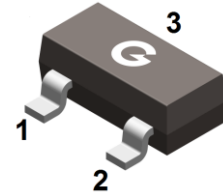
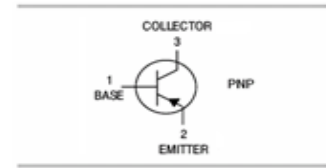


Features

- 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
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



SOT-23-3L

Mechanical Data

- Case: SOT-23-3L
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TGT5350-3L	SOT-23-3L	3000 pcs / Tape & Reel	T5350

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ 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
Equivalent On-Resistance	$R_{CE(sat)}$	135	mΩ

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	400	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	313	$^\circ\text{C/W}$
Junction Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-50	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-50	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$	-	-	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -2\text{V}, I_C = -100\text{mA}$	200	-	-	-
		$V_{CE} = -2\text{V}, I_C = -500\text{mA}$	200	-	-	-
		$V_{CE} = -2\text{V}, I_C = -1\text{A}$	200	-	-	-
		$V_{CE} = -2\text{V}, I_C = -2\text{A}$	130	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-	-	-0.10	V
		$I_C = -1\text{A}, I_B = -50\text{mA}$	-	-	-0.20	V
		$I_C = -2\text{A}, I_B = -100\text{mA}$	-	-	-0.50	V
		$I_C = -2\text{A}, I_B = -200\text{mA}$	-	-	-0.30	V
Equivalent On-Resistance	$R_{CE(sat)}$	$I_C = -2\text{A}, I_B = -200\text{mA}$	-	90	135	$\text{m}\Omega$
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -2\text{A}, I_B = -100\text{mA}$	-	-	-1.1	V
Base-emitter Voltage	$V_{BE(on)}$	$I_C = -1\text{A}, V_{CE} = -2\text{V}$	-	-	-1.2	V
Transition Frequency	f_T	$V_{CE} = -5\text{V}, I_C = -100\text{mA}$ $f = 100\text{MHz}$	100	-	-	MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = I_C = 0$ $f = 1\text{MHz}$	-	-	35	pF

