0}	Emitter-Base Breakdown Voltage	$I_E=1\mu\text{A}, I_C=0$	5.0		V
I_{CB0}	Collector Cutoff Current	$V_{CB}=45\text{V}, I_E=0\text{V}$		100	nA
I_{EB0}	Emitter cut-off current	$V_{EB}=4\text{V}, I_C=0$		100	nA

h_{FE}	DC Current Gain*	$h_{fe}(1) I_C=100mA, V_{CE}=1V$ $h_{fe}(2) I_C=500mA, V_{CE}=1V$	100 40	600	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=500mA, I_B=50mA$		0.7	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=500mA, I_B=50mA$		1.2	V
f_T	Transition frequency	$I_C=10mA, V_{CE}=5V, f=100MHz$	100		MHZ
C_{ob}	Collector Capacitance	$V_{CB}=10.0V, f=1MHz$		10	PF

CLASSIFICATION OF $h_{fe}(1)$

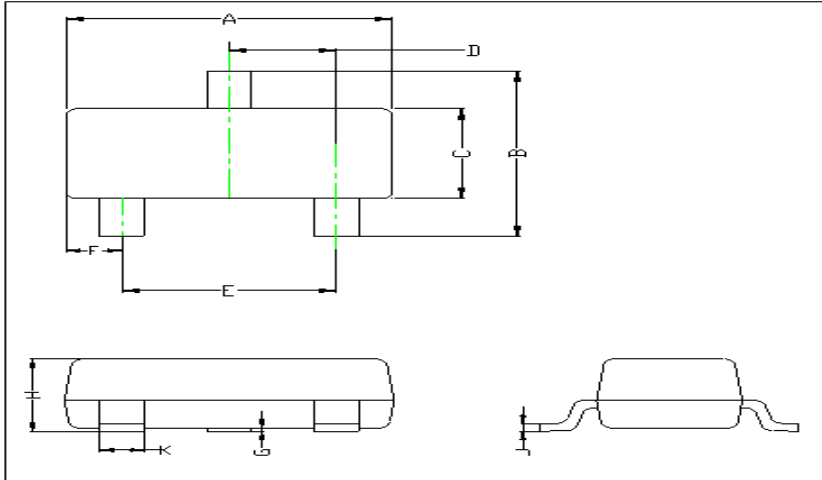
Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

ORDERING INFORMATION

Device	Package	Shipping	Tape wide	Emboss pitch	Tape specification	Notes
BC817	SOT23	Tape & Reel 3000pcs /7" Reel	8mm	4mm	Conductive	

PACKAGE DIMENSIONS

Package Outline : SOT23



Symbol	Dimensions in mm	
	Min.	Max.
A	2.800	3.040
B	2.100	2.640
C	1.200	1.400
D	0.890	1.030
E	1.780	2.050
F	0.450	0.600
G	0.013	0.100
H	0.900	1.110
J	0.090	0.180
K	0.370	0.510

Note:
 1. Halogen free ,EMC
 2. Pb free solder
 3. Lead thickness solder plating
 4. Lead frame CAC-5
 5. Other Tolerance ± 0.05
 6. Dimensions are exclusive of Burrs Mold Flash and Tie Bar extrusions
 7. Unit : mm

SOT23 Package Outline