



MPSA92/93

PNP SILICON TRANSISTOR

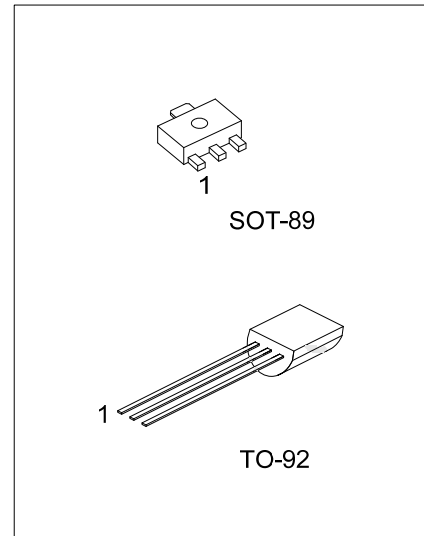
HIGH VOLTAGE PNP TRANSISTOR

■ DESCRIPTION

The UTC **MPSA92/93** are high voltage PNP transistors, designed for telephone signal switching and for high voltage amplifier.

■ FEATURES

- * High Collector-Emitter voltage:
 - V_{CEO}=-300V (UTC **MPSA92**)
 - V_{CEO}=-200V (UTC **MPSA93**)
- * Collector Dissipation:
 - P_{C(max)}=625mW



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MPSA92L-AB3-R	MPSA92G-AB3-R	SOT-89	B	C	E	Tape Reel
MPSA92L-T92-B	MPSA92G-T92-B	TO-92	E	B	C	Tape Box
MPSA92L-T92-K	MPSA92G-T92-K	TO-92	E	B	C	Bulk
MPSA93L-AB3-R	MPSA93G-AB3-R	SOT-89	B	C	E	Tape Reel
MPSA93L-T92-B	MPSA93G-T92-B	TO-92	E	B	C	Tape Box
MPSA93L-T92-K	MPSA93G-T92-K	TO-92	E	B	C	Bulk

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

<p>MPSA92L-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Lead Free</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, T92: TO-92 (3) L: Lead Free, G: Halogen Free</p>
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■ MARKING

Package	MPSA92	MPSA93
SOT-89		
TO-92		

■ ABSOLUTE MAXIMUM RATING ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage	MPSA92	V_{CBO}	-300	V
	MPSA93		-200	V
Collector-Emitter Voltage	MPSA92	V_{CEO}	-300	V
	MPSA93		-200	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current		I_C	-500	mA
Collector Dissipation	SOT-89	P_C	0.5	W
	TO-92		0.62	W
Junction Temperature		T_J	150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-55~ +150	$^{\circ}\text{C}$

