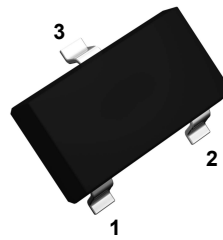


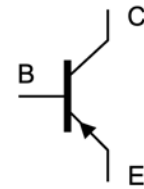
Feature

- Epoxy meets UL-94 V-0 flammability rating
- High conductance
- Surface mount package ideally suited for automatic insertion

1. BASE
2. EMITTER
3. COLLECTOR



SOT-323



Schematic Diagram

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	-50	V
Collector-Emitter Voltage	V _{CEO}	-45	V
Emitter-Base Voltage	V _{EBO}	-6	V
Collector Current	I _C	-0.1	A
Collector Power Dissipation	P _C	200	mW
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55 to 150	°C
Thermal Resistance from Junction to Ambient	R _{θJA}	625	°C/W

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition		Value		Unit
				Min	Max	
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-10uA, I _E =0		-50	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-10mA, I _B =0		-45	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-1uA, I _C =0		-5	-	V
Collector-Base Cut-Off Current	I _{CBO}	V _{CB} =-30V, I _E =0		-	-0.1	uA
Emitter-Base Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0		-	-0.1	uA
DC Current Gain	h _{FE}	V _{CE} =-5V I _C =-2mA	GSBC857AW	125	250	-
			GSBC857BW	220	475	
			GSBC857CW	420	800	
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-100mA, I _B =-5mA		-	-0.65	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-100mA, I _B =-5mA		-	-1.1	V
Transition Frequency	f _T	V _{CE} =-5V, I _C =-10mA, F=100MHz		100	-	MHz
Collector Output Capacitance	C _{ob}	V _{CB} =-10V, F=1MHz		-	4.5	pF

