

Features

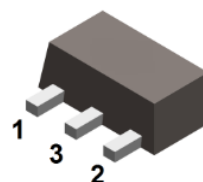
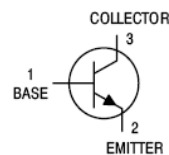
- Surface mount package ideally suited for automatic insertion
- Compliant to Halogen-free

Application

- High voltage transistor
- Telephone switching

Mechanical Data

- Package: SOT-89
- Terminals: Tin plated leads; solderable per J-STD-202 and JESD22-B102
- Marking Code: A44 / XTA44



SOT-89

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

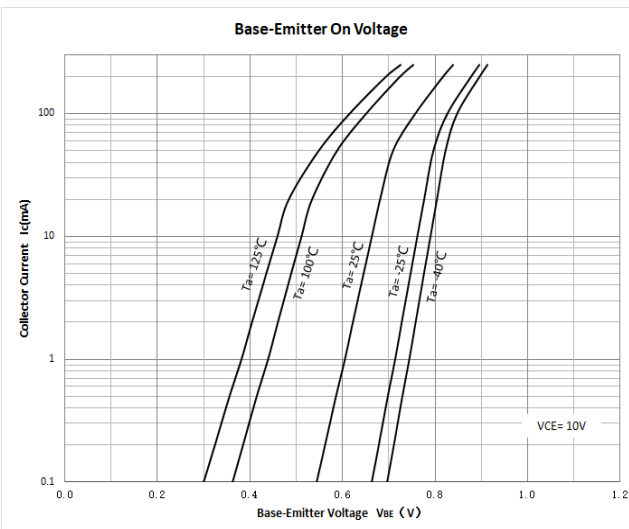
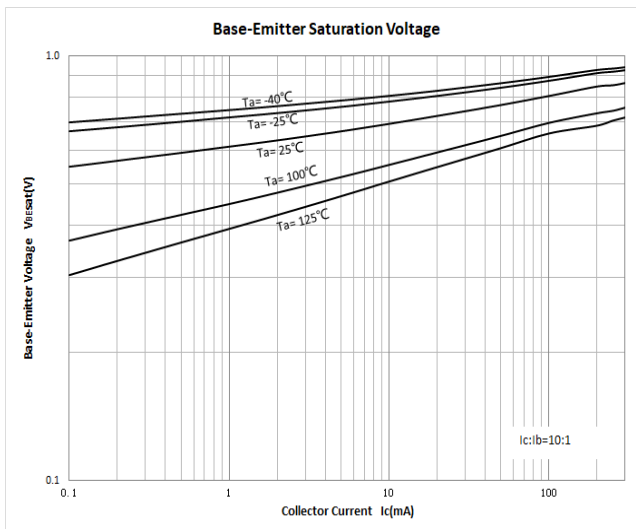
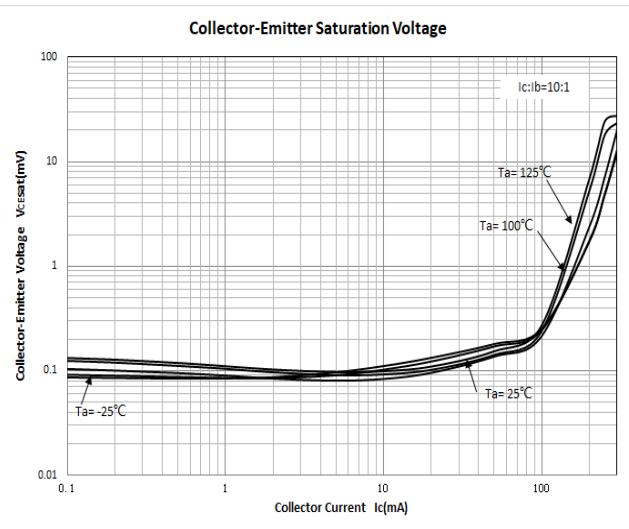
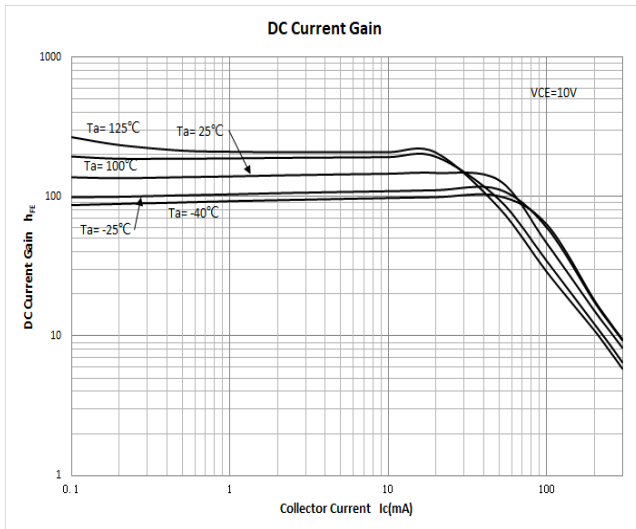
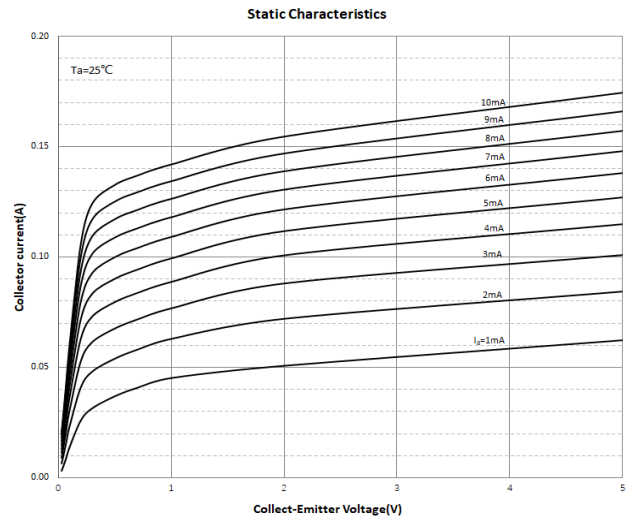
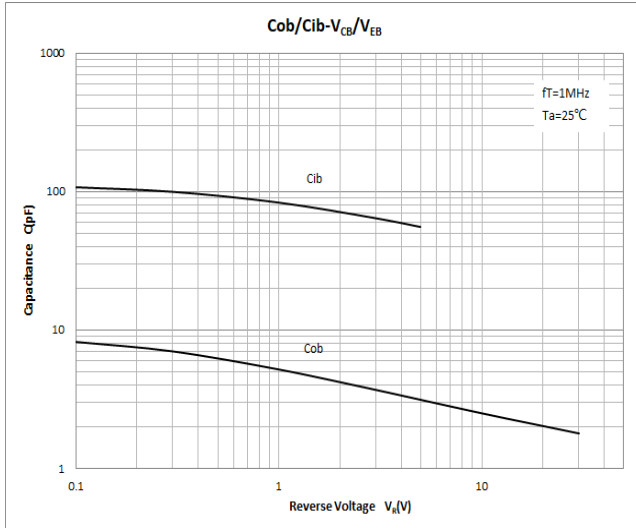
Item	Symbol	Unit	Conditions	Value
Collector-base voltage	V_{CBO}	V	$I_C=100\mu\text{A}$, $I_E=0$	400
Collector-emitter voltage	V_{CEO}	V	$I_C=1\text{mA}$, $I_B=0$	400
Emitter-base voltage	V_{EBO}	V	$I_E=10\mu\text{A}$, $I_C=0$	6
Collector current	I_C	mA		300
Power dissipation	P_D	W		0.5
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	$^\circ\text{C/W}$		250
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	$^\circ\text{C/W}$		50
Operation junction temperature	T_J	$^\circ\text{C}$		-55 to +150
Storage temperature	T_{STG}	$^\circ\text{C}$		-55 to +150

