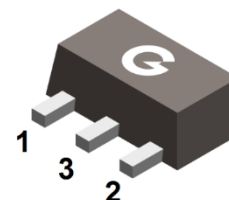
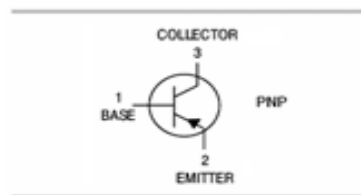


Features

- 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
- Complementary NPN type: TGT4350E
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



SOT-89

Mechanical Data

- Case: SOT-89
- Molding compound, UL flammability classification rating 94V-0
- Terminals: Matte tin plated leads, solderable per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping	Marking Code
TGT5350E	SOT-89	1000 pcs / Tape & Reel	T5350

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

Symbol	Parameter	Value	Units
MAXIMUM RATINGS			
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current - Continuous	-3	A
I_{CM}	Collector Current - Peak	-5	A
Thermal Characteristic			
P_D^{*1}	Total Power Dissipation, $T_A = 25^{\circ}\text{C}$	0.55	W
$R_{\theta JA}^{*1}$	Thermal Resistance (Junction-to-Ambient)	227	$^{\circ}\text{C/W}$
$R_{\theta JL}^{*1}$	Thermal Resistance (Junction-to-Lead)	15	$^{\circ}\text{C/W}$
P_D^{*2}	Total Power Dissipation, $T_A = 25^{\circ}\text{C}$	1.5	W
$R_{\theta JA}^{*2}$	Thermal Resistance (Junction-to-Ambient)	83.3	$^{\circ}\text{C/W}$
$R_{\theta JC}$	Thermal Resistance (Junction-to- Case)	33	$^{\circ}\text{C/W}$
T_J	Junction Temperature	-65 to +150	$^{\circ}\text{C}$
T_{STG}	Junction and Storage Temperature	-65 to +150	$^{\circ}\text{C}$

Notes:

1. The data tested by surface mounted on a FR4 printed-circuit board; single-sided copper, tin-plated; standard footprint
2. The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper

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

Parameter	Symbol	Test conditions	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	-	-	-100	nA
		T _J =25°C	-	-	-50	μA
Emitter cut-off current	I _{EBO}	T _J =150°C	-	-	-50	μA
		V _{EB} =-5V, I _C =0	-	-	-100	nA
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	-	450	
		V _{CE} =-2V, I _C =-2A	130	-	-	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-500mA, I _B =-50mA	-	-	-100	mV
		I _C =-1A, I _B =-50mA	-	-	-200	
		I _C =-2A, I _B =-100mA	-	-	-500	
		I _C =-2A, I _B =-200mA	-	-	-300	
Base-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-2A, I _B =-100mA	-	-	-1.1	V
Base-Emitter Turn-on Voltage	V _{BE(on)}	V _{CE} =-2V, I _C =-1A	-	-	-1.2	V
Collector Capacitance	C _C	V _{CB} =-10V, I _E =I _C =0, f=1MHz	-	-	35	pF
Transition Frequency	f _T	V _{CE} =-5V, I _C =-100mA, f=100MHz	100	-	-	MHz

