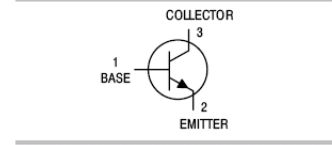




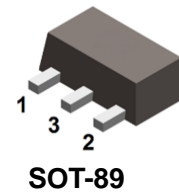
Features

- High DC current gain
- Complimentary to SS8550



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
SS8050	SOT-89	1000 pcs / Tape & Reel	Y1

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°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base Breakdown Voltage	V _{(BR)CBO}	I _C = 100μA, I _E = 0	40	-	-	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C = 2mA, I _B = 0	25	-	-	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	I _E = 100μA, I _C = 0	6	-	-	V
Collector Cut-off Current	I _{CBO}	V _{CB} = 35V, I _E = 0	-	-	0.1	μA
Collector Cut-off Current	I _{CEO}	V _{CE} = 20V, I _B = 0	-	-	0.1	μA
Emitter Cut-off Current	I _{EBO}	V _{EB} = 6V, I _C = 0	-	-	0.1	μA
DC Current Gain	h _{FE}	V _{CE} = 1V, I _C = 0.1A	120	-	400	-
		V _{CE} = 1V, I _C = 0.8A	40	-	-	-
Collector-emitter Saturation Voltage	V _{CE(sat)}	I _C = 0.8A, I _B = 0.08A	-	0.28	0.5	V
Base-emitter Saturation Voltage	V _{BE(sat)}	I _C = 0.8A, I _B = 0.08A	-	0.98	1.2	V
Base-emitter on Voltage	V _{BE(on)}	V _{CE} = 1V, I _C = 10mA	-	0.66	1	V
Transition Frequency	f _T	I _C = 50mA, V _{CE} = 10V	100	-	-	MHz
Collector Output Capacitance	C _{OB}	V _{CB} = 10V, I _E = 0, f = 1MHz	-	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)

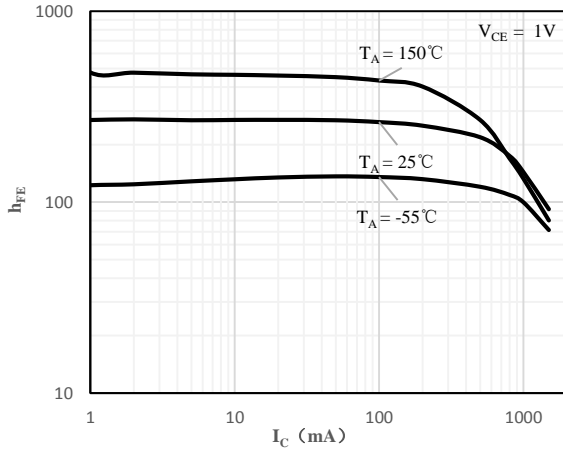


Fig 1 h_{FE} vs. I_C (H)

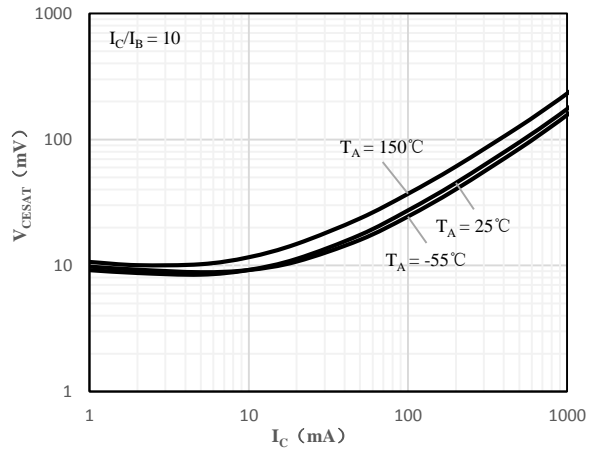


Fig 2 $V_{CE(sat)}$ vs. I_C

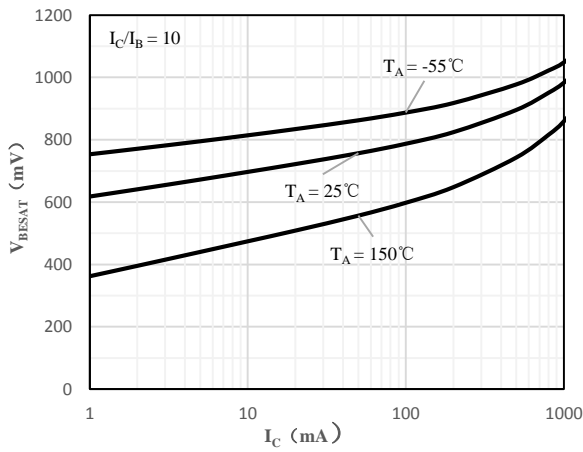


Fig 3 $V_{BE(sat)}$ vs. I_C

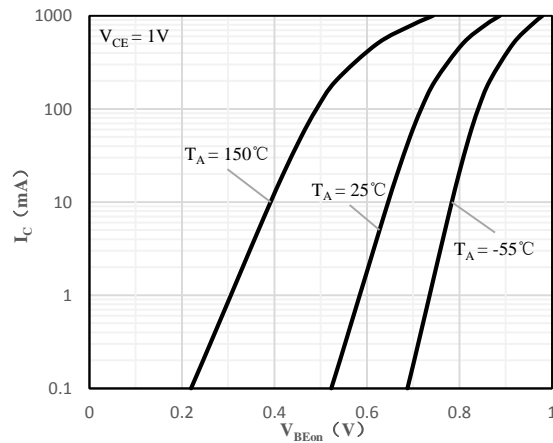


Fig 4 $V_{BE(ON)}$ vs. I_C

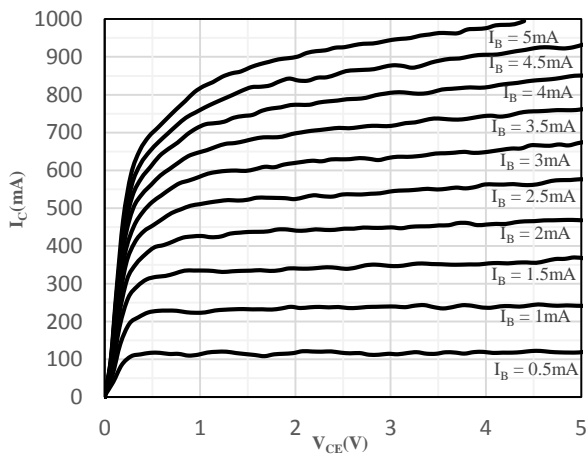
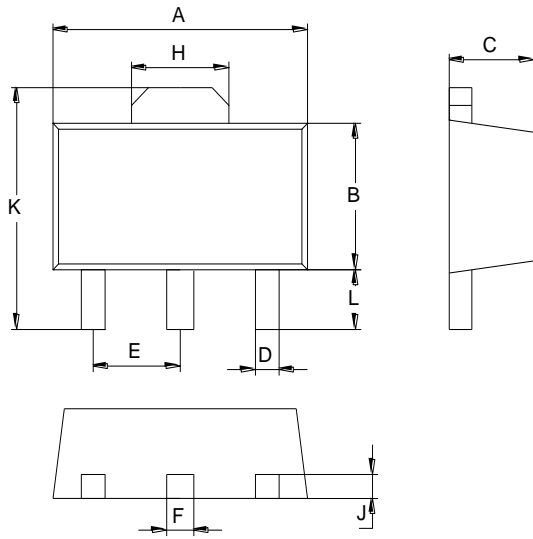


Fig 5 I_C vs. V_{CE}



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