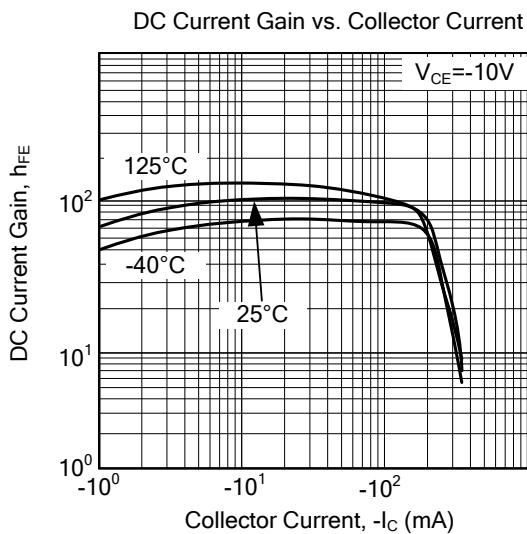
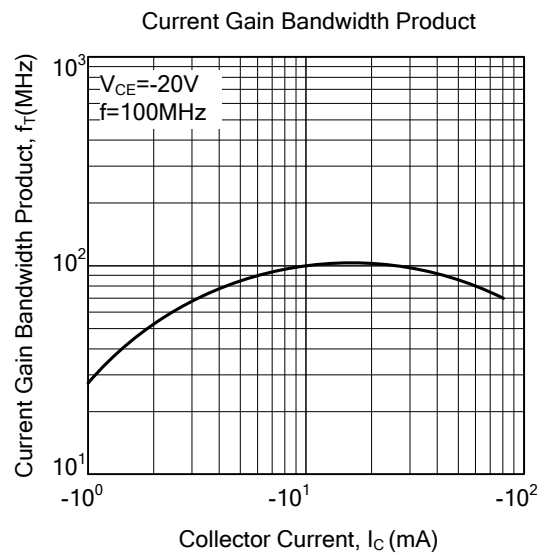
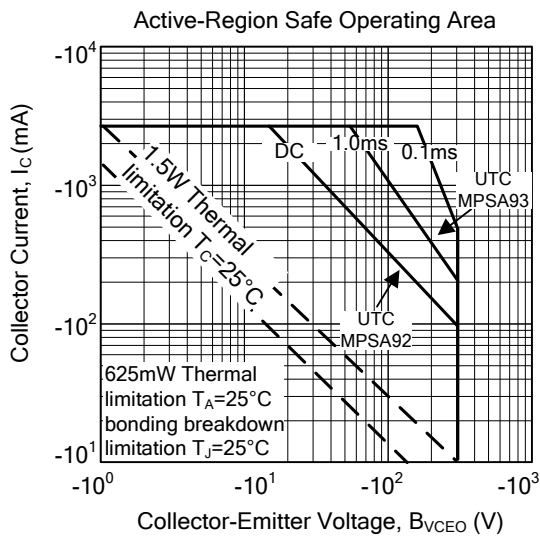
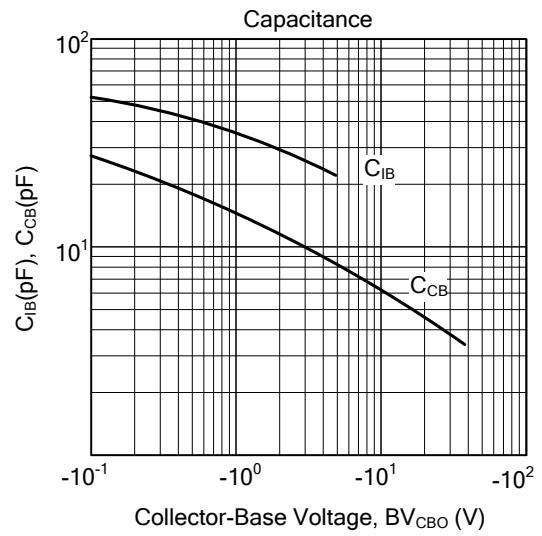
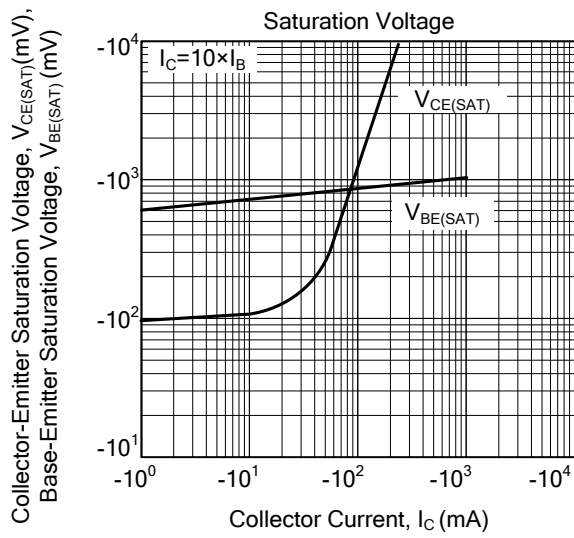
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

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

PARAMETER		SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS							
Collector-Base Breakdown Voltage	MPSA92	BV_{CBO}	$I_C=-100\mu\text{A}, I_E=0$	-300			V
	MPSA93			-200			V
Collector-Emitter Breakdown Voltage	MPSA92	BV_{CEO}	$I_C=-1\text{mA}, I_B=0$	-300			V
	MPSA93			-200			V
Emitter-Base Breakdown Voltage		BV_{EBO}	$I_E=-100\mu\text{A}, I_C=0$	-5			V
Collector Cut-Off Current	MPSA92	I_{CBO}	$V_{CB}=-200\text{V}, I_E=0$			-0.25	μA
	MPSA93					-0.25	μA
Emitter Cut-Off Current		I_{EBO}	$V_{EB}=-3\text{V}, I_C=0$			-0.10	μA
ON CHARACTERISTICS							
DC Current Gain(note)		h_{FE}	$V_{CE}=-10\text{V}, I_C=-1\text{mA}$ $V_{CE}=-10\text{V}, I_C=-10\text{mA}$ $V_{CE}=-10\text{V}, I_C=-30\text{mA}$	60			
				80			
				80			
Collector-Emitter Saturation Voltage		$V_{CE(SAT)}$	$I_C=-20\text{mA}, I_B=-2\text{mA}$			-0.5	V
Base-Emitter Saturation Voltage		$V_{BE(SAT)}$	$I_C=-20\text{mA}, I_B=-2\text{mA}$			-0.90	V
SMALL SIGNAL CHARACTERISTICS							
Current Gain Bandwidth Product		f_T	$V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	50			MHz
Output Capacitance	MPSA92	C_{ob}	$V_{CB}=-20\text{V}, I_E=0, f=1\text{MHz}$			6	pF
	MPSA93					8	pF

Note: Pulse test: $P_W < 300\mu\text{s}$, Duty Cycle $< 2\%$, $V_{CE(SAT)} < 200\text{mV}$

TYPICAL CHARACTERISTICS



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