PNP Silicon Epitaxial Planar Transistor

GT5350

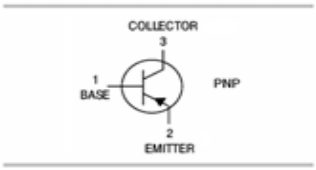
Features

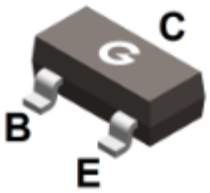
HF

- Low Collector-Emitter saturation voltage $V_{CE(sat)}$ and corresponding low $R_{CE(sat)}$
- High collector current capability
- High collector current gain
- Improved efficiency due to reduced heat generation
- RoHS compliant with Halogen-free

Mechanical Data

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





SOT-23

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code	
GT5350	SOT-23	3000pcs / Tape & Reel	53yww	53: PN Code yww: D/C(y / Year, ww / Week)

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	-50	V
Collector-Emitter Breakdown Voltage	V_{CEO}	-50	V
Emitter-Base Breakdown Voltage	V_{EBO}	-5	V
Collector Current (Continuous)	I_C	-2	A
Collector Current (Pulse)	I_{CM}	-4	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	300	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	264	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	118	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	84	°C/W
Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = -10μA, I_E = 0	-50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = -1mA, I_B = 0	-50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = -10μA, I_C = 0	-5	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = -50V, I_E = 0	-	-	-0.1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = -5V, I_C = 0	-	-	-0.1	μA
DC Current Gain	h_{FE}	V_{CE} = -2V, I_C = -100mA	200	-	-	-
		V_{CE} = -2V, I_C = -500mA	200	-	-	-
		V_{CE} = -2V, I_C = -1A	200	-	-	-
		V_{CE} = -2V, I_C = -2A	130	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = -500mA, I_B = -50mA	-	-	-0.10	V
		I_C = -1A, I_B = -50mA	-	-	-0.20	V
		I_C = -2A, I_B = -100mA	-	-	-0.50	V
		I_C = -2A, I_B = -200mA	-	-	-0.30	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C = -2A, I_B = -100mA	-	-	-1.1	V
Base-emitter Voltage	$V_{BE(on)}$	I_C = -1A, V_{CE} = -2V	-	-	-1.2	V
Transition Frequency	f_T	V_{CE} = -5V, I_C = -100mA f = 100MHz	100	-	-	MHz
Output Capacitance	C_{ob}	V_{CB} = -10V, I_E = I_e = 0 f = 1MHz	-	-	35	pF

