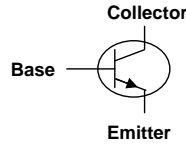
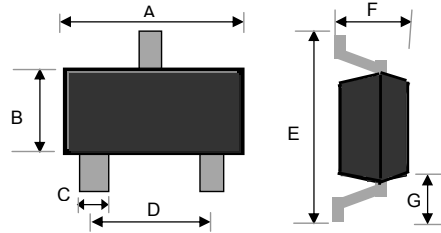


Small Signal Diode



SOT-23



Features

- ↳ Low power loss, high current capability, low V_f
- ↳ Surface device type mounting
- ↳ Moisture sensitivity level 1
- ↳ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ↳ Pb free version and RoHS compliant
- ↳ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

- ↳ Case : SOT- 23 small outline plastic package
- ↳ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ↳ High temperature soldering guaranteed: 260°C/10s
- ↳ Weight : 0.008gram (approximately)

Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.50	1.70	0.059	0.067
B	3.55	3.85	0.140	0.152
C	0.45	0.65	0.018	0.026
D	2.60	2.80	0.102	0.11
E	1.05	1.25	0.041	0.049
F	0.08	0.15	0.003	0.006
G	0.02 REF		0.50 REF	

Ordering Information

Part No.	Package	Packing
BC817-16/-25/-40 RF	SOT-23	3Kpcs/7" Reel

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	BC817-16	BC817-25	BC817-40	Units
Power Dissipation	P_D	300			mW
Collector-Base Voltage	V_{CBO}	50			V
Collector-Emitter Voltage	V_{CEO}	45			V
Emitter-Base Voltage	V_{EBO}	5			V
Collector Current	I_C	500			mA
Thermal Resistance (Junction to Ambient) (Note 1)	$R_{\theta JA}$	388			°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150			°C

Electrical Characteristics

Type Number	Symbol	BC817-16	BC817-25	BC817-40	Units
Collector-Base Breakdown Voltage $I_C=10\mu A, I_E=0$	$V_{(BR)CBO}$	50			V
Collector-Emitter Breakdown Voltage $I_C=10mA, I_B=0$	$V_{(BR)CEO}$	45			V
Emitter-Base Breakdown Voltage $I_E=1\mu A, I_C=0$	$V_{(BR)EBO}$	5			V
Collector Cut-off Current $V_{CB}=45V, I_E=0$	I_{CBO}	0.1			μA
Emitter Cut-off Current $V_{EB}=4V, I_C=0$	I_{EBO}	0.1			μA
Collector-Emitter saturation voltage $I_C=500mA, I_B=50mA$	$V_{CE(sat)}$	0.7			V
Base-Emitter saturation voltage $I_C=500mA, I_B=50mA$	$V_{BE(sat)}$	1.2			V
Transition frequency $V_{CE}=5V, I_C=10mA, f=100MHz$	f_T	100			MHz
Junction Capacitance $V_R=0V, f=1.0MHz$	C_J	10			pF
DC current gain $V_{CE}=1V, I_C=100mA$	h_{FE}	100	-	600	
		>40	>40	>40	
DC current gain	h_{FE}	100-250	160-400	250-600	

Notes: 1. Valid provided that electrodes are kept at ambient temperature

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Pulsed Current Gain vs Collector Current

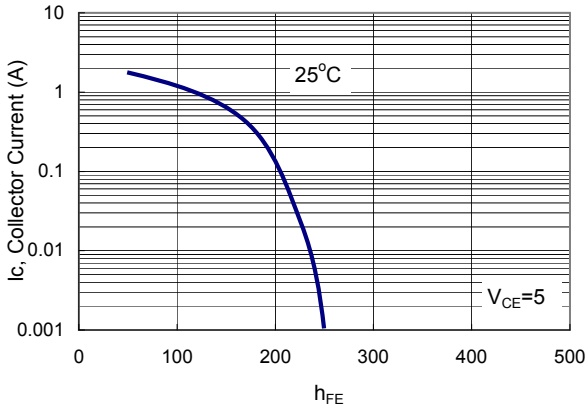


FIG 2 Collector-Emitter Saturation Voltage vs Collector Current

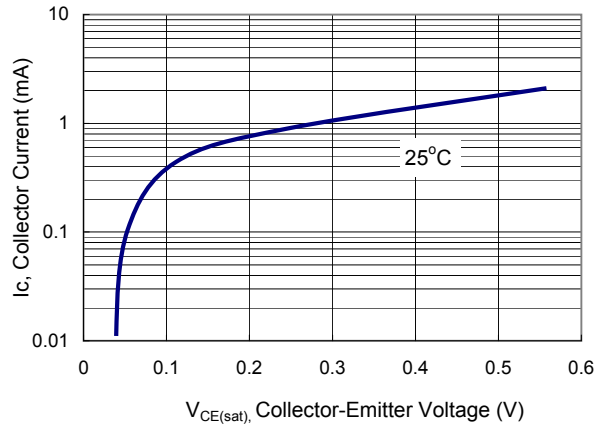


FIG 3 Base-Emitter Saturation Voltage vs Collector Current

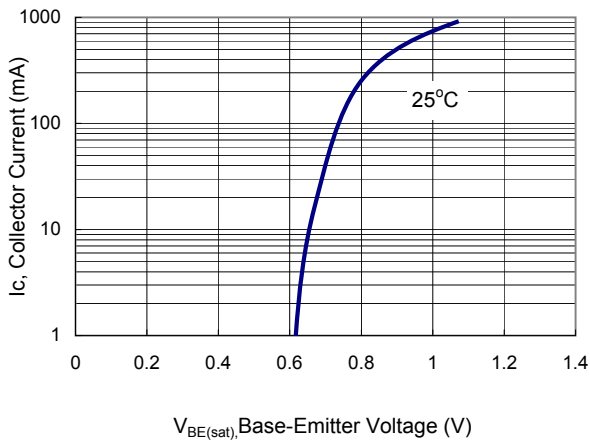


FIG 4 Base-Emitter on Voltage vs Collector Current

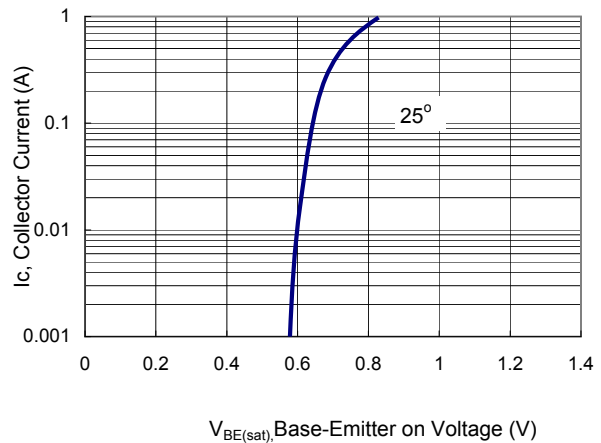


FIG 5 Collector-Base Capacitance vs Collector-Base Voltage