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

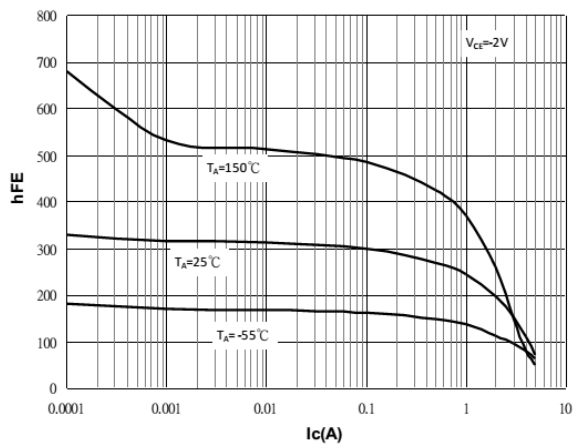


FIG.1 - DC current gain as a function of collector current

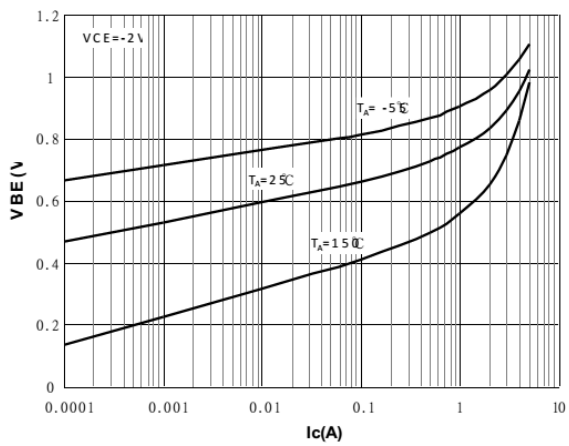


FIG.2 - Base-emitter voltage as a function of collector current

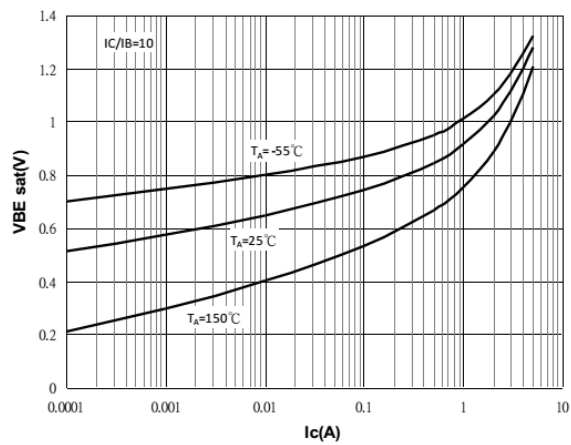


FIG.3 - Base-emitter saturation voltage as a function of collector current

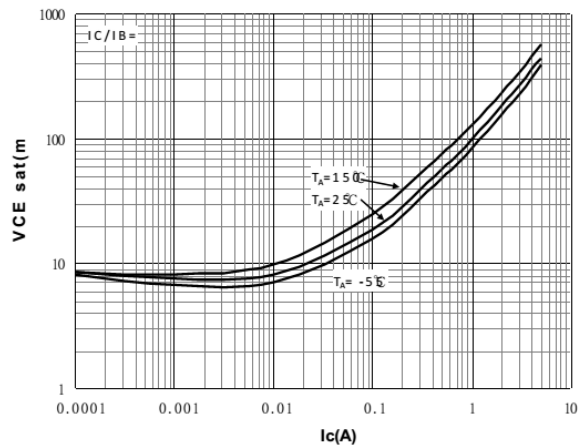


FIG.4 - Collector-emitter saturation voltage as a function of collector current

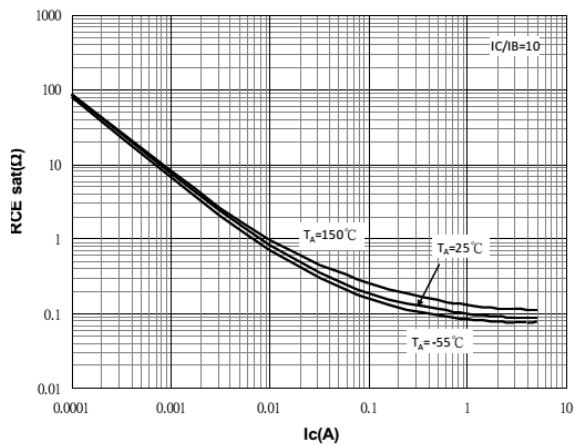
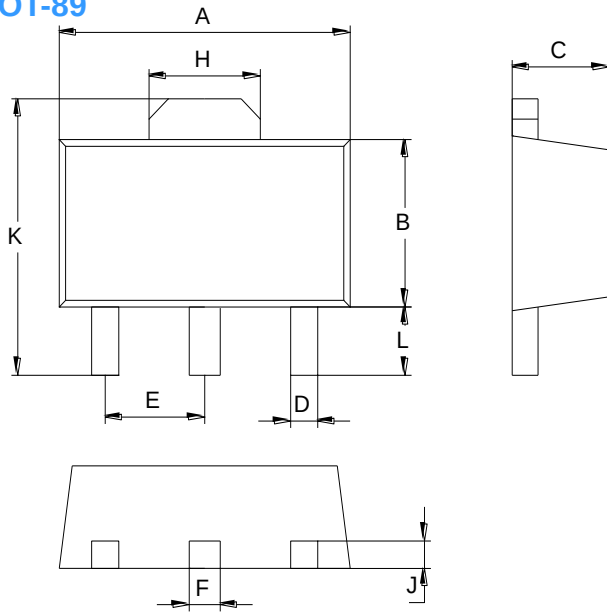


FIG.5 - Equivalent on-resistance as a function of collector current

Package Outline Dimensions (unit: mm)

SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35

SOLDERING FOOTPRINT (unit: mm)

