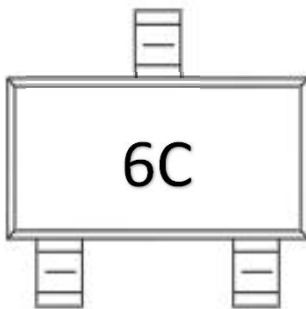


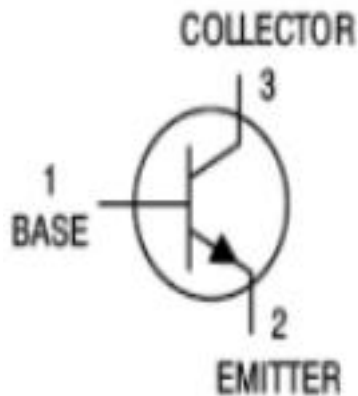
## SOT-23 Plastic-Encapsulate MOSFETS

### BC817 TRANSISTOR (NPN)

#### MARKING:

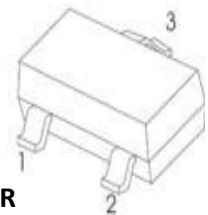


#### Equivalent Circuit:



#### SOT-23

- 1.BASE
- 2.EMITTER
- 3.COLLECTOR



#### FEATURES:

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BC807 (PNP)

#### MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	VCBO	50	V
Collector-Emitter Voltage	VCEO	45	V
Emitter-Base Voltage	VEBO	5	V
Collector Current -Continuous	IC	500	mA
Collector Current -Pulsed	ICM	200	mA
Collector Power Dissipation	PC	300	mW
Thermal Resistance From Junction To Ambient	ROJA	417	°C/W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55~+150	°C

