

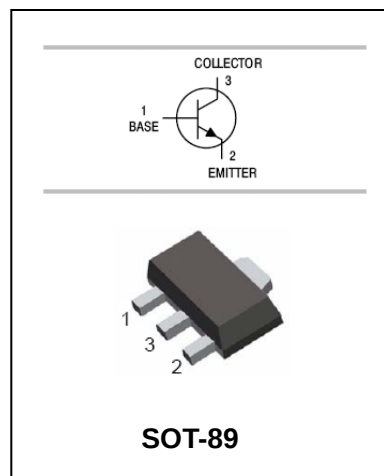
NPN Silicon Epitaxial Planar Transistor

A44

FEATURES

- Collector-emitter voltage: $V_{CEO} = 400V$
- Collector current up to 300mA
- Complement to A94
- Power dissipation: $P_D (\text{max}) = 500mW$

HF



APPLICATIONS

- High voltage transistor
- Telephone switching

ORDERING INFORMATION

Type No.	Marking	Package Code
A44	A44	SOT-89

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	500	V
V_{CEO}	collector-emitter voltage	400	V
V_{EBO}	emitter-base voltage	6	V
I_C	collector current (DC)	0.3	A
P_C	Collector dissipation	0.5	W
$R_{\theta JA}$	Thermal resistance Junction-to-ambient	200	$^\circ\text{C/W}$
T_J, T_{STG}	junction and storage temperature	-55 to +150	$^\circ\text{C}$

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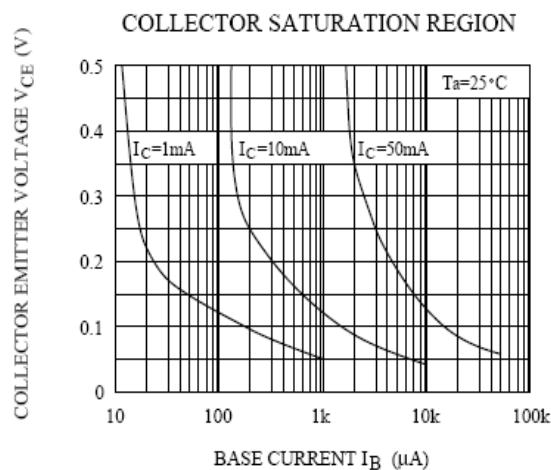
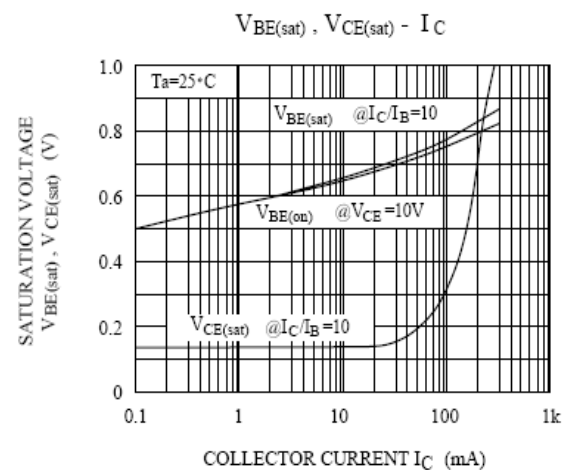
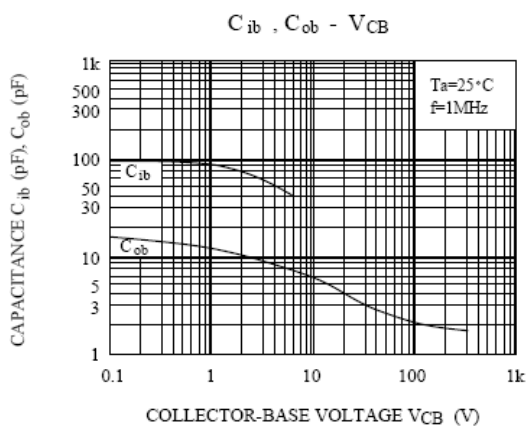
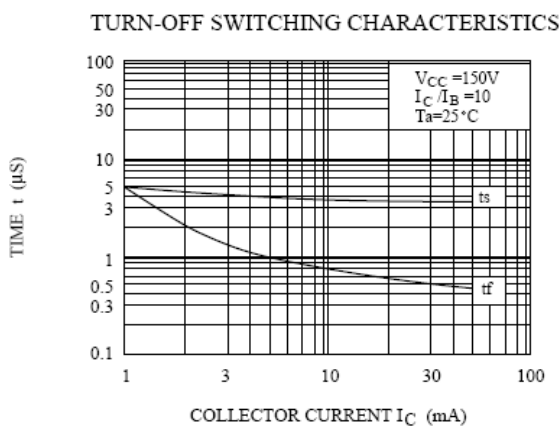
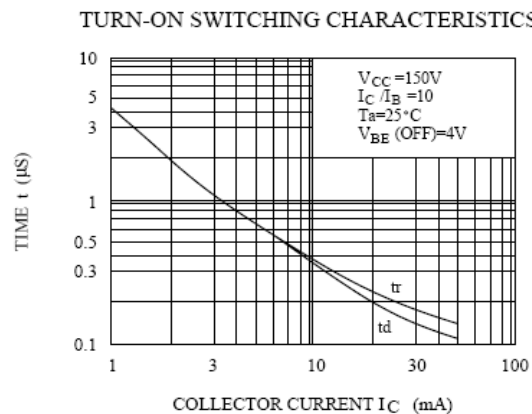
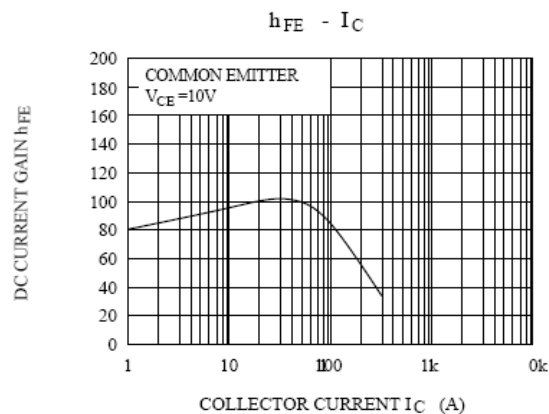
ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN.	MAX.	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	500	-	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1.0mA, I_B=0$	400	-	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6	-	V
collector cut-off current	I_{CBO}	$I_E = 0, V_{CB} = 400V$	-	0.1	μA
collector cut-off current	I_{CES}	$I_B = 0, V_{CE} = 400V$	-	0.5	μA
emitter cut-off current	I_{EBO}	$I_C = 0, V_{EB} = 4V$	-	0.1	μA
DC current gain	h_{FE}	$V_{CE} = 10V; I_C=1mA$	40	-	
		$V_{CE} = 10V; I_C = 10mA$	50	200	
		$V_{CE} = 10V; I_C = 50mA$	45	-	
		$V_{CE} = 10V; I_C = 100mA$	40	-	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1mA; I_B = 0.1mA$	-	0.4	V
		$I_C = 10mA; I_B = 1mA$	-	0.5	
		$I_C = 50mA; I_B = 5mA$	-	0.75	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA; I_B = 1mA$	-	0.75	V
Current gain bandwidth product	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	50		MHz
Output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		7	pF