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

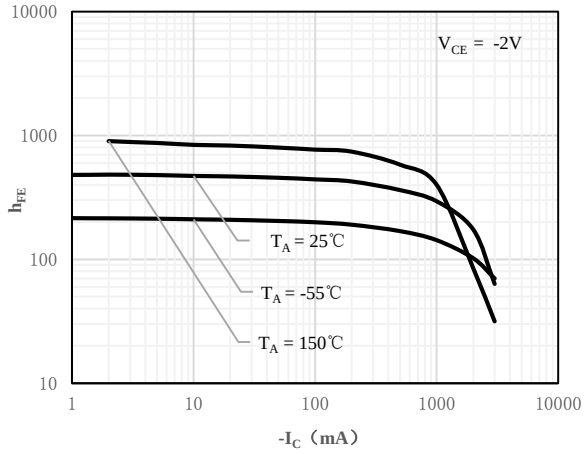


Fig 1 h_{FE} vs. I_C

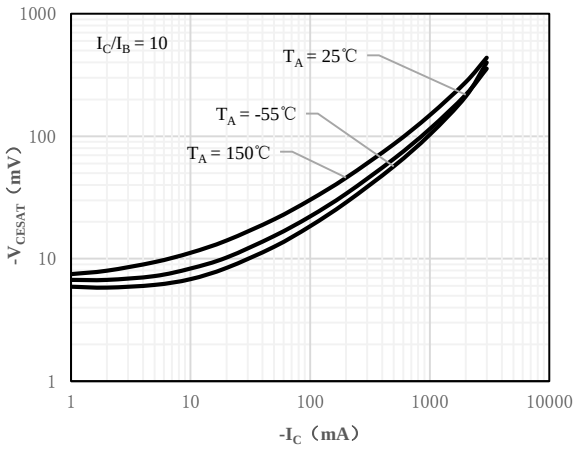


Fig 2 $V_{CE(sat)}$ vs. I_C

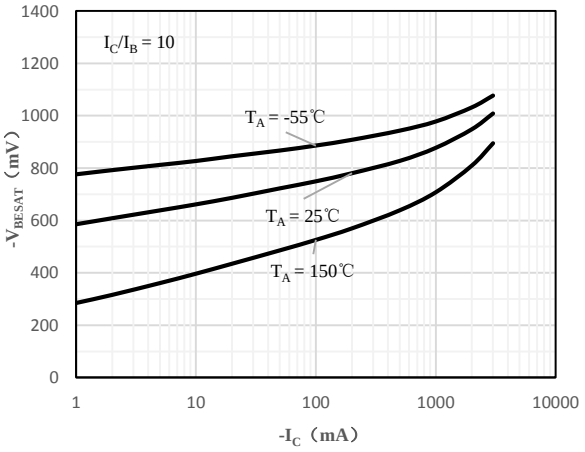


Fig 3 $V_{BE(sat)}$ vs. I_C

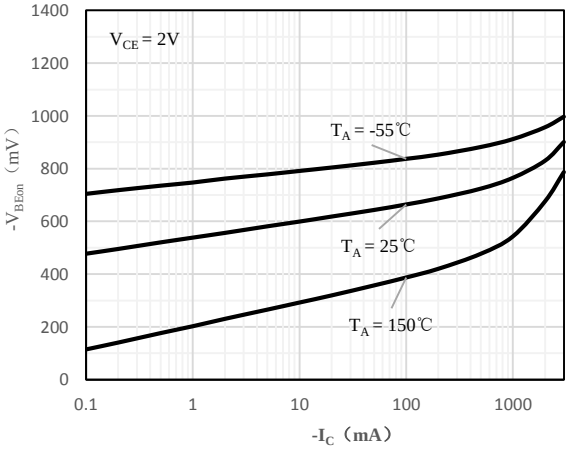


Fig 4 $V_{BE(ON)}$ vs. I_C

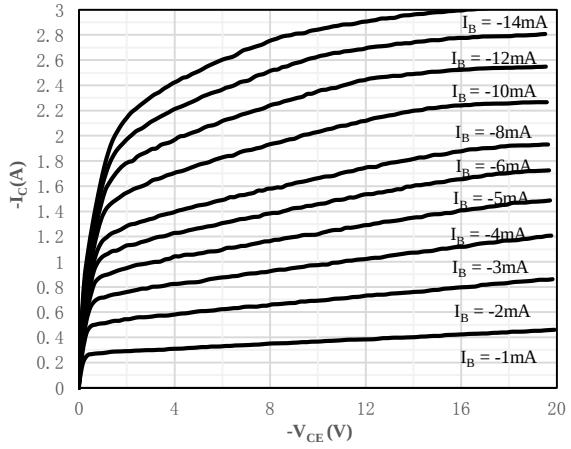


Fig 5 I_C vs. V_{CE}

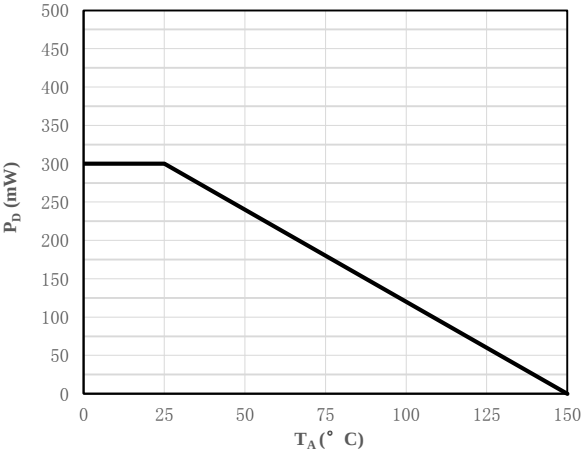


Fig 6 P_D vs. T_A

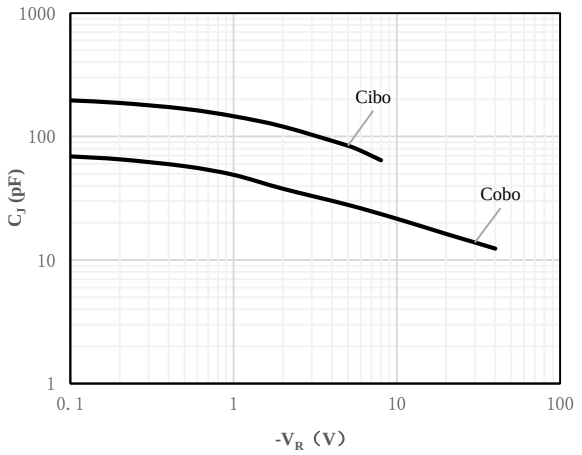
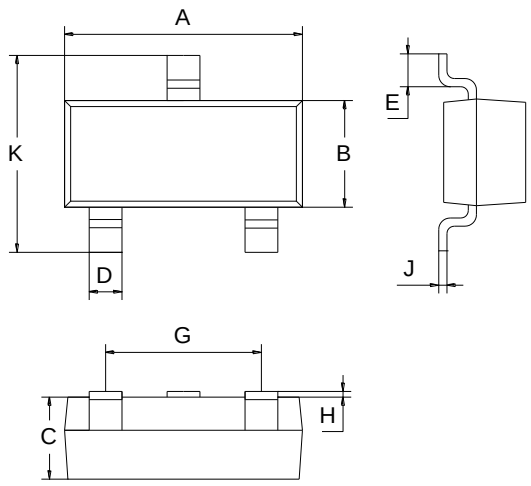


Fig 7 C_J vs. V_R

Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	**Min.**	**Max.**
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23