



MPSA92/93

PNP SILICON TRANSISTOR

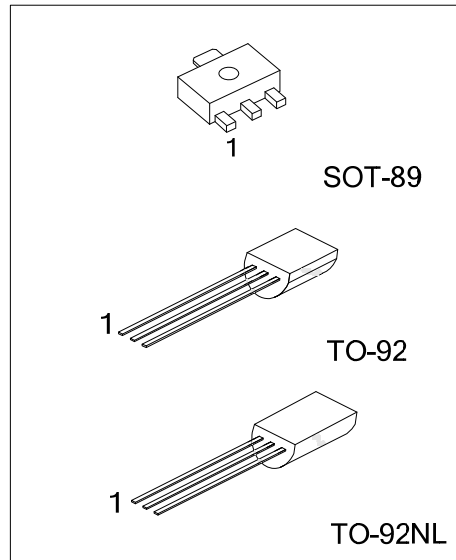
HIGH VOLTAGE PNP TRANSISTOR

■ 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



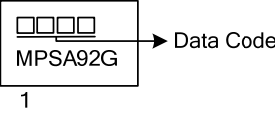
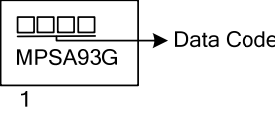
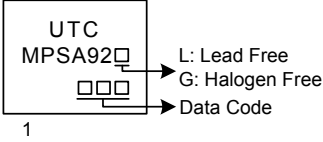
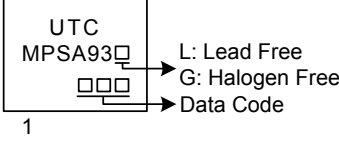
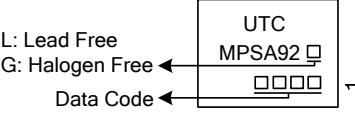
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
-	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
MPSA92L-T9N-B	MPSA92G-T9N-B	TO-92NL	E	B	C	Tape Box
MPSA92L-T9N-K	MPSA92G-T9N-K	TO-92NL	E	B	C	Bulk
-	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>MPSA92G-AB3-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel</p> <p>(2) AB3: SOT-89, T92: TO-92, T9N: TO-92NL</p> <p>(3) L: Lead Free, G: Halogen Free and Lead Free</p>
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MARKING

Package	MPSA92	MPSA93
SOT-89		
TO-92		
TO-92NL		-

■ ABSOLUTE MAXIMUM RATING (T_A=25°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/TO-92NL		0.62	W
Junction Temperature		T _J	150	°C
Storage Temperature		T _{STG}	-55~ +150	°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.

