



## PUMZ1

Preliminary

NPN/PNP SILICON TRANSISTOR

### NPN/PNP GENERAL PURPOSE TRANSISTORS

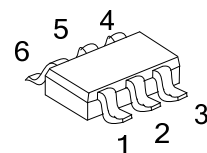
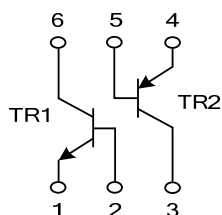
#### DESCRIPTION

The UTC **PUMZ1** is a NPN/PNP transistor, specially used in general purpose of switching and amplifying applications. Thus, two NPN/PNP transistors are operated independently in an SOT-363 package.

#### FEATURES

- \* Low Current: 100mA (MAX.)
- \* Low Voltage: 40V (MAX.)
- \* Less Number of Components And Boardspace Required

#### SYMBOL



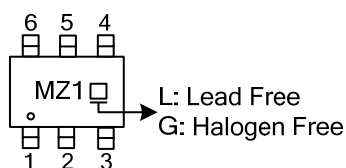
SOT-363

#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
PUMZ1L-AL6-R	PUMZ1G-AL6-R	SOT-363	E1	B1	C2	E2	B2	C1	Tape Reel

<p>PUMZ1G-AL6-R</p> <ul style="list-style-type: none"><li>(1) Packing Type</li><li>(2) Package Type</li><li>(3) Halogen Free</li></ul>	<p>(1) R: Tape Reel</p> <p>(2) AL6: SOT-363</p> <p>(3) G: Halogen Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

PARAMETER	SYMBOL	RATINGS	UNIT
<b>Per Transistor; For The PNP Transistor With Negative Polarity</b>			
Collector- Base Voltage	$V_{CBO}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	40	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current (DC)	$I_C$	100	mA
Peak Collector Current	$I_{CM}$	200	mA
Total Power Dissipation	$P_D$	300	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

Notes: 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.

2. Device mounted on an FR4 printed-circuit board.

■ THERMAL DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	416	K/W

Note: Device mounted on an FR4 printed-circuit board.

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$  unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>Per Transistor; For The PNP Transistor With Negative Polarity</b>						
Collect Cut-off Current	$I_{CBO}$	$V_{CB}=30\text{V}, I_E=0$			100	nA
		$V_{CB}=30\text{V}, I_E=0, T_J=150^\circ\text{C}$			10	$\mu\text{A}$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=4\text{V}, I_C=0$			100	nA
DC Current Gain	$h_{FE}$	$V_{CE}=6\text{V}, I_C=1\text{mA}$	120			
Collector-Emitter Saturation Voltage(Note)	$V_{CE(SAT)}$	$I_C=50\text{mA}, I_B=5\text{mA}$			200	mV
Collector Capacitance	TR1	$I_E=i_e=0; V_{CB}=12\text{V}; f=1\text{MHz}$			1.5	pF
	TR2				2.2	pF
Transition Frequency	$f_T$	$V_{CE}=12\text{V}, I_C=2\text{mA}, f=100\text{MHz}$	100			MHz

Note: Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

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