



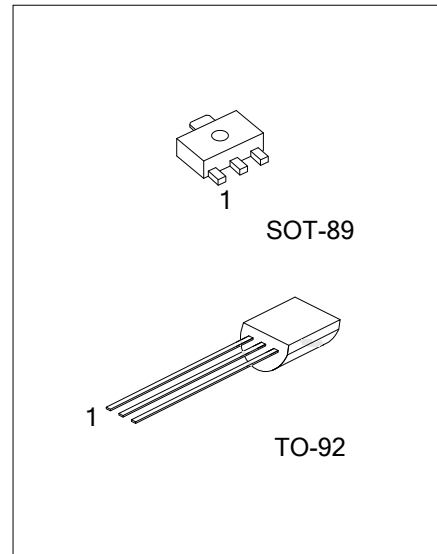
## MPSA94

## PNP SILICON TRANSISTOR

### HIGH VOLTAGE TRANSISTOR

#### FEATURES

- \* Collector-Emitter voltage:  $V_{CE0}=-400V$
- \* Low collector-Emitter saturation voltage



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MPSA94L-AB3-R	MPSA94G-AB3-R	SOT-89	B	C	E	Tape Reel
MPSA94L-T92-B	MPSA94G-T92-B	TO-92	E	B	C	Tape Box
MPSA94L-T92-K	MPSA94G-T92-K	TO-92	E	B	C	Bulk
MPSA94L-T92-R	MPSA94G-T92-R	TO-92	E	B	C	Tape Reel

Note: Pin Assignment: B: Base C: Collector E: Emitter

<p>MPSA94G-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) R: Tape Reel, B: Tape Box, K: Bulk (2) T92: TO-92, AB3: SOT-89 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

SOT-89	TO-92
<p>→ Date Code → L: Lead Free → G: Halogen Free</p>	<p>→ L: Lead Free → G: Halogen Free → Date Code</p>

■ **ABSOLUTE MAXIMUM RATING** (Operating temperature range applies unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	-400	V
Collector-Emitter Voltage	$V_{CEO}$	-400	V
Emitter-Base Voltage	$V_{EBO}$	-6	V
Collector Power Dissipation( $T_A=25^\circ\text{C}$ )	SOT-89	500	mW
	TO-92	625	mW
Collector Current	$I_C$	-300	mA
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +150	$^\circ\text{C}$

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.

