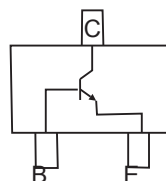


Features

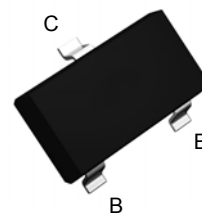
- Epitaxial planar die construction
- Low current
- High voltage

Mechanical Data

- Case: SOT-23
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, method 208



Schematic Diagram



SOT-23

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V _{CBO}	500	V
Collector-Emitter Breakdown Voltage	V _{CEO}	420	V
Emitter-Base Breakdown Voltage	V _{EBO}	8	V
Collector Current (Continuous)	I _C	0.5	A
Collector Current (Peak, t _p <5ms)	I _{CM}	1	A
Power Dissipation (T _A =25°C)	P _D	0.35	W
Thermal Resistance (Junction-to-Ambient) ¹	R _{θJA}	250	°C/W
Junction Temperature	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C =100μA, I _E =0	500	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =1mA, I _B =0	420	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E =100μA, I _C =0	8	-	-	V
Collector Cut-Off Current	I _{CBO}	V _{CB} =500V, I _E =0	-	-	10	μA
DC Current Gain	h _{FE}	V _{CE} =10V, I _C =1mA	100	-	-	-
		V _{CE} =10V, I _C =50mA	100	-	300	-
		V _{CE} =10V, I _C =100mA	10	-	-	-
Collector-Emitter Saturation Voltage	V _{CE(sat)}	I _C =20mA, I _B =2mA	-	-	0.2	V
		I _C =50mA, I _B =6mA	-	-	0.3	V
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =50mA, I _B =5mA	-	-	0.9	V
Base-Emitter Turn-On Voltage	V _{BE(on)}	I _C =50mA, V _{CE} =1V	-	-	1.0	V

Note:

1. Device mounted on PCB area of 1 cm²

Typical Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

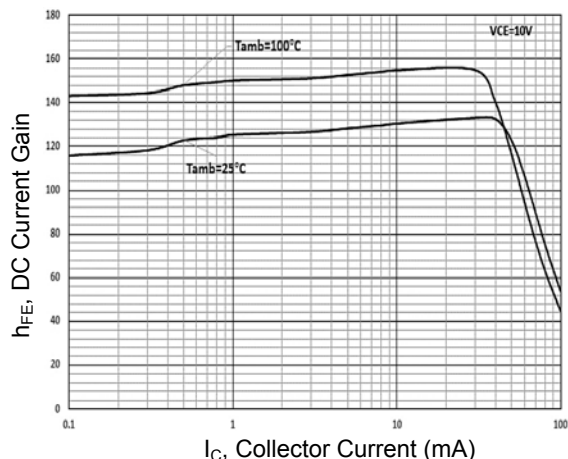


Figure 1. DC Current Gain as a Function of Collector Current

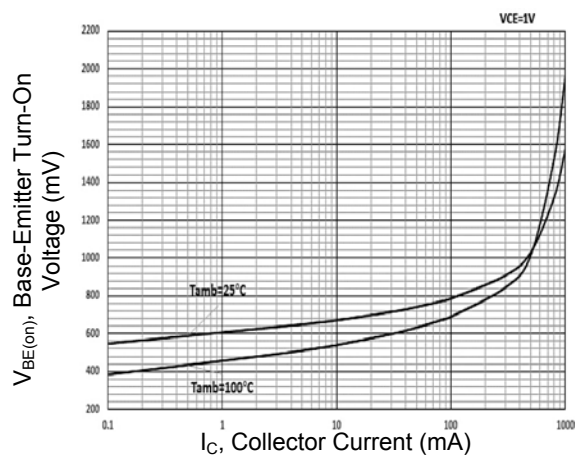


Figure 2. Base-Emitter Turn-On Voltage as a Function of Collector Current

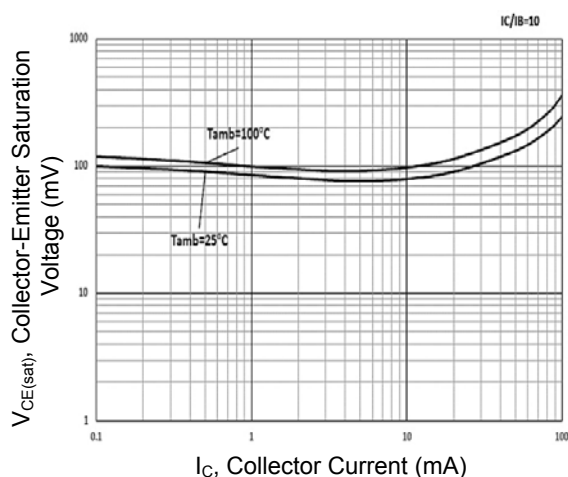


Figure 3. Collector-Emitter Saturation Voltage as a Function of Collector Current

