



MPSA13

NPN EPITAXIAL SILICON TRANSISTOR

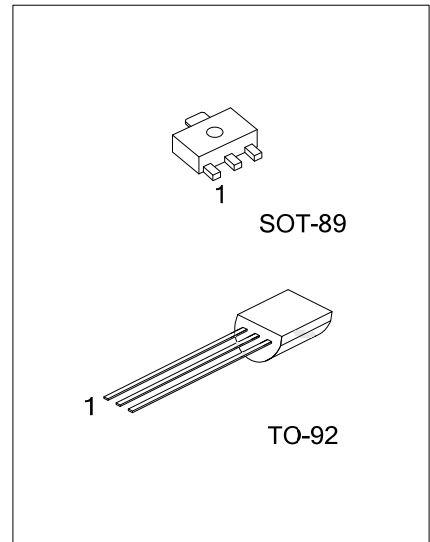
DARLINGTON TRANSISTOR

■ DESCRIPTION

The UTC **MPSA13** is a Darlington transistor.

■ FEATURES

* Collector-Emitter Voltage: $V_{CES} = 30V$



■ ORDERING INFORMATION

Order Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
MPSA13-AB3-R	MPSA13L-AB3-R	MPSA13G-AB3-R	SOT-89	E	C	B	Tape Reel
MPSA13-T92-B	MPSA13L-T92-B	MPSA13G-T92-B	TO-92	E	B	C	Tape Box
MPSA13-T92-K	MPSA13L-T92-K	MPSA13G-T92-K	TO-92	E	B	C	Bulk

Note: Pin assignment: E: EMITTER, C: COLLECTOR, B: BASE

<p>MPSA13L-AB3-R</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Lead Free</p>	<p>(1) B: Tape Box, K: Bulk, R: Tape Reel</p> <p>(2) AB3: SOT-89, T92: TO-92</p> <p>(3) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING (Ta=25°C, 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 Current	I_C	500	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	125	°C
Storage Temperature	T_{STG}	-40 ~ +150	°C

Note: 1. 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 (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Emitter Breakdown Voltage	BV_{CES}	$I_C=100\mu A, I_B=0$	30			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=30V, I_E=0$			100	nA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=10V, I_C=0$			100	nA
DC Current Gain	h_{FE}	$V_{CE}=5V, I_C=100mA$	10000			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=100mA, I_B=0.1mA$			1.5	V
Base-Emitter on Voltage	$V_{BE(ON)}$	$V_{CE}=5V, I_C=100mA$			2.0	V
Current Gain Bandwidth Product	f_T	$V_{CE}=5V, I_C=10mA, f=100MHz$	125			MHz

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

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