■ THERMAL DATA

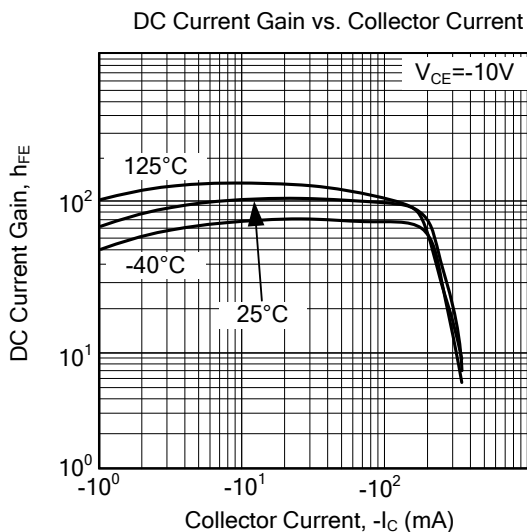
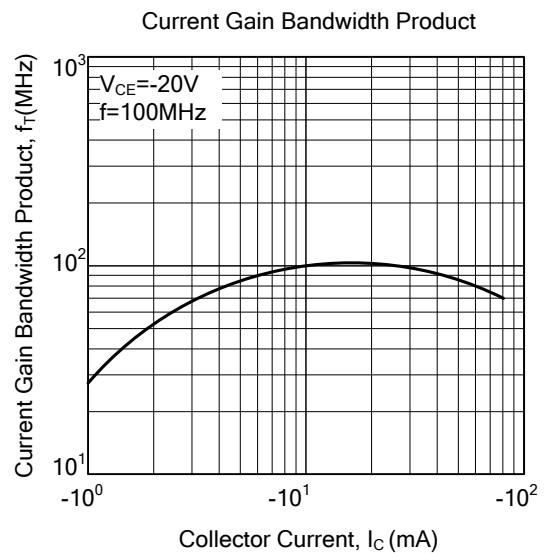
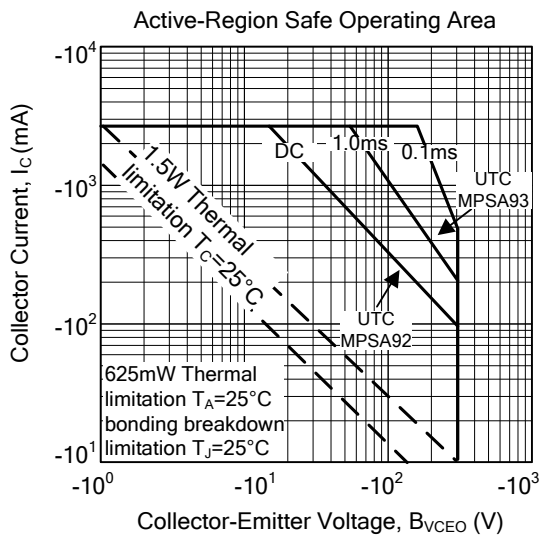
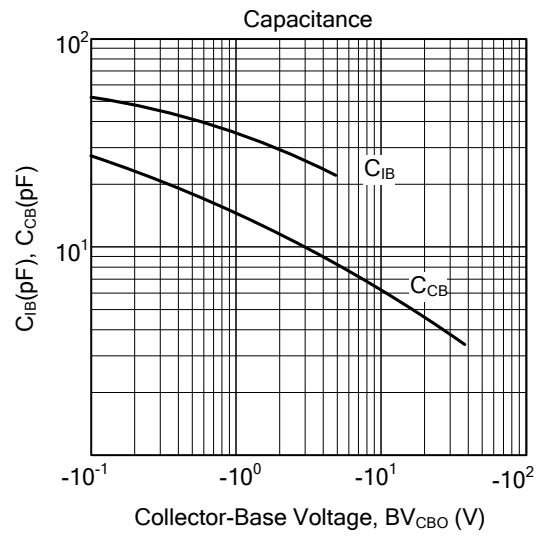
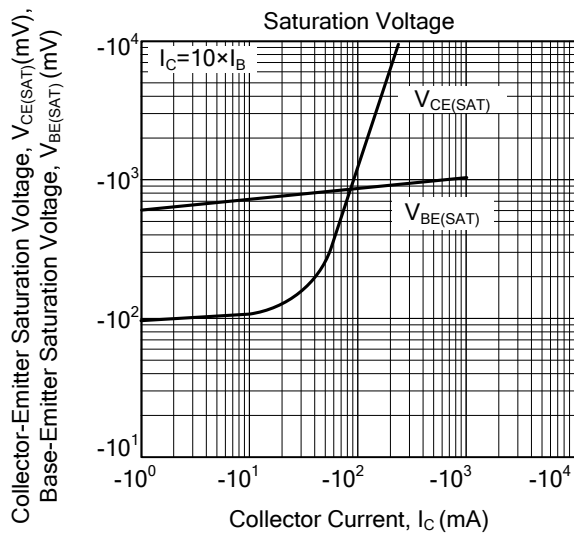
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-89	θ _{JA}	250	°C/W
	TO-92/TO-92NL		200	°C/W
Junction to Case	SOT-89	θ _{JC}	43	°C/W
	TO-92/TO-92NL		83.3	°C/W

■ ELECTRICAL CHARACTERISTICS (T_A=25°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<300μs, Duty Cycle<2%, V_{CE(SAT)}<200mV

TYPICAL CHARACTERISTICS



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