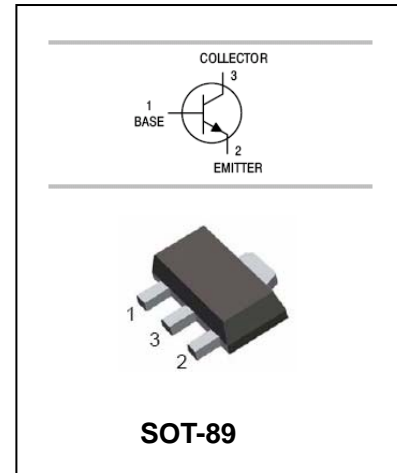


NPN Silicon Epitaxial Planar Transistor

A44

FEATURES

- Collector-Emitter voltage: $V_{CE0}=400V$.
- Collector current up to 300mA.
- Complement to A94.
- Power dissipation: $P_d(max)=500mW$.



APPLICATIONS

- High voltage transistor.
- Telephone switching.

ORDERING INFORMATION

Type No.	Marking	Package Code
A44	A44	SOT-89

MAXIMUM RATING @ $T_a=25^{\circ}C$ 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	$^{\circ}C/W$
T_J, T_{stg}	junction and storage temperature	-55 to +150	$^{\circ}C$



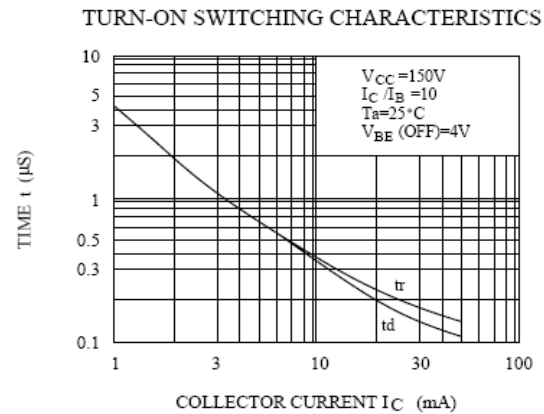
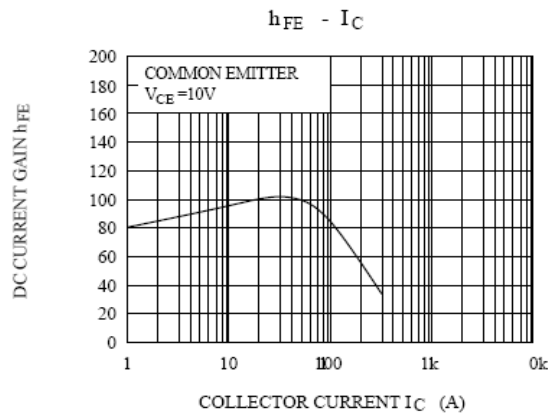
NPN Silicon Epitaxial Planar Transistor