Ratings and Characteristic Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

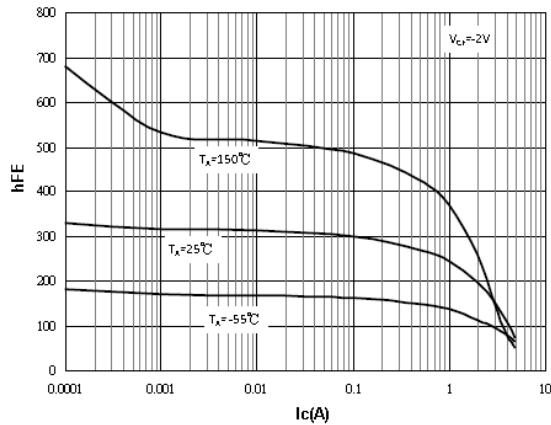


FIG.1 - DC current gain as a function of collector current

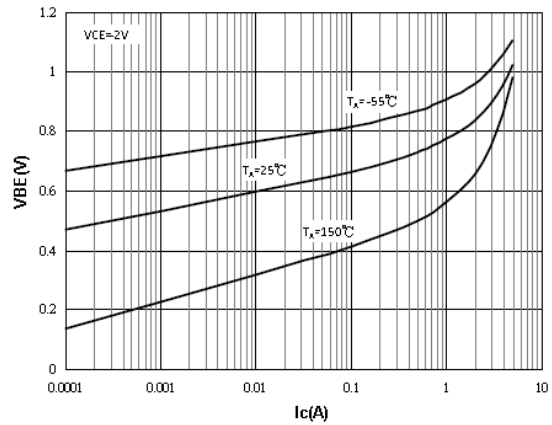


FIG.2 - Base-emitter voltage as a function of collector current

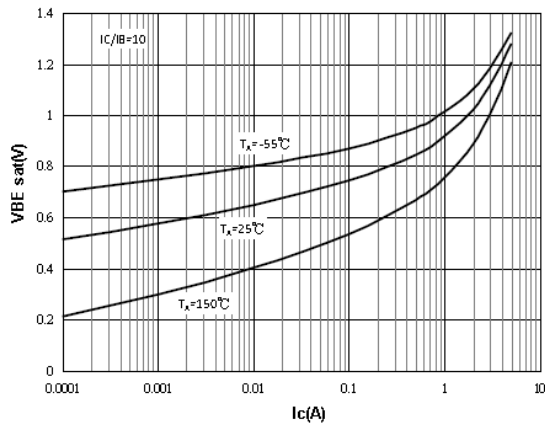


FIG.3 - Base-emitter saturation voltage as a function of collector current