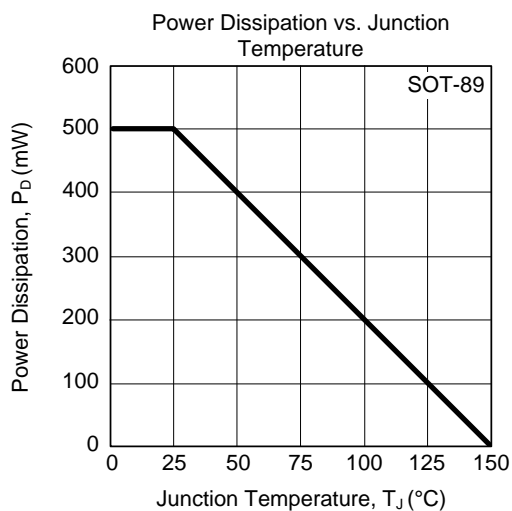
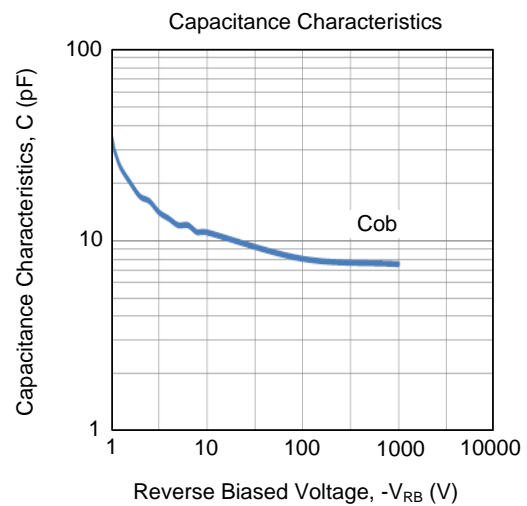
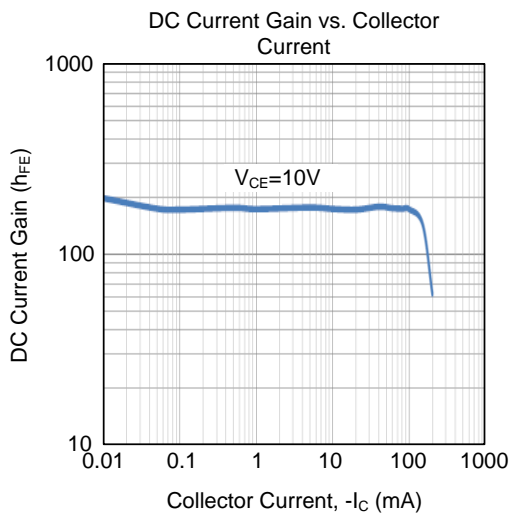
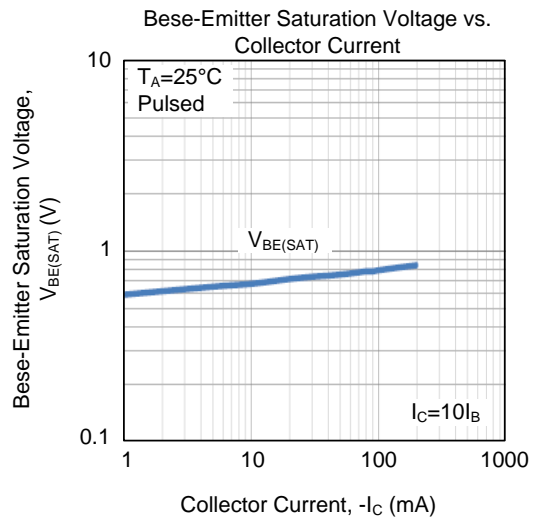
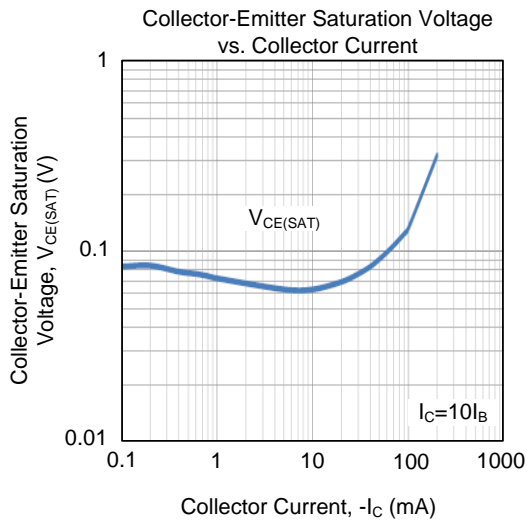
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ **ELECTRICAL CHARACTERISTICS** ( $T_J=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=-100\mu\text{A}, I_E=0$	-400			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-1\text{mA}, I_B=0$	-400			V
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$I_C=-100\mu\text{A}, V_{BE}=0$	-400			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-300\text{V}, I_E=0$			-100	nA
Collector Cut-off Current	$I_{CES}$	$V_{CE}=-400\text{V}, V_{BE}=0$			-1	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=-4\text{V}, I_C=0$			100	nA
DC Current Gain(note)	$h_{FE}$	$V_{CE}=-10\text{V}, I_C=-1\text{mA}$	60		300	
		$V_{CE}=-10\text{V}, I_C=-10\text{mA}$	70			
		$V_{CE}=-10\text{V}, I_C=-50\text{mA}$	70			
		$V_{CE}=-10\text{V}, I_C=-100\text{mA}$	40			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$ $I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.20 -0.5	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=-10\text{mA}, I_B=-1\text{mA}$			-0.75	V
Output Capacitance	$C_{ob}$	$V_{CB}=-20\text{V}, I_E=0, f=1\text{MHz}$			7	pF

Note: Pulse test: Pulse Width<300 $\mu\text{s}$ , Duty Cycle<2%.

## ■ TYPICAL CHARACTERISTICS



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