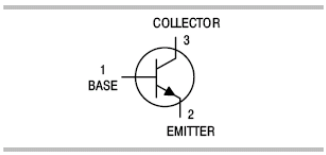
NPN Silicon Epitaxial Planar Transistor

2SC554

Features

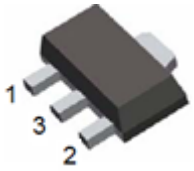
HF

- Low saturation voltage
- High speed switching



Mechanic al Data

- Case: SOT-89
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Tin-plated; solderability per MIL-STD-202, Method 208



SOT-89

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
2SC554	SOT-89	1000 pcs / Tape & Reel	C554

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

Parameter	Symbol	Value	Unit
Collector-Base Breakdown Voltage	V_{CBO}	100	V
Collector-Emitter Breakdown Voltage	V_{CEO}	100	V
Emitter-Base Breakdown Voltage	V_{EBO}	6	V
Collector Current (continuous)	I_C	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Collector Power Dissipation	P_C	500	mW
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	250	°C/W
Junction Temperature Range	T_J	-55 ~ +150	°C
Storage Temperature Range	T_{STG}	-55 ~ +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 = 0.1mA, I_E = 0	100	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, I_B = 0	100	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 0.1mA, I_C = 0	6	-	-	V
Collector Cut-off Current	I_{CBO}	V_{CB} = 100V, I_E = 0	-	-	1	μA
Emitter Cut-off Current	I_{EBO}	V_{EB} = 4V, I_C = 0	-	-	1	μA
DC Current Gain	h_{FE}	V_{CE} = 3V, I_C = 100mA	82	-	270	-
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 500mA, I_B = 25mA	-	-	0.2	V
		I_C = 1A, I_B = 50mA	-	-	0.3	V
Base-emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 1A, I_B = 50mA	-	-	1	V
Transition Frequency	f_T	V_{CE} = 5V, I_C = 100mA	30	-	-	MHz
Output Capacitance	C_{ob}	V_{CB} = 10V , I_E = 0 , f = 1MHz	-	16	-	pF

