



## UZ18C

Preliminary

TVS

### 18-FOLD ESD TRANSIENT VOLTAGE SUPPRESSOR

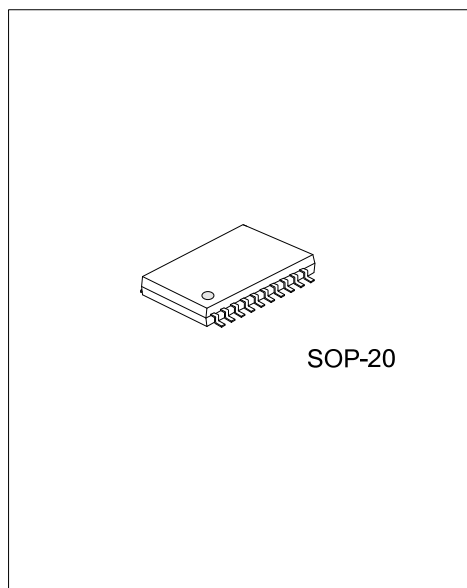
#### DESCRIPTION

The UTC **UZ18C** is Transient Voltage Suppressors. it uses UTC's advanced technology to provide customers with low leakage current, etc

The UTC **UZ18C** is suitable for Computers, Printers–Business machines and Medical equipment, etc.

#### FEATURES

- \* Working voltage: typ. 6.8V
- \* Forward voltage: max. 1.3V
- \* Maximum reverse peak power dissipation: 27.5W at tp=1ms
- \* Maximum clamping voltage at peak pulse current: 11V at 2.5A
- \* Low leakage current: max. 2μA
- \* ESD rating > 8kV, according IEC 801-2.



#### ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UZ18CXXXL-S20-R	UZ18CXXXG-S20-R	SOP-20	Tape Reel

UZ18CXXXG-S20-R	(1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) S20: SOP-20 (3) G: Halogen Free and Lead Free, L: Lead Free
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PACKAGE	VOLTAGE CODE	MARKING
SOP-20	6V8: 6.8V	<p>Diagram illustrating the marking layout for the SOP-20 package. The package is shown with pins 1 through 10 on the bottom and 20 through 11 on the top. The marking layout includes:</p> <ul style="list-style-type: none"> <li><b>Date Code:</b> Indicated by an arrow pointing to the top right area.</li> <li><b>L: Lead Free:</b> Indicated by an arrow pointing to the top right area.</li> <li><b>G: Halogen Free:</b> Indicated by an arrow pointing to the top right area.</li> <li><b>Lot Code:</b> Indicated by an arrow pointing to the bottom right area.</li> <li><b>Voltage Code:</b> Indicated by an arrow pointing to the '6V8' marking near pin 1.</li> </ul>

K1	1	20	K18
K2	2	19	K17
K3	3	18	K16
K4	4	17	K15
K5	5	16	A2
A1	6	15	K14
K6	7	14	K13
K7	8	13	K12
K8	9	12	K11
K9	10	11	K10

PIN NO.	PIN NAME	DESCRIPTION
1~5	K1~K5	cathode
6, 16	A1, A2	common anode
7~15	K6~K14	cathode
17~20	K15~K18	cathode

## ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	TEST CONDITIONS	RATINGS	UNIT
Working Current	$I_Z$		Note 2	mA
Continuous Forward Current	$I_F$		200	mA
Non-Repetitive Peak Forward Current	$I_{FSM}$	$t_p=1\text{ms}$ , square pulse	4	A
Non-Repetitive Peak Reverse Current	$I_{ZSM}$	$t_p=1\text{ms}$ , square pulse	2.5	A
Power Dissipation	$P_D$	$T_A=25^\circ\text{C}$ (Note 3)	1.25	W
		$T_S=60^\circ\text{C}$ (Note 4)	1.6	W
Non-Repetitive Peak Reverse Power Dissipation	$P_{ZSM}$	$t_p=1\text{ms}$ , square pulse	27.5	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. DC working current limited by  $P_D$  max.

3. One or more diodes loaded; device mounted on a printed-circuit board with  $R_{\theta A-S}=43.5\text{K/W}$ .

4. One or more diodes loaded;  $T_S$  is the temperature at the soldering point.

## ■ THERMAL DATA

PARAMETER	SYMBOL	TEST CONDITIONS	RATING	UNIT
Junction to Ambient	$\theta_{JA}$	One or more diodes loaded	56.5	K/W
Junction to Case	$\theta_{JC}$		100	K/W

## ■ ELECTRICAL CHARACTERISTICS

### For UZ18C6V8

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Working Voltage	$V_Z$	$I_Z=5\text{mA}$	6.4	6.8	7.2	V
Forward Voltage	$V_F$	$I_F=200\text{mA}$			1.3	V
Non-Repetitive Peak Reverse Voltage	$V_{ZSM}$	$t_p=1\text{ms}$ , $I_{ZSM}=2.5\text{A}$			11	V
Reverse Current	$I_R$	$V_R=5.25\text{V}$			2	$\mu\text{A}$
Differential Resistance	$r_{dif}$	$I_Z=1\text{mA}$			40	$\Omega$
		$I_Z=5\text{mA}$			8	$\Omega$
Temperature Coefficient Of Working Voltage	$S_Z$	$I_Z=5\text{mA}$		3		mV/K
Diode Capacitance	$C_d$	$V_R=0$ , $f=1\text{MHz}$			120	pF
		$V_R=5.25\text{V}$ , $f=1\text{MHz}$			60	pF

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