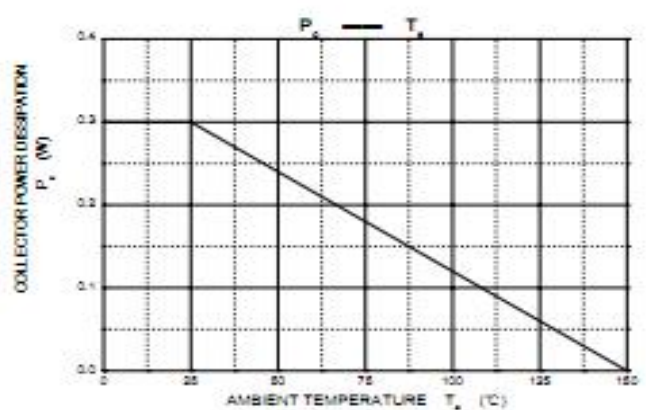
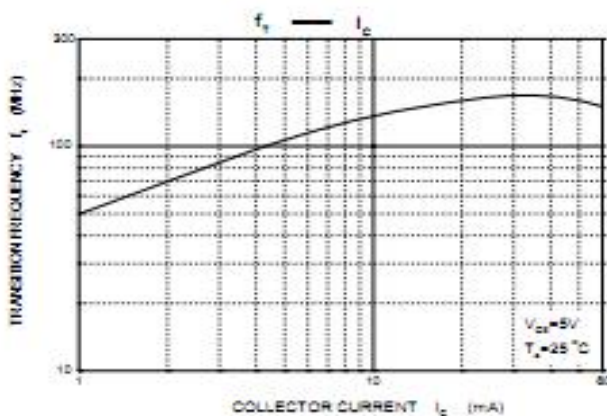
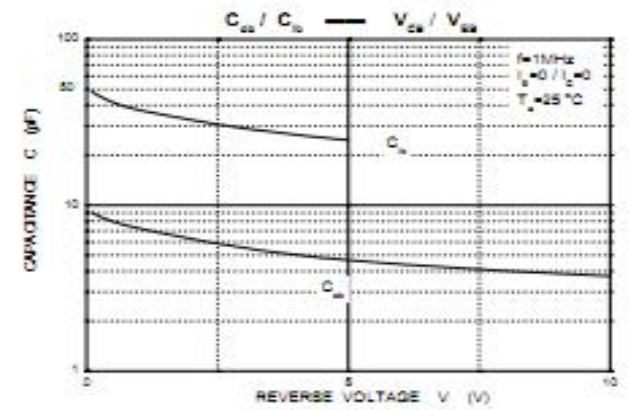
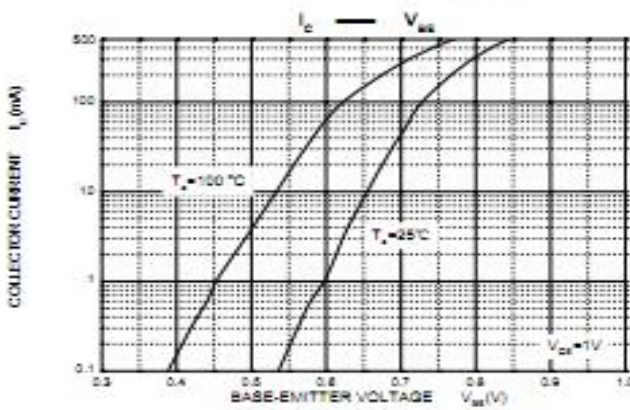
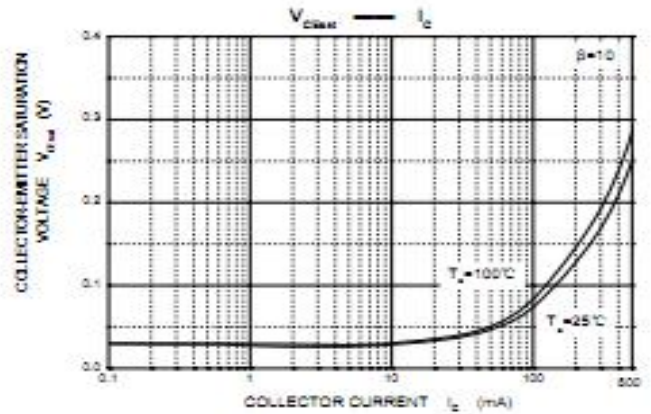
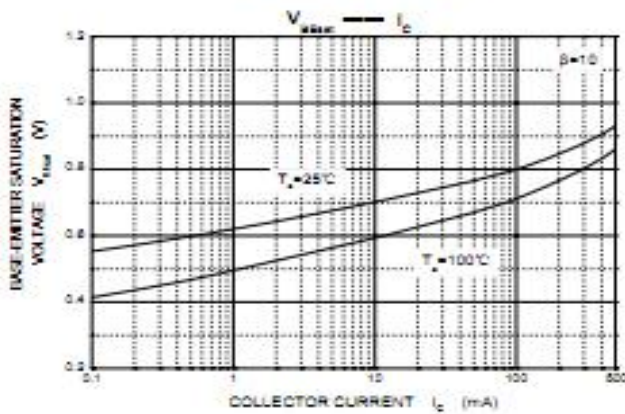
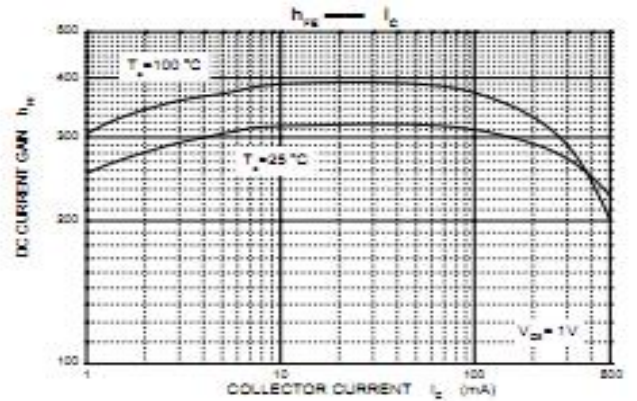
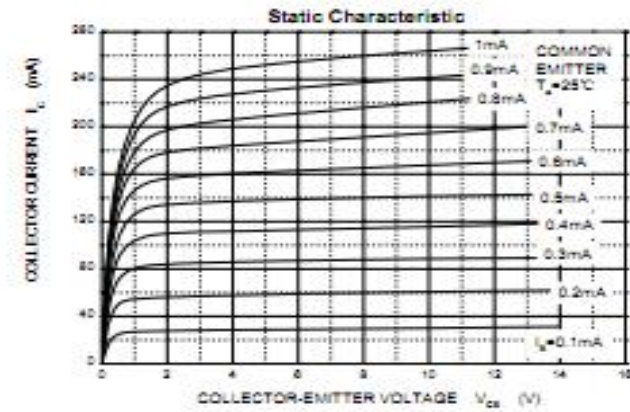
**ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	V(BR)CBO	IC= 10μA, IE=0	50			V
Collector-emitter breakdown voltage	V(BR)CEO	IC= 1mA, IB=0	45			V
Emitter-base breakdown voltage	V(BR)EBO	IE=10μA, IC=0	5			V
Collector cut-off current	ICBO	VCB= 45 V , IE=0			0.1	μA
Collector cut-off current	ICEO	VCB= 40V , IE=0			0.8	μA
Emitter cut-off current	IEBO	VEB= 5V , IC=0			0.1	μA
DC current gain	hFE	VCE= 1V, IC= 100mA	100		600	
	hFE	VCE= 1V, IC= 500mA	40			
Collector-emitter saturation voltage	VCE(sat)	IC= 500mA, IB= 5mA			0.65	V
Base-emitter saturation voltage	VBE(sat)	IC= 500 mA, IB= 5mA			1.2	V
Transition frequency	fT	VCE= 5V, IC= 10mA f=100MHz	100			MHz
Collector output capacitance	Cob	VCB=10V, IE=0, f=1MHz		10		PF

