



## MMBTA63-64

## PNP SILICON TRANSISTOR

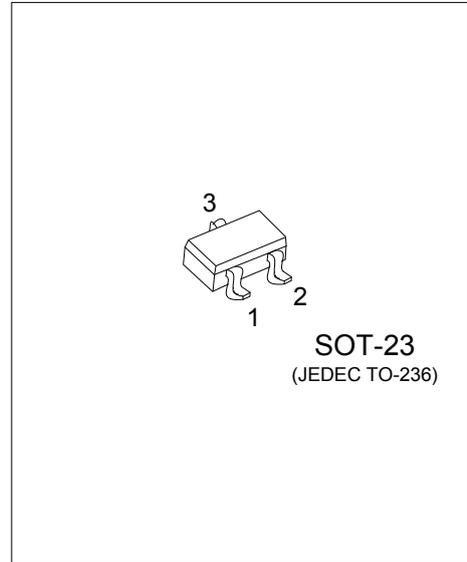
### DARLINGTON TRANSISTOR

#### DESCRIPTION

The UTC **MMBTA63-64** is a Darlington transistor.

#### FEATURES

- \* Collector-Emitter Voltage:  $V_{CES} = -30V$
- \* Collector current up to  $-1.2A$
- \* Collector Dissipation:  $P_C = 625\text{ mW}$



#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MMBTA63L-AE3-R	MMBTA63G-AE3-R	SOT-23	B	E	C	Tape Reel
MMBTA64L-AE3-R	MMBTA64G-AE3-R	SOT-23	B	E	C	Tape Reel

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

<p>MMBTA63G-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL3: SOT-323 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

MMBTA63	MMBTA64
<p>6P → L: Lead Free G: Halogen Free</p>	<p>4P → L: Lead Free G: Halogen Free</p>

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### ■ ABSOLUTE MAXIMUM RATING ( $T_A=25^\circ\text{C}$ , 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 Dissipation ( $T_C=25^\circ\text{C}$ )	$P_C$	350	mW
Collector Current	$I_C$	-1.2	A
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +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
Collector-Emitter Breakdown Voltage	$BV_{CES}$	$I_C=-100\mu\text{A}$ , $I_B=0$	-30			V
Collector CutOff Current	$I_{CBO}$	$V_{CB}=-30\text{V}$ , $I_E=0$			-100	nA
Emitter CutOff Current	$I_{EBO}$	$V_{EB}=-10\text{V}$ , $I_C=0$			-100	nA
DC Current Gain	MMBTA63	$V_{CE}=-5\text{V}$ , $I_C=-10\text{mA}$	5000			
	MMBTA64		10000			
	MMBTA63	$V_{CE}=-5\text{V}$ , $I_C=-100\text{mA}$	10000			
	MMBTA64		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 $\mu\text{s}$ , Duty Cycle < 2%.

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