A44

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

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

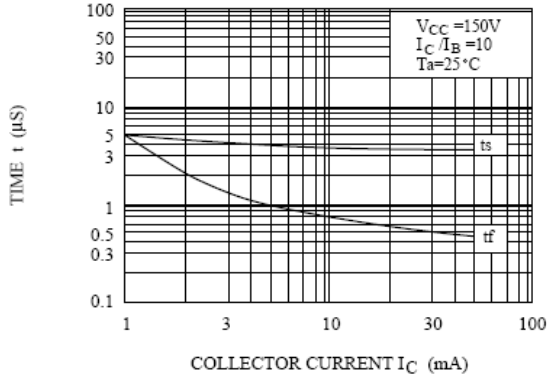




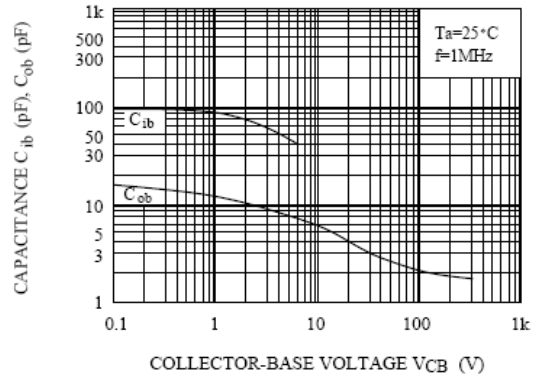
NPN Silicon Epitaxial Planar Transistor

A44

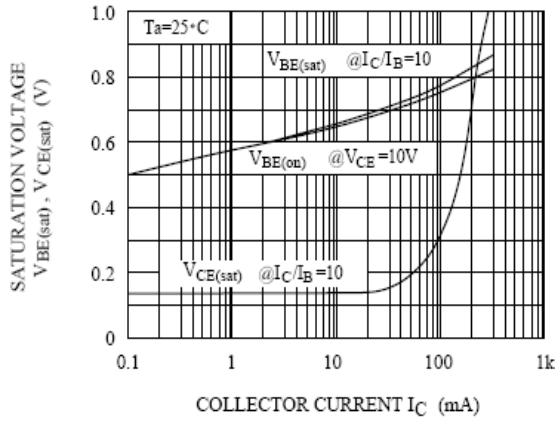
TURN-OFF SWITCHING CHARACTERISTICS



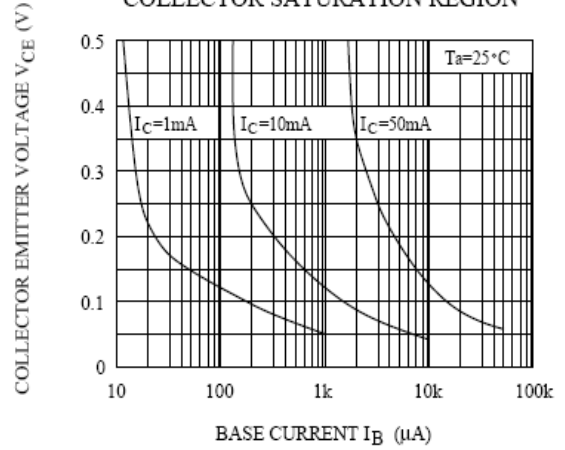
$C_{ib}, C_{ob} - V_{CB}$



$V_{BE(sat)}, V_{CE(sat)} - I_C$



COLLECTOR SATURATION REGION



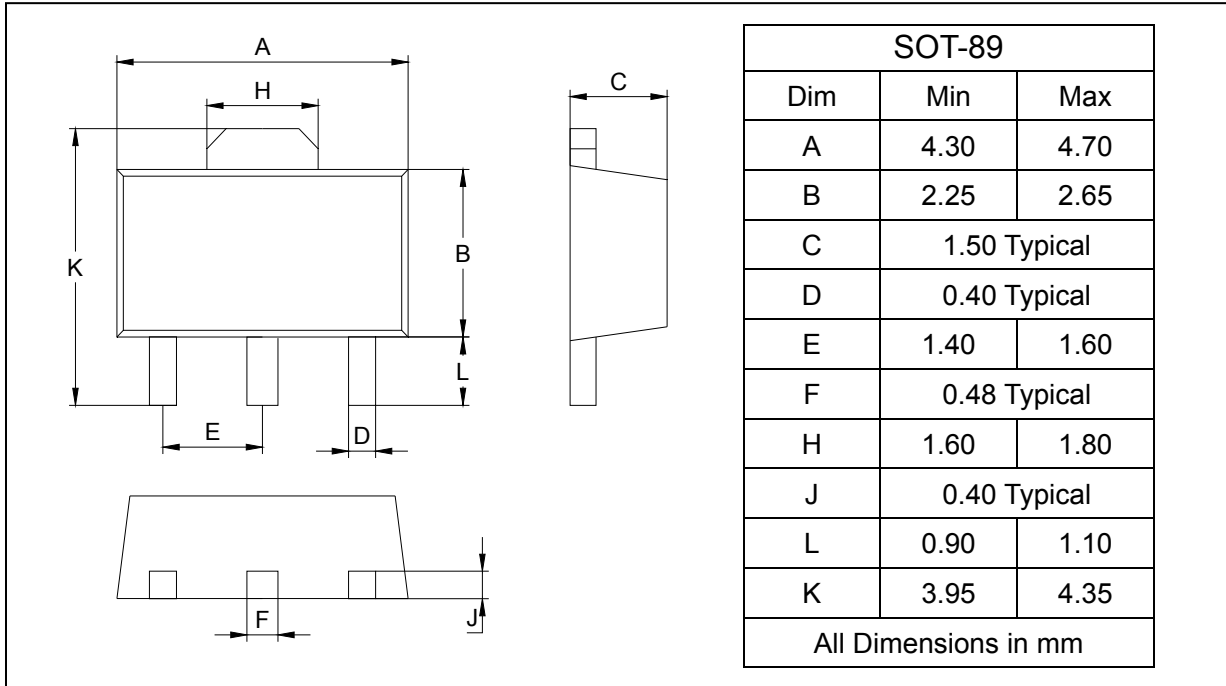
NPN Silicon Epitaxial Planar Transistor

A44

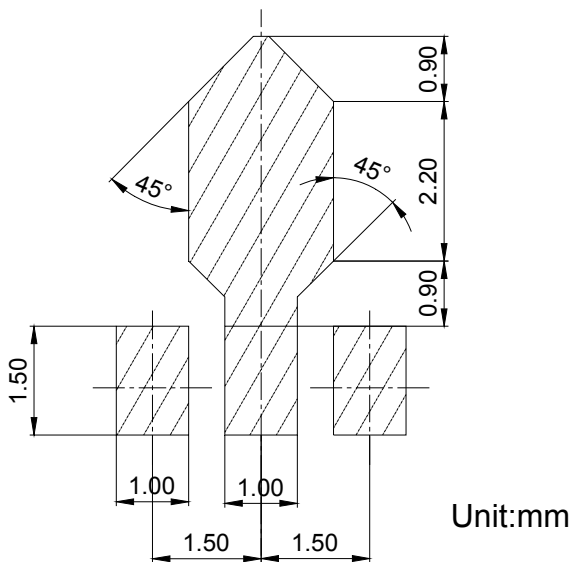
PACKAGE OUTLINE

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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