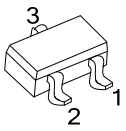
ESD6V2S1B

Preliminary ***TVS DIODE***

ULTRA LOW CLAMPING BI-DIRECTIONAL ESD TRANSIENT PROTECTION DIODE



SOT-323

■ DESCRIPTION

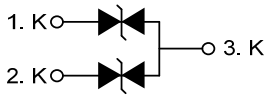
The UTC **ESD6V2S1B** is ultra-low clamping ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **ESD6V2S1B** is suitable for ESD protection and high density boards.

■ FEATURES

* Bi-directional, symmetrical working voltage
* Ultra low clamping voltage
* Ultra low dynamic resistance

■ SYMBOL



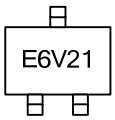
■ ORDERING INFORMATION

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
ESD6V2S1BG-AL3-R	SOT-323	K	K	K	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

ESD6V2S1BL-AL3-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AL3 : SOT-323 (3) G: Halogen Free and Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER			SYMBOL	RATINGS	UNIT
ESD Discharge	IEC61000-4-2	Contact Discharge	V_{ESD}	30	kV
Peak Pulse current (t_P=8/20 μs)			I_{PP}	8.0	A
Operating Junction Temperature			T_J	125	°C
Operating Temperature (Note 2)			T_{OPR}	-40 ~ +125	°C
Storage Temperature			T_{STG}	-55 ~ +150	°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°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse working voltage	V_{RMW}		-6.2		6.2	V
Reverse current	I_R	V_R=6.2V		1.0	100	nA
Line capacitance	C_L	V_R=0V. f=1MHz		5.0	10	pF
Clamping voltage	V_{CL}	I_{PP}=16A, t_P=100ns		12		V
		I_{PP}=30A, t_P=100ns		14		V
		I_{PP}=-1A, t_P=8/20 μs		8.0		V
		I_{PP}=8A, t_P=8/20 μs		11		V
Dynamic resistance (Note 1)	R_{DYN}			0.13		Ω

Note: Z0=50Ω, t_P=100ns, t_R=300ps, averaging window: t_1=30ns to t_2=60ns, extraction of dynamic resistance using least squares fit of TLP charactertistics between I_{PP1}=10A and I_{PP2}=40A.