



MPSA14

NPN SILICON TRANSISTOR

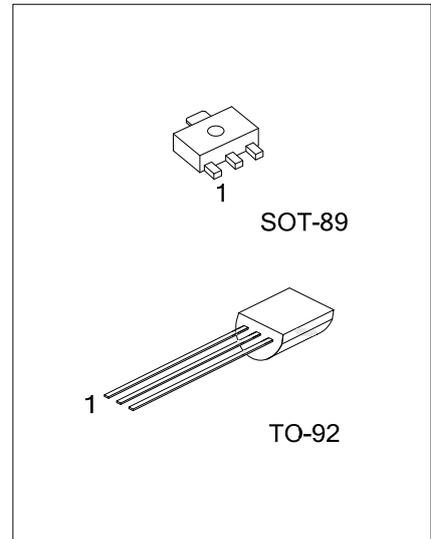
DARLINGTON TRANSISTOR

■ DESCRIPTION

The UTC **MPSA14** is a Darlington transistor.

■ FEATURES

- * Collector-Emitter Voltage: $V_{CES} = 30V$
- * Collector Dissipation: $P_c(max) = 625mW$



■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MPSA14L-AB3-R	MPSA14G-AB3-R	SOT-89	B	C	E	Tape Reel
MPSA14L-T92-K	MPSA14G-T92-K	TO-92	E	B	C	Bulk
MPSA14L-T92-B	MPSA14G-T92-B	TO-92	E	B	C	Tape Box

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

<p>MPSA14G-AB3-R</p> <p>(1)Packing Type (2)Package Type (3)Green Package</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel (2) AB3: SOT-89, T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-89	TO-92

■ ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified.)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CES}	30	V
Emitter-Base Voltage	V_{EBO}	10	V
Collector Dissipation ($T_A=25^\circ\text{C}$)	P_C	625	mW
Collector Current	I_C	500	mA
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 ($T_J=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_C=100\mu\text{A}$, $I_B=0$	30			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30\text{V}$, $I_E=0$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=10\text{V}$, $I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$	20000			
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=0.1\text{mA}$			1.5	V
Base-Emitter on Voltage	$V_{BE(on)}$	$V_{CE}=5\text{V}$, $I_C=100\text{mA}$			2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5\text{V}$, $I_C=10\text{mA}$, $f=100\text{MHz}$	125			MHz

Note: Pulse test: Pulse Width<300 μs , Duty Cycle=2%.

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