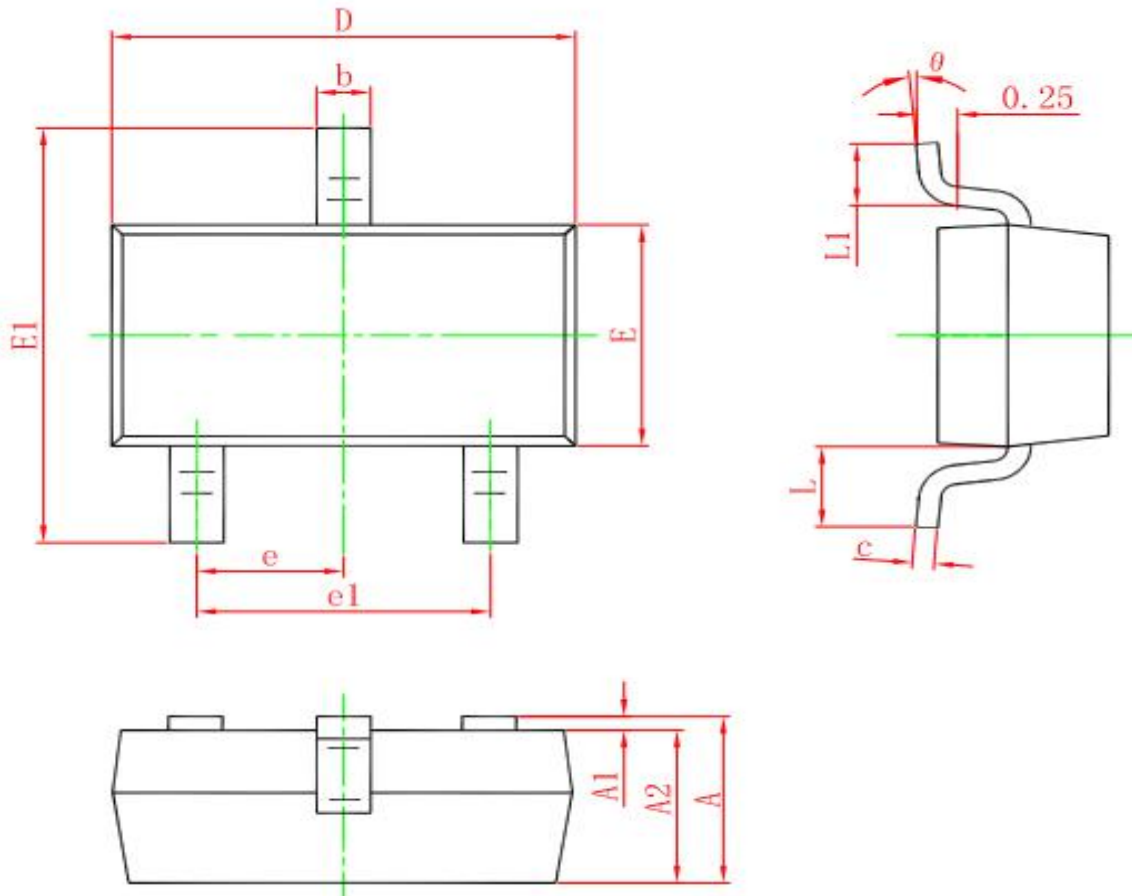
**CLASSIFICATION OF hFE**

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

## TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



### SOT-23 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
$\theta$	0°	8°	0°	8°