



## AZ23C

Preliminary

DIODE

### VOLTAGE REGULATOR DOUBLE DIODES

#### DESCRIPTION

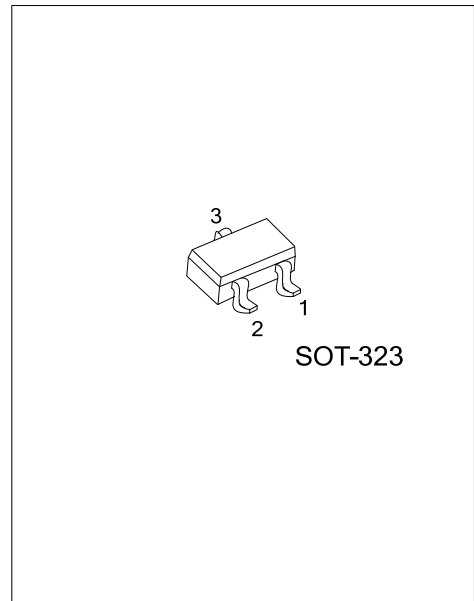
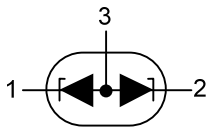
The UTC **AZ23C** is a voltage regulator double diode, it uses UTC's advanced technology to provide the customers with low leakage current.

The UTC **AZ23C** is suitable for ESD and surge protection.

#### FEATURES

\* Low leakage current

#### SYMBOL



#### ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
AZ23CXXXG-AL3-R	SOT-323	K	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>AZ23CXXXG-AL3-R</p>	<p>(1) R: Tape Reel (2) AL3: SOT-323 (3) G: Halogen Free and Lead Free (4) refer to ELECTRICAL CHARACTERISTICS</p>
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#### MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-323	5.1: 5.1V	Voltage Code

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

PARAMETER	TST CONDITIONS	SYMBOL	RATINGS	UNIT
Continuous Forward Current		$I_F$	200	mA
On-Repetitive Peak Reverse Current	$t_p=100\mu\text{s}$ , square wave, $T_A=25\text{ }^\circ\text{C}$ , prior to surge	$I_{ZSM}$	See TABLE 1	
Total Power Dissipation (Note 1)	$T_A=25\text{ }^\circ\text{C}$ , 2 diodes loaded	$P_D$	350	mW
	$T_A=25\text{ }^\circ\text{C}$ , 1 diode loaded		180	mW
Non-Repetitive Peak Reverse Dissipation	$t_p=100\mu\text{s}$ , square wave, $T_A=25\text{ }^\circ\text{C}$ , prior to surge	$P_{ZSM}$	40	W
Operating Junction Temperature		$T_J$	150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-65~+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 CHARACTERISTICS

PARAMETER	SYMBOL	TST CONDITIONS	RATINGS	UNIT
Junction to Ambient	$\theta_{JA}$	2 diodes loaded (Note 2)	355	K/W
		1 diodes loaded (Note 2)	680	K/W

Notes: 1. Solder points on cathode tabs.

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

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

Device	Marking Code	Nominal Zener Voltage			Max Zener Impedance				Diode CAP. $C_d$ (pF)	Non-Rep etitive Peak Reverse Curren $I_{ZSM}(A)$	Max Reverse Leakage Current ( $\mu A$ )	
		$V_Z @ I_{ZT}$ (V)			$ZZT @ I_{ZT}$		$ZZT @ I_{ZT}$				f=1 MHz, $V_R=0V$	$t_p=100\mu\text{s}$ $T_A=25\text{ }^\circ\text{C}$
		MIN	TYP	MAX	( $\Omega$ )	(mA)	( $\Omega$ )	(mA)	MAX	MAX		
AZ23C5V1	5.1	4.8	5.1	5.4	480	1	60	5	300	6.0	2	2

Note: Short duration pulse test used to minimize self-heating effect.

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