Typical Characteristic Curves

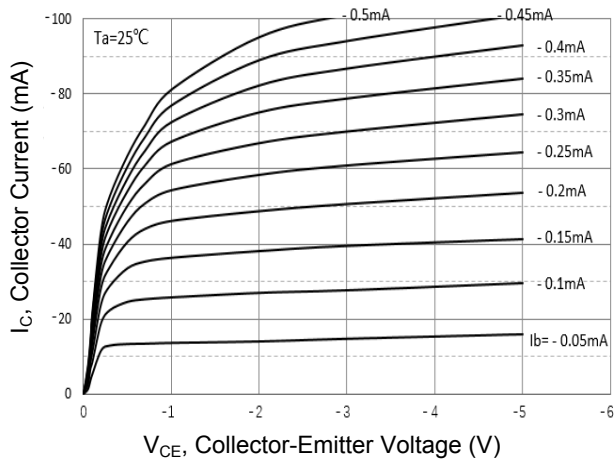


Figure 1. Static Characteristic

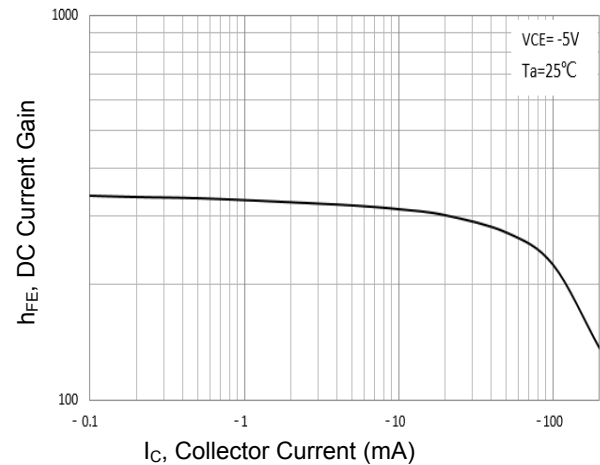


Figure 2. DC Current Gain vs. Collector Current

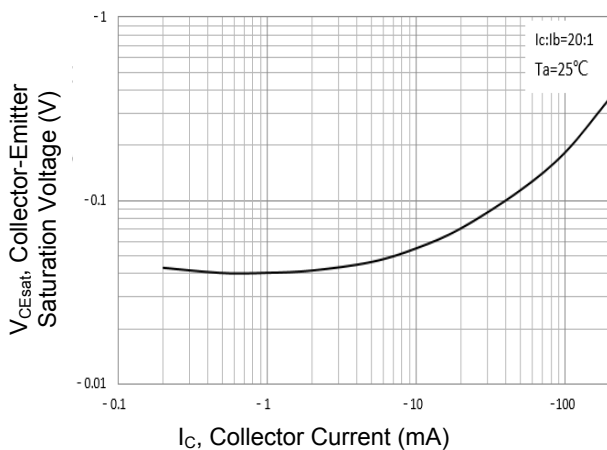


Figure 3. Collector Emitter Saturation Voltage vs. I_C

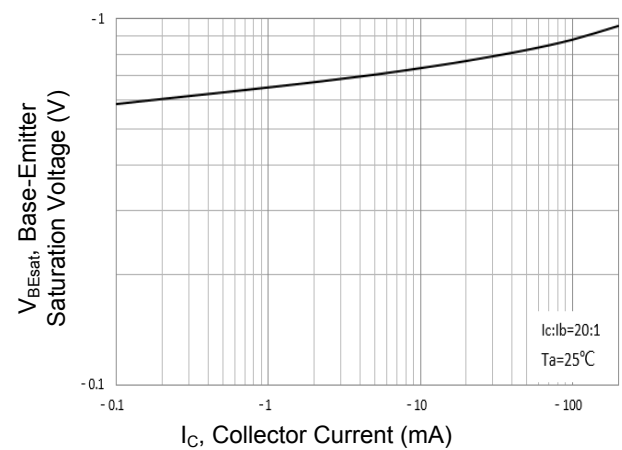


Figure 4. Base Emitter Saturation Voltage vs. I_C

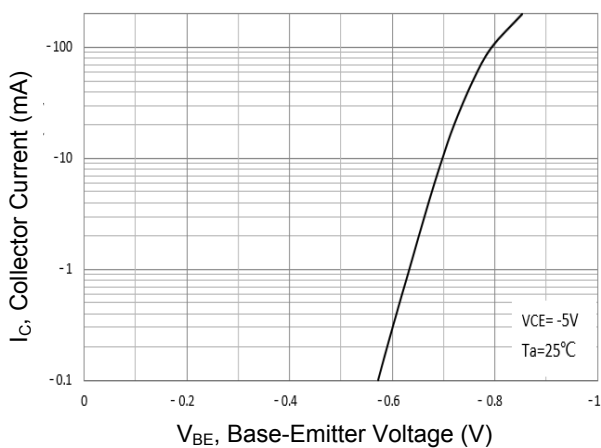


Figure 5. Base-Emitter On Voltage

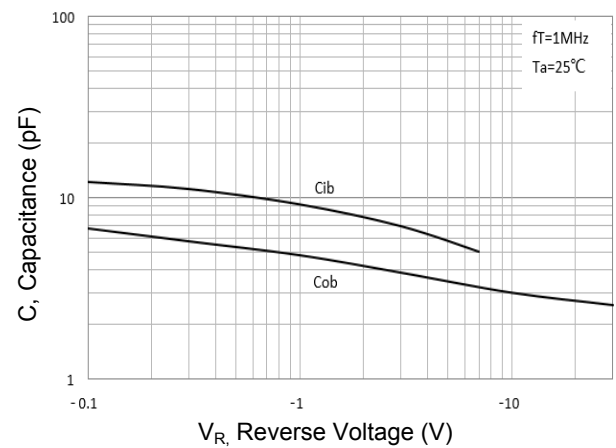
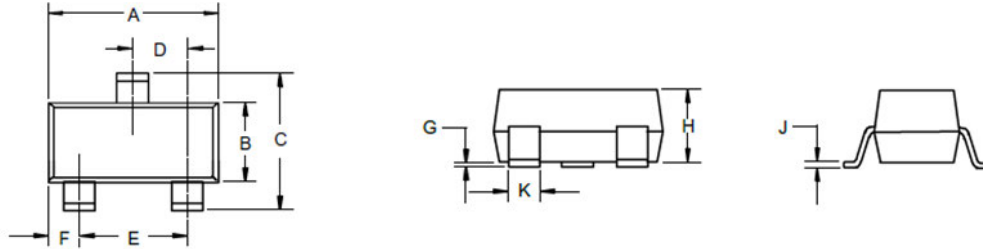


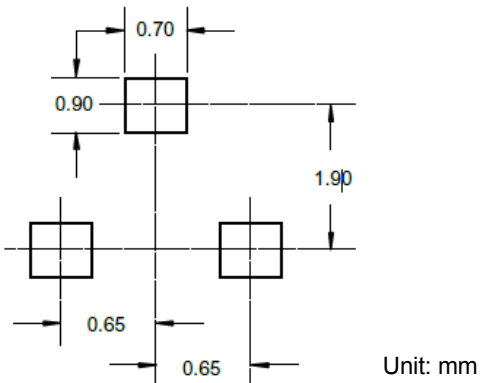
Figure 6. $C_{ob}/C_{ib}-V_{CB}/V_{EB}$

Package Outline Dimensions (SOT-323)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.800	2.200	0.071	0.087
B	1.150	1.350	0.045	0.053
C	2.100	2.450	0.083	0.096
D	0.650 Nom		0.026 Nom	
E	1.200	1.400	0.047	0.055
F	0.300	0.400	0.012	0.016
G	0.000	0.100	0.000	0.004
H	0.900	1.000	0.035	0.039
J	0.100	0.250	0.004	0.010
K	0.150	0.400	0.006	0.016

Recommended Pad Layout



Order Information

Device	Package	Marking	Packaging	SPQ
GSBC857AW	SOT-323	3E	Tape & Reel	3,000pcs / Reel
GSBC857BW	SOT-323	3F	Tape & Reel	3,000pcs / Reel
GSBC857CW	SOT-323	3G	Tape & Reel	3,000pcs / Reel