

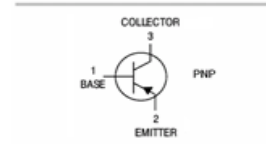
Features

- High DC current gain
- Complimentary to SS8050E
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: SOT-89
- 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
SS8550E-L	SOT-89	1000 pcs / Tape & Reel	Y2
SS8550E-H	SOT-89	1000 pcs / Tape & Reel	Y2
SS8550E-J	SOT-89	1000 pcs / Tape & Reel	Y2

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V _{CBO}	-40	V
Collector-Emitter Breakdown Voltage	V _{CEO}	-25	V
Emitter-Base Breakdown Voltage	V _{EBO}	-6	V
Collector Current (Continuous)	I _C	-1.5	A
Collector Current (Peak)	I _{CM}	-2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation (T _A = 25°C) *1	P _D	0.5	W
Power Dissipation (T _A = 25°C, based on R _{θJA} (Typ.) = 175°C/W)	P _D	0.7	W
Thermal Resistance Junction-to-Air *1	R _{θJA}	250	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

Note 1: The data tested by surface mounted on a minimum recommended FR-4 board

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-40	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -2\text{mA}, I_B = 0$	-25	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-6	-	-	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = -35\text{V}, I_E = 0$	-	-	-0.1	μA
Collector Cut-off Current	I_{CEO}	$V_{CE} = -20\text{V}, I_B = 0$	-	-	-0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$	-	-	-0.1	μA
DC Current Gain	h_{FE}	$V_{CE} = -1\text{V}, I_C = -0.1\text{A}$	120	-	400	-
		$V_{CE} = -1\text{V}, I_C = -0.8\text{A}$	40	-	-	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -0.8\text{A}, I_B = -0.08\text{A}$	-	-0.28	-0.5	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -0.8\text{A}, I_B = -0.08\text{A}$	-	-0.98	-1.2	V
Base-emitter on Voltage	$V_{BE(on)}$	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	-	-0.66	-1	V
Transition Frequency	f_T	$I_C = -50\text{mA}, V_{CE} = -10\text{V}$	100	-	-	MHz
Collector Output Capacitance	C_{OB}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	15	-	pF

Classification of h_{FE}

Rank	L	H	J
Range	120-200	200-350	300-400

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

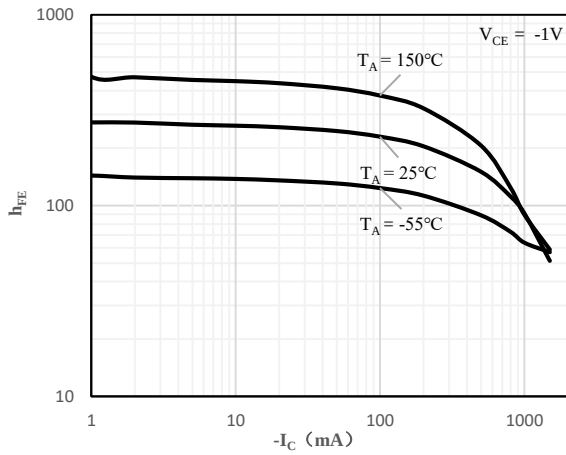


Fig 1 h_{FE} vs. I_C (H)