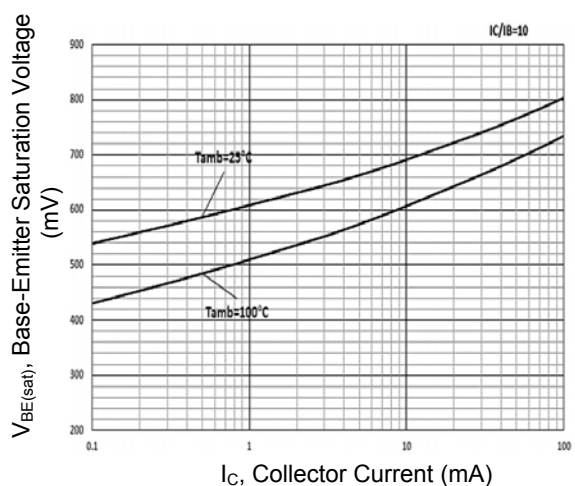


Figure 4. Base-Emitter Saturation Voltage as a Function of Collector Current

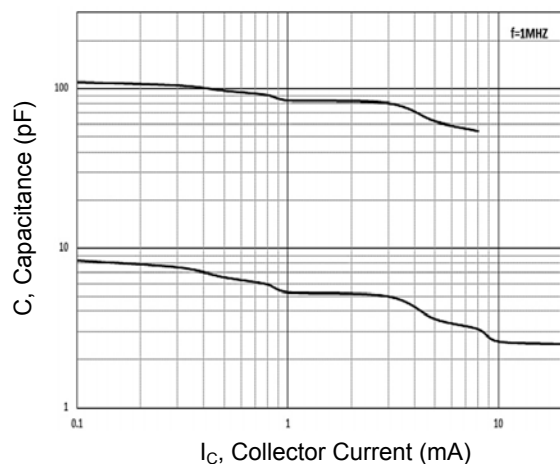
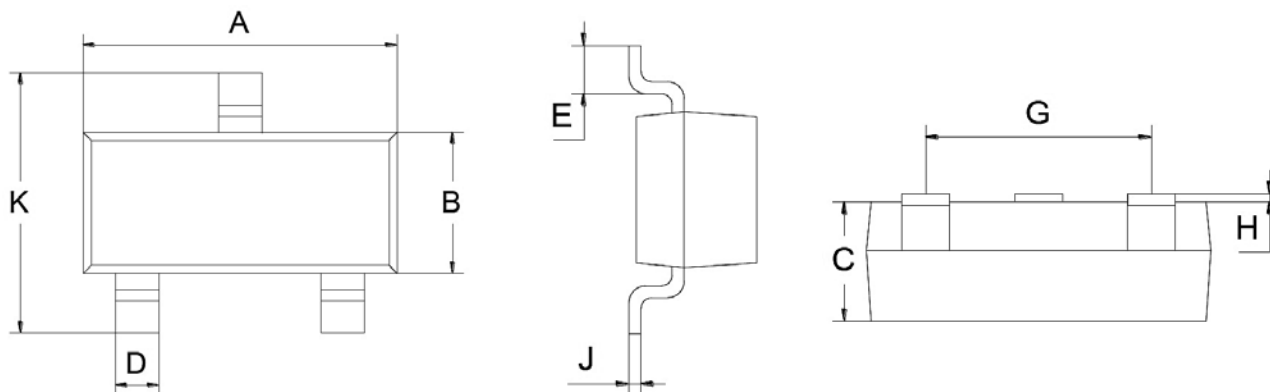


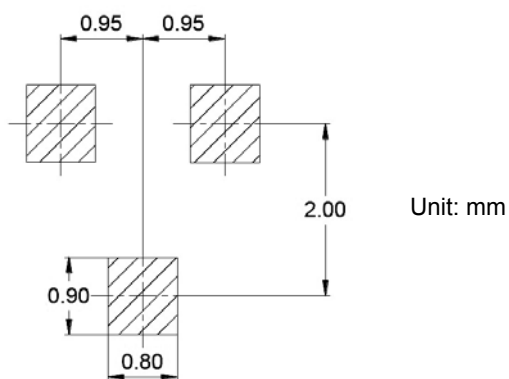
Figure 5. Collector Output / Emitter Input Capacitance

Package Outline Dimensions (SOT-23)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.90	1.10	0.035	0.043
D	0.30	0.50	0.012	0.020
E	0.35	0.48	0.014	0.019
G	1.80	2.00	0.071	0.079
H	0.02	0.10	0.001	0.004
J	0.05	0.15	0.002	0.006
K	2.20	2.60	0.087	0.102

Recommended Pad Layout



Order Information

Device	Package	Marking	Carrier	Quantity
GSBL1545	SOT-23	1545	Tape & Reel	3,000 Pcs / Reel