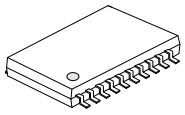
UZ18C6V8

TVS

18-FOLD ESD TRANSIENT VOLTAGE SUPPRESSOR



SOP-20

■ DESCRIPTION

The UTC **UZ18C6V8** is transient voltage suppressors. it uses UTC's advanced technology to provide customers with low leakage current, etc

The UTC **UZ18C6V8** is suitable for computers, printers, business machines and medical equipment, etc.

■ FEATURES

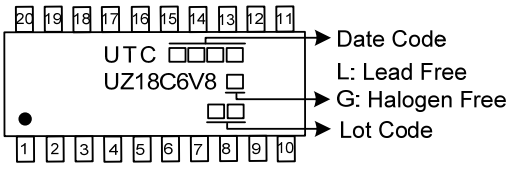
* Working voltage: typ. 6.8V
* Forward voltage: max. 1.3V
* Maximum reverse peak power dissipation: 27.5W at tp=1ms
* Maximum clamping voltage at peak pulse current: 11V at 2.5A
* Low leakage current: max. 2μA
* ESD rating > 8kV, according IEC 801-2.

■ ORDERING INFORMATION

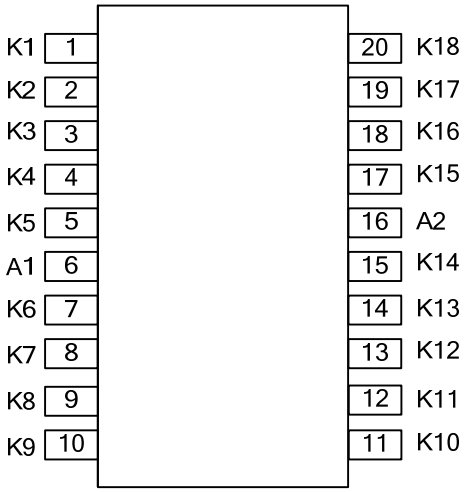
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UZ18C6V8L-S20-R	UZ18C6V8G-S20-R	SOP-20	Tape Reel

UZ18C6V8G-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

■ MARKING



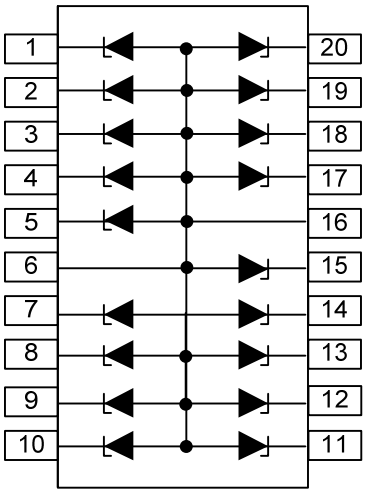
■ PIN CONFIGURATION



■ PIN DESCRIPTION

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

■ BLOCK DIAGRAM



■ 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=1ms, square pulse	4	A
Non-Repetitive Peak Reverse Current	I_{ZSM}	t_p=1ms, square pulse	2.5	A
Power Dissipation	P_D	T_A=25°C (Note 3)	1.25	W
		T_S=60°C (Note 4)	1.6	W
Non-Repetitive Peak Reverse Power Dissipation	P_{ZSM}	tp=1ms, square pulse	27.5	W
Operating Junction Temperature	T_J		+150	°C
Storage Temperature	T_{STG}		-65 ~ +150	°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 $R_{\theta A\text{-}S}$=43.5K/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	θ_{JA}		100	K/W
Junction to Soldering Point	θ_{JS}	One or more diodes loaded	56.5	K/W

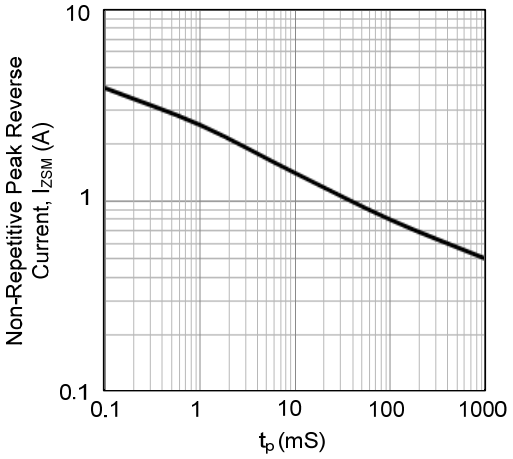
■ ELECTRICAL CHARACTERISTICS

For UZ18C6V86V8

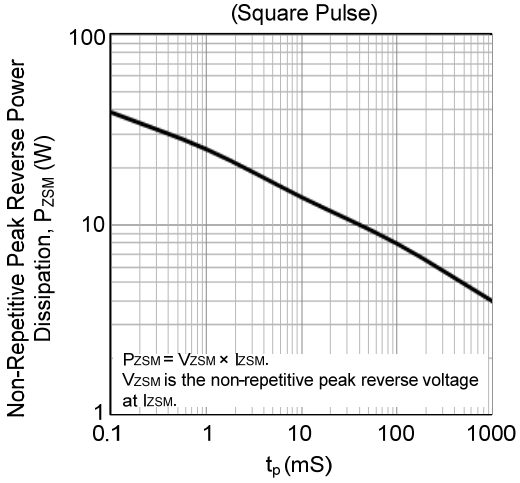
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Working Voltage	V_Z	I_Z=5mA	6.4	6.8	7.2	V
Forward Voltage	V_F	I_F=200mA			1.3	V
Non-Repetitive Peak Reverse Voltage	V_{ZSM}	t_p=1ms, I_{ZSM}=2.5A			11	V
Reverse Current	I_R	V_R=5.25V			2	μA
Differential Resistance	r_{dif}	I_Z=1mA			40	Ω
		I_Z=5mA			8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

■ TYPICAL CHARACTERISTICS

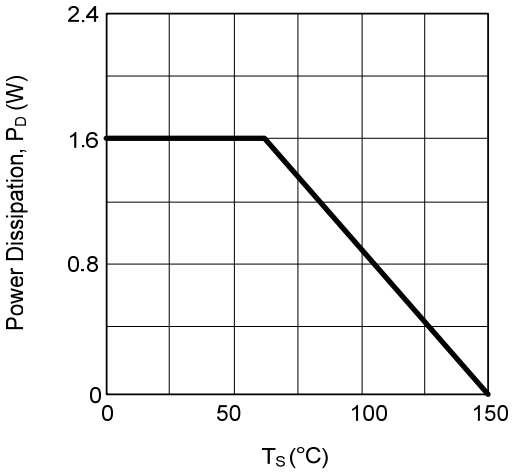
Maximum Non-Repetitive Peak Reverse Current as a Function of Pulse Time



Maximum Non-Repetitive Peak Reverse Power Dissipation as a Function of Pulse Duration (Square Pulse)



Power Dissipation Curve



Diode capacitance as a function of reverse voltage; typical values