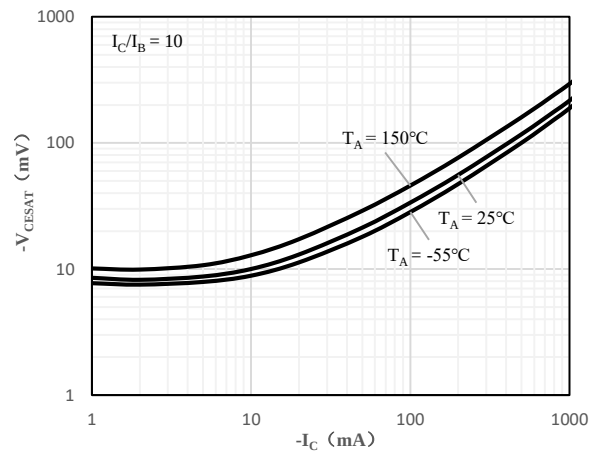


Fig 2 $V_{CE(sat)}$ vs. I_C

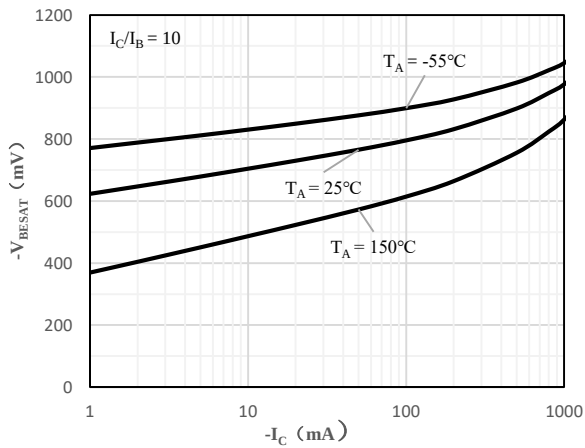


Fig 3 $V_{BE(sat)}$ vs. I_C

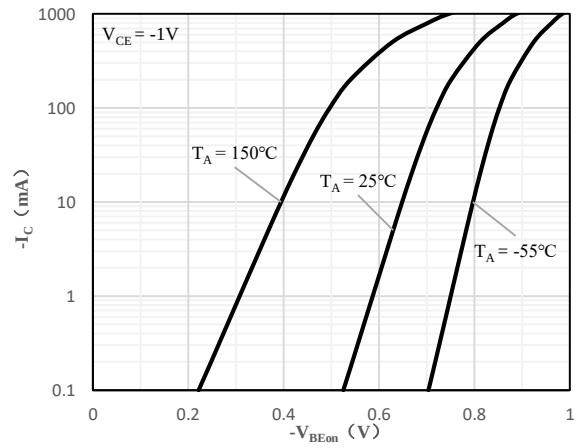


Fig 4 $V_{BE(ON)}$ vs. I_C

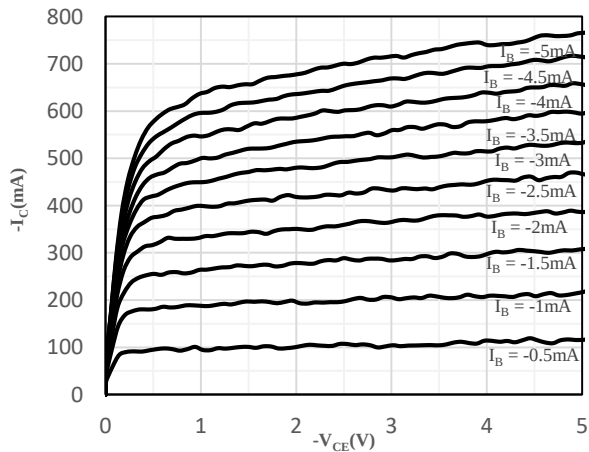
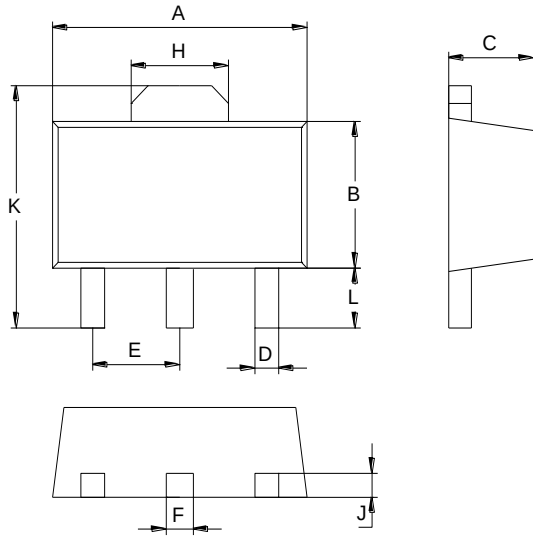


Fig 5 I_C vs. V_{CE}

Package Outline Dimensions (Unit: mm)



SOT-89		
Dimension	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

Mounting Pad Layout (Unit: mm)

SOT-89