Note1: The device is installed and tested on 25.4 * 25.4 * 1.5mm P.C.B.

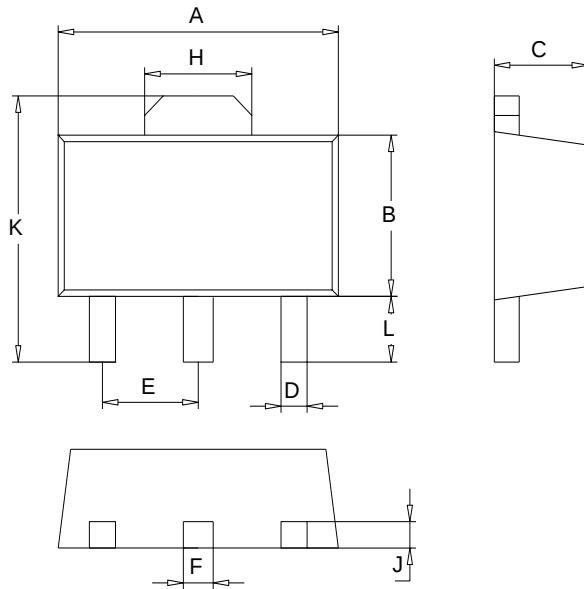
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	$I_C=100\mu\text{A}, I_E=0$	400		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	$I_C=1\text{mA}, I_B=0$	400		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	$I_E=10\mu\text{A}, I_C=0$	6		
Collector-base cut-off current	I_{CBO}	nA	$V_{CB}=400\text{V}$			100
Emitter-Base Cutoff Current	I_{EBO}	nA	$V_{EB}=4\text{V}$			100
DC current gain	h_{FE1}		$V_{CE}=10\text{V}, I_C=1\text{mA}$	40		
	h_{FE2}		$V_{CE}=10\text{V}, I_C=10\text{mA}$	50		200
	h_{FE3}		$V_{CE}=10\text{V}, I_C=50\text{mA}$	45		
	h_{FE4}		$V_{CE}=10\text{V}, I_C=100\text{mA}$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C=10\text{mA}, I_B=1\text{mA}$			0.5
			$I_C=50\text{mA}, I_B=5\text{mA}$			0.75
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	V	$I_C=10\text{mA}, I_B=1\text{mA}$			0.85
Transition frequency	f_T	MHz	$I_C=10\text{mA}, V_{CE}=10\text{V}, f=100\text{MHz}$	50		

Ratings and Characteristic Curves



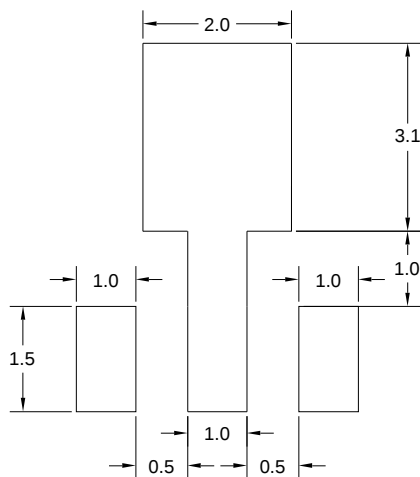
Package Outline Dimensions



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	1.55	1.80
J	0.30	0.50
L	0.80	1.20
K	3.94	4.35
All Dimensions in mm		

Mounting Pad Layout (Unit: mm)

SOT-89



Unit: mm