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

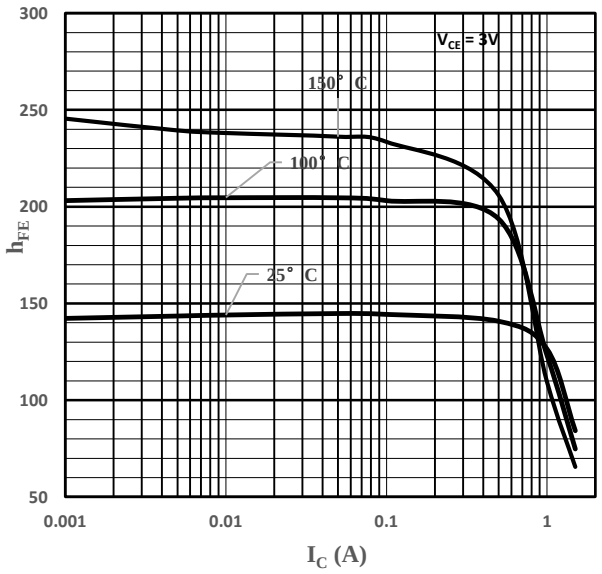


Fig. 1 h_{FE} vs. I_C

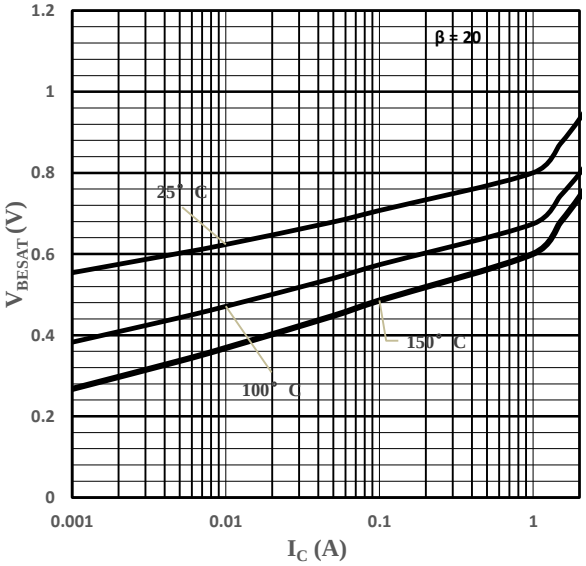


Fig. 2 $V_{BE(sat)}$ vs. I_C

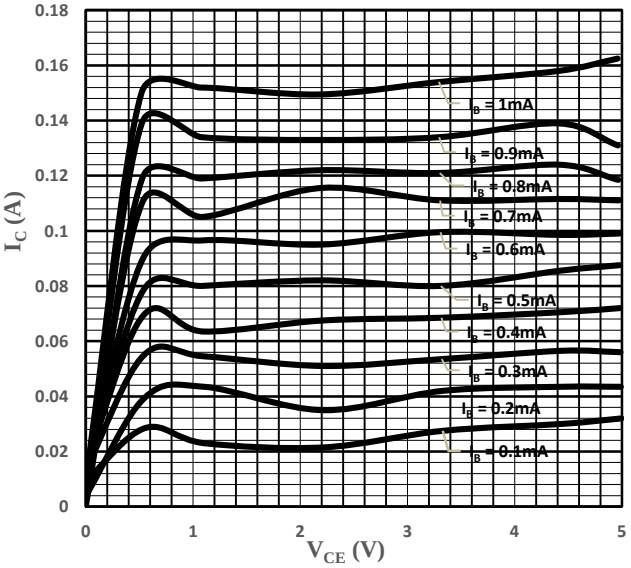


Fig. 3 I_C vs. V_{CE}

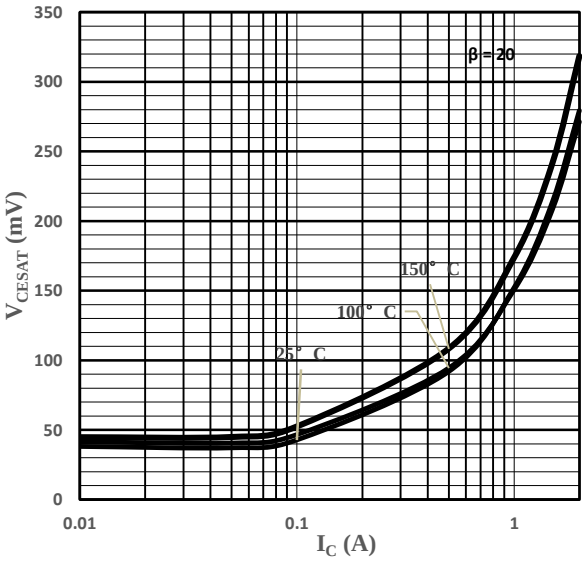


Fig. 4 $V_{CE(sat)}$ vs. I_C

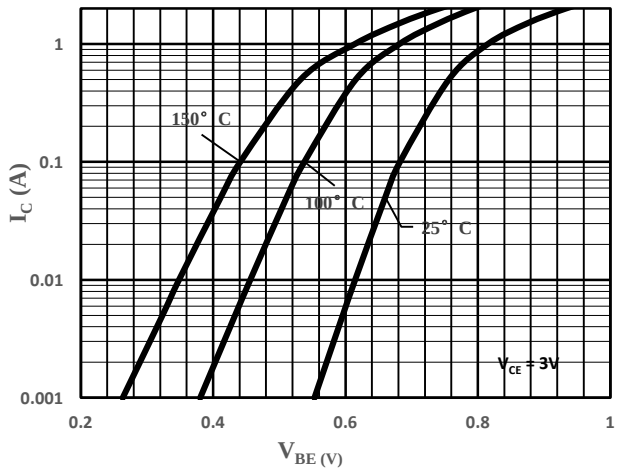


Fig. 5 $V_{BE(on)}$ vs. I_C

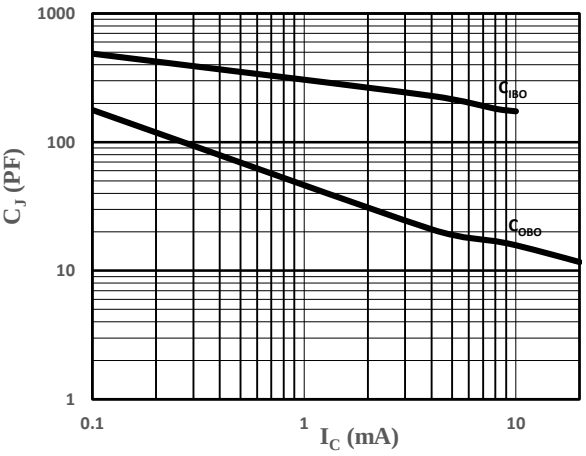
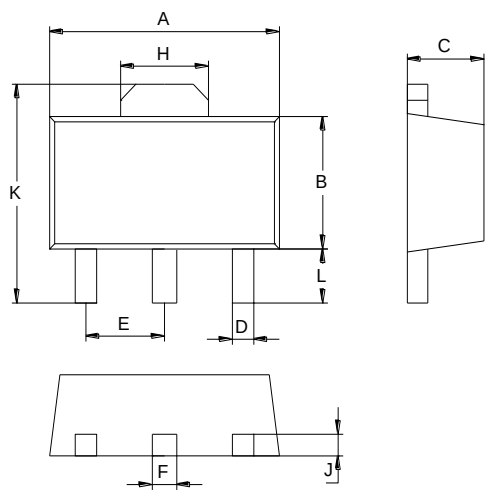


Fig. 6 Capacitance

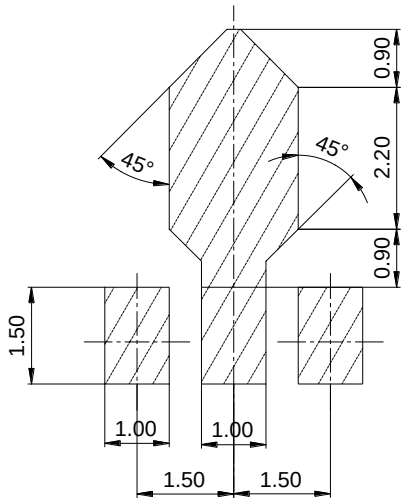
Package Outline Dimensions (Unit: mm)



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

Package Outline Dimensions (Unit: mm)

SOT-89



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