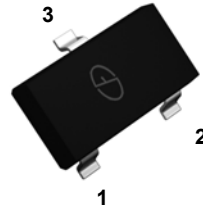


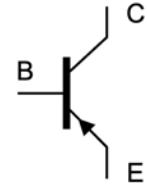
Feature

- 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 =-10μA, 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 =-1μA, I _C =0	-5	-	V	
Collector-Base Cut-Off Current	I _{CBO}	V _{CB} =-30V, I _E =0	-	-0.1	μA	
Emitter-Base Cut-Off Current	I _{EBO}	V _{EB} =-5V, I _C =0	-	-0.1	μA	
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

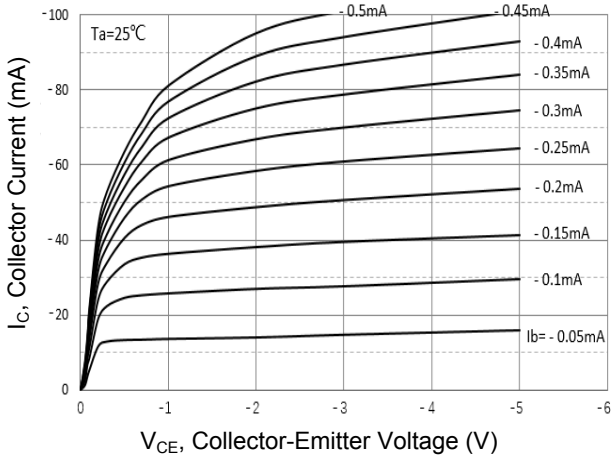


Figure 1. Static Characteristic

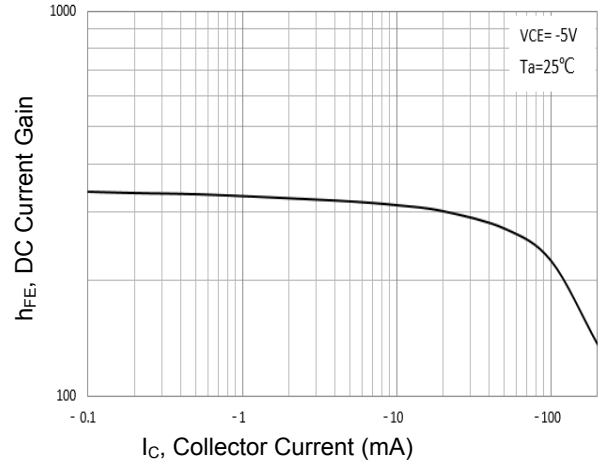


