

**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

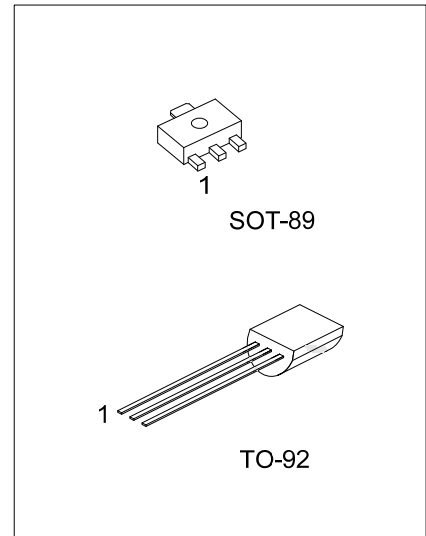
* High Collector-Emitter voltage:

– 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
MPSA93L-AB3-R	MPSA93G-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
MPSA92L-T92-R	MPSA92G-T92-R	TO-92	E	B	C	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
MPSA93L-T92-R	MPSA93G-T92-R	TO-92	E	B	C	Tape Reel

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

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

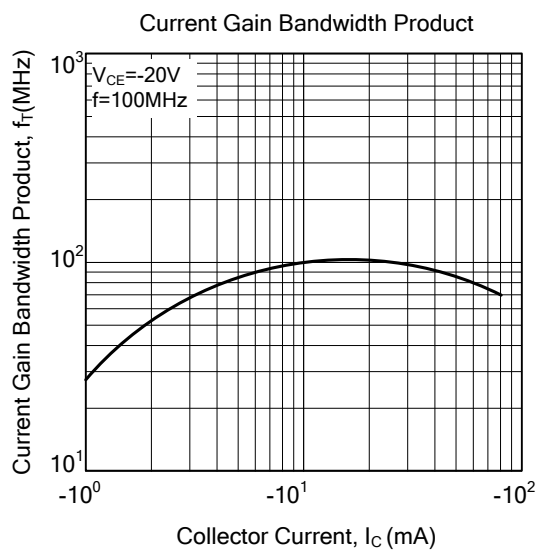
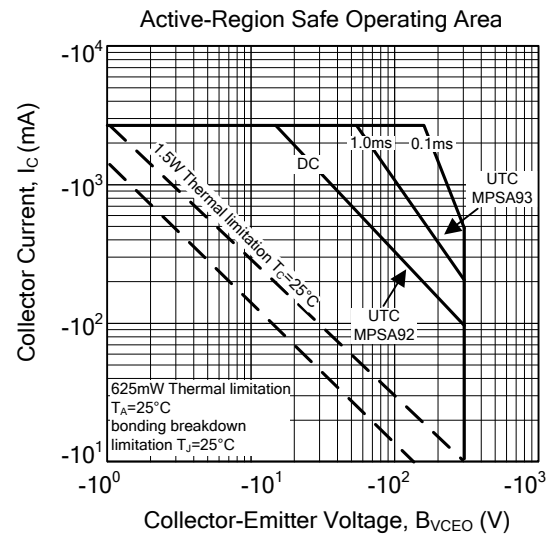
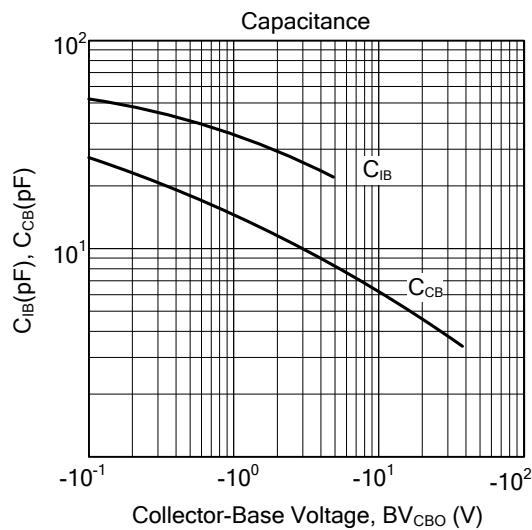
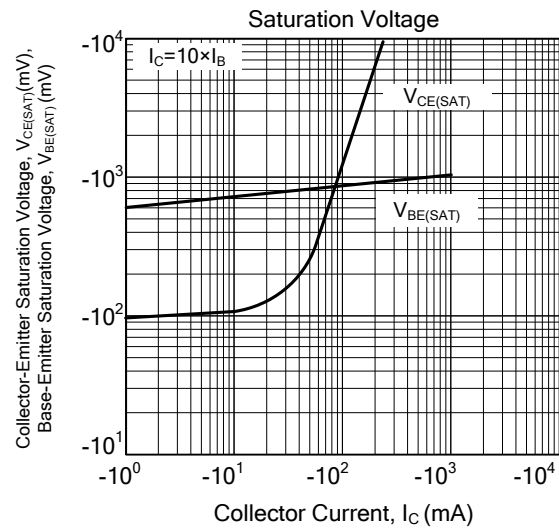
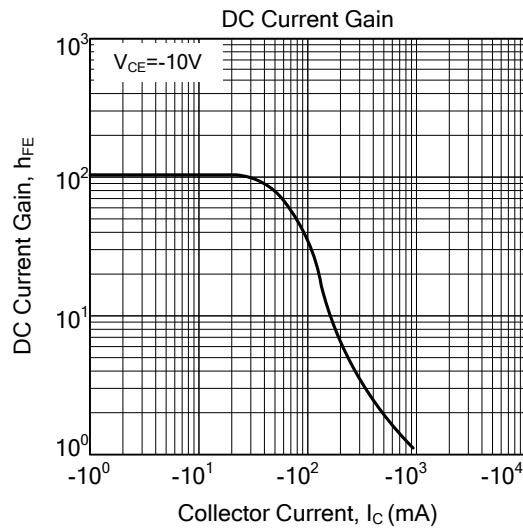
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ 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 =-100μA, I _E =0	-300			V
	MPSA93			-200			V
Collector-Emitter Breakdown Voltage	MPSA92	BV _{CEO}	I _C =-1mA, I _B =0	-300			V
	MPSA93			-200			V
Emitter-Base Breakdown Voltage		BV _{EBO}	I _E =-100μA, I _C =0	-5			V
Collector Cut-Off Current	MPSA92	I _{CBO}	V _{CB} =-200V, I _E =0			-0.25	μA
	MPSA93					-0.25	μA
Emitter Cut-Off Current		I _{EBO}	V _{EB} =-3V, I _C =0			-0.10	μA
ON CHARACTERISTICS							
DC Current Gain(note)		h _{FE}	V _{CE} =-10V, I _C =-1mA	60			
			V _{CE} =-10V, I _C =-10mA	80			
			V _{CE} =-10V, I _C =-30mA	80			
Collector-Emitter Saturation Voltage		V _{CE(SAT)}	I _C =-20mA, I _B =-2mA			-0.5	V
Base-Emitter Saturation Voltage		V _{BE(SAT)}	I _C =-20mA, I _B =-2mA			-0.90	V
SMALL SIGNAL CHARACTERISTICS							
Current Gain Bandwidth Product		f _T	V _{CE} =-20V, I _C =-10mA, f=100MHz	50			MHz
Output Capacitance	MPSA92	C _{ob}	V _{CB} =-20V, I _E =0, f=1MHz			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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