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



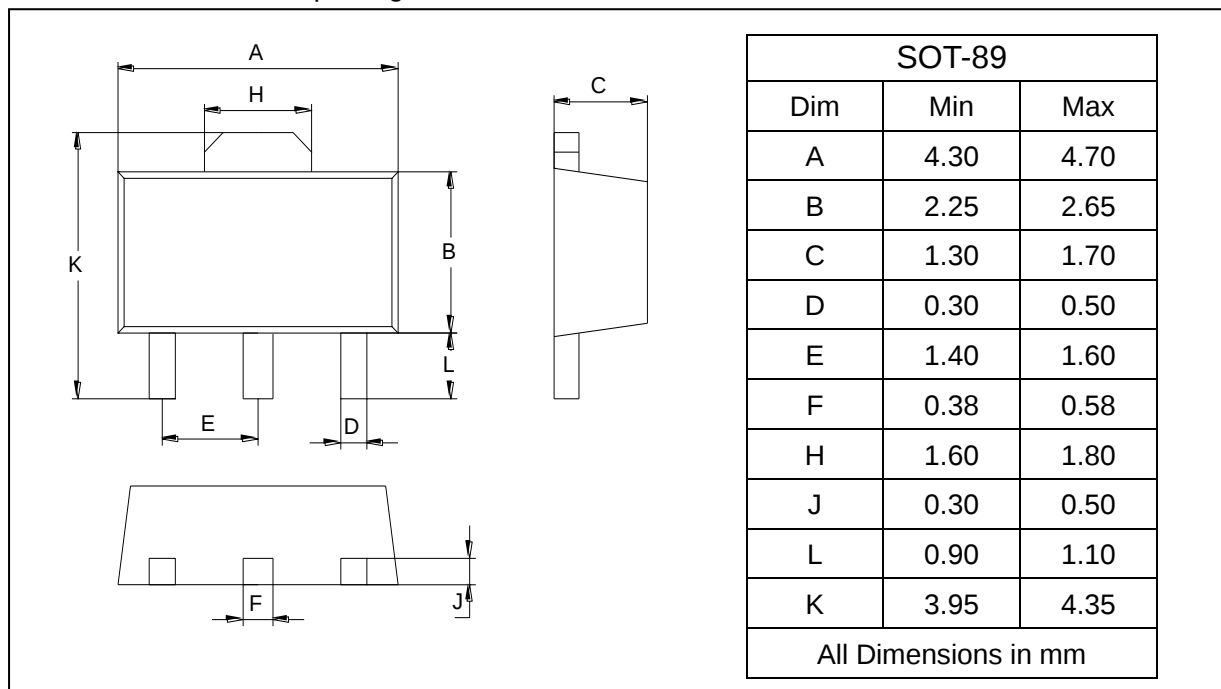
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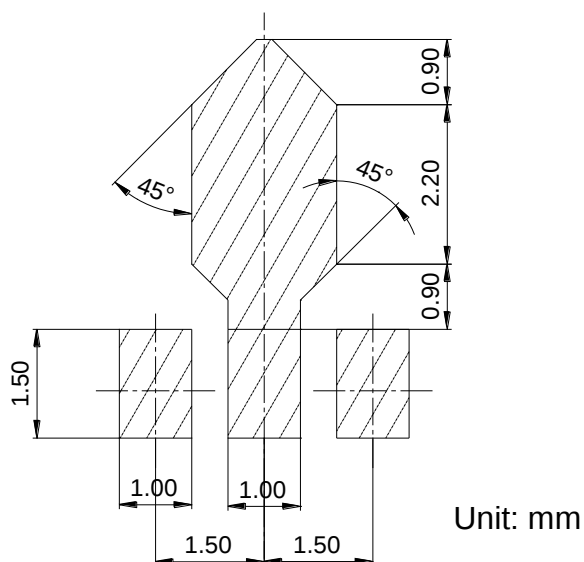
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
A44	SOT-89	1000 pcs / Tape & Reel