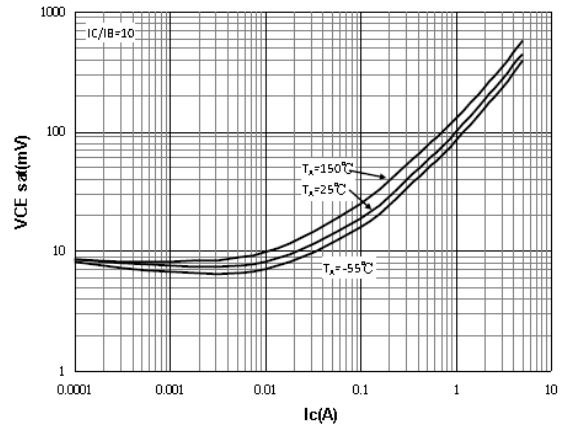


FIG.4 - Collector-emitter saturation voltage as a function of collector current

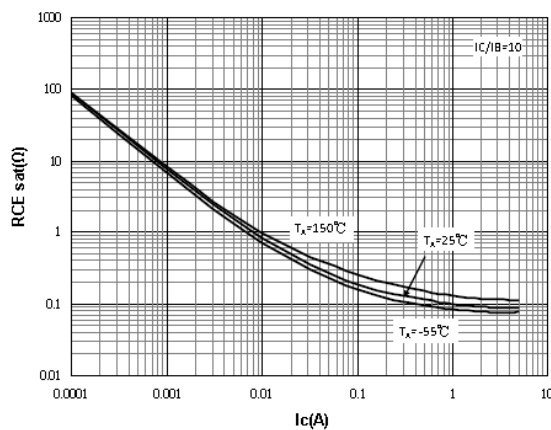
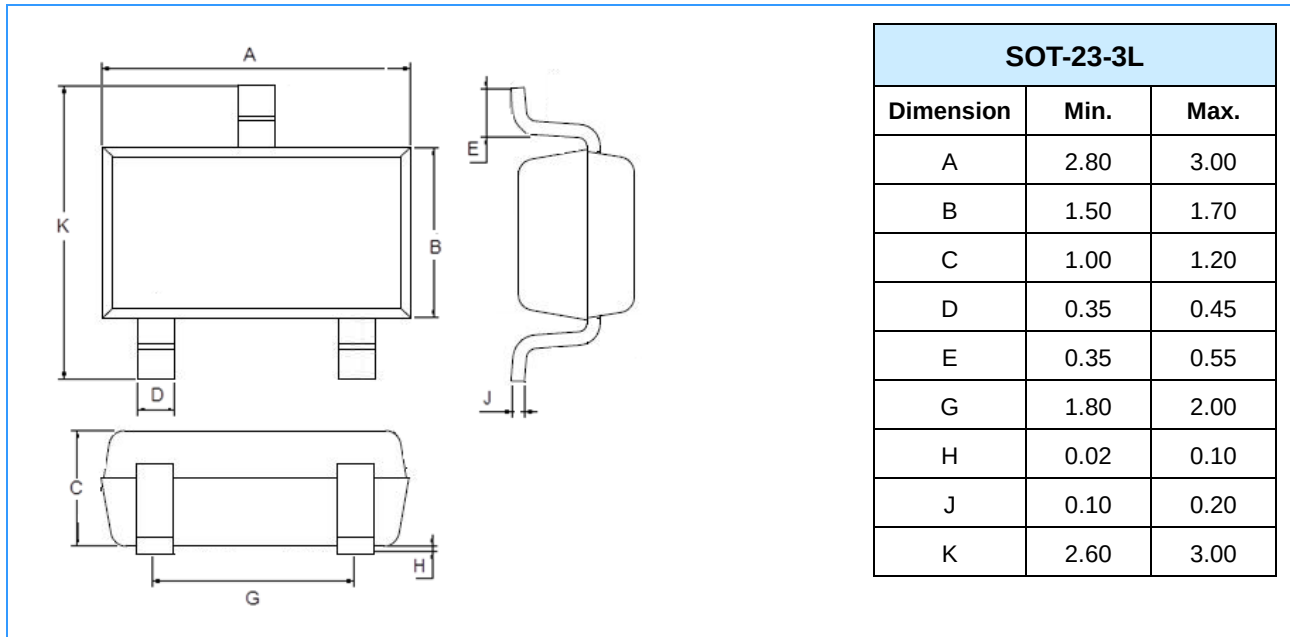
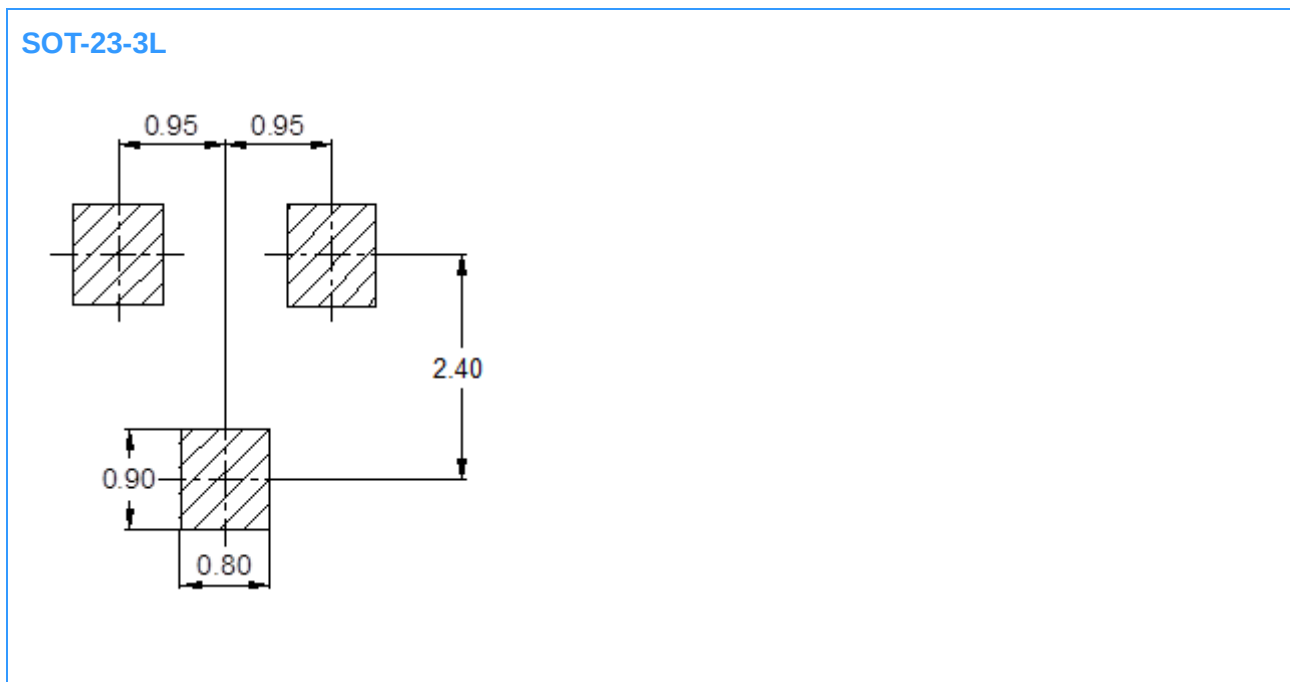


FIG.5 - Equivalent on-resistance as a function of collector current

Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



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