Figure 2. DC Current Gain vs. Collector Current

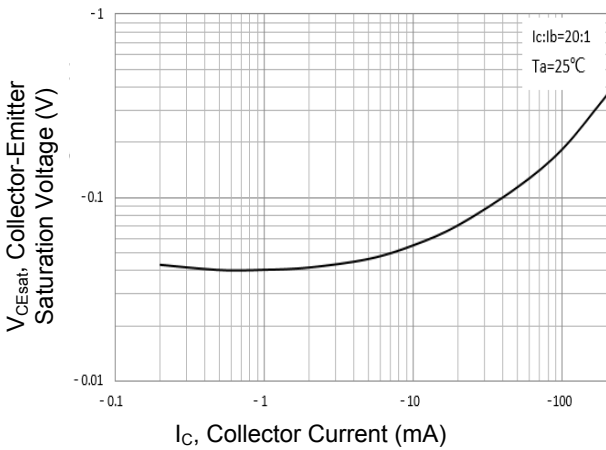


Figure 3. Collector Emitter Saturation Voltage vs. Ic

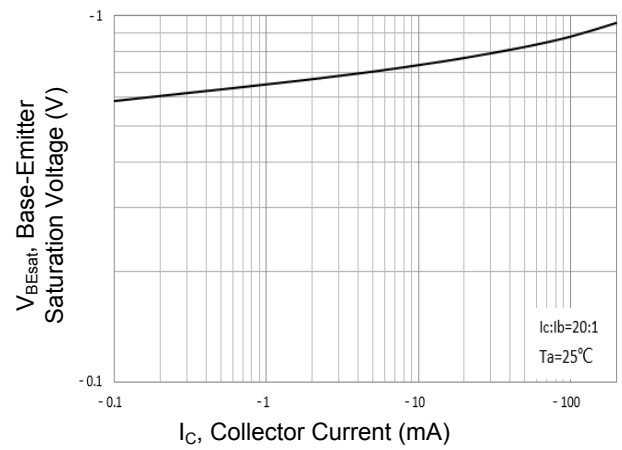


Figure 4. Base Emitter Saturation Voltage vs. Ic

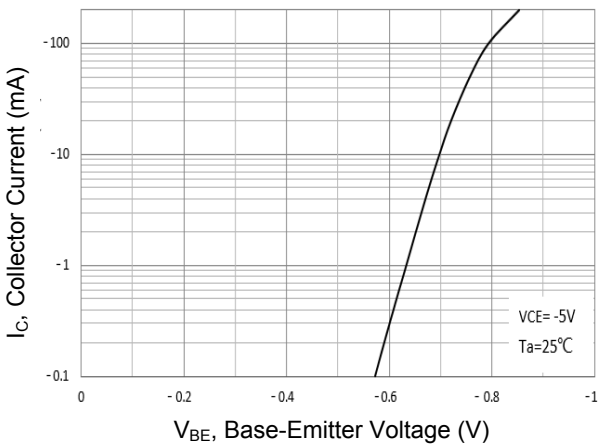


Figure 5. Base-Emitter On Voltage

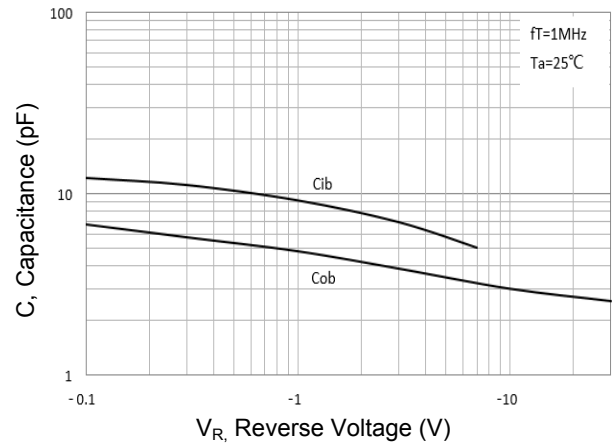
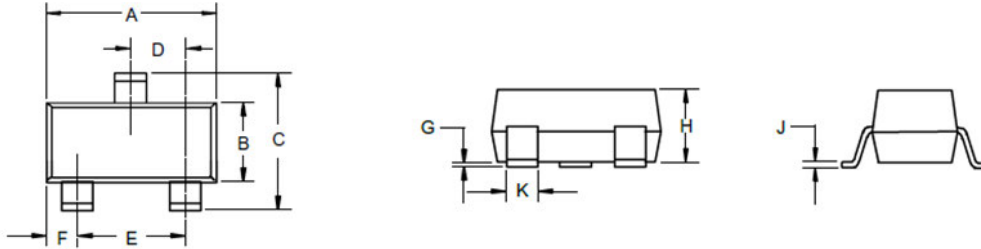


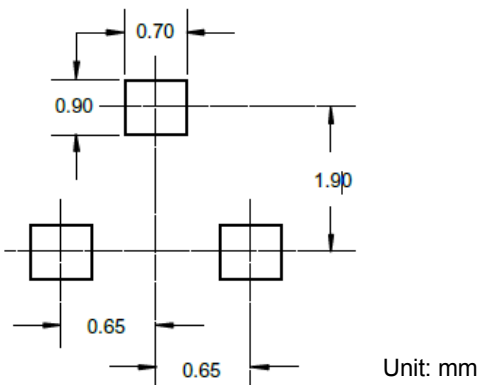
Figure 6. Cob/Cib-V_{CB}/V_{EB}

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	Carrier	Quantity
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