



ESD5V0L1B

Preliminary

TVS DIODE

ULTRA LOW CLAMPING BI-DIRECTIONAL ESD TRANSIENT PROTECTION DIODE

DESCRIPTION

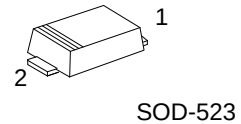
The UTC **ESD5V0L1B** is ultra-low clamping ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **ESD5V0L1B** is suitable for ESD protection and high density boards.

FEATURES

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

FEATURES



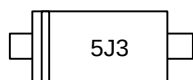
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
ESD5V0L1BL-CC2-R	ESD5V0L1BG-CC2-R	SOD-523	K	K	Tape Reel

Note: Pin Assignment: K: Cathode

ESD5V0L1BG-CC2-R	(1) Packing Type (2) Package Type (3) Green Package	(1) R: Tape Reel (2) CC2 : SOT-523 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



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

PARAMETER			SYMBOL	RATINGS	UNIT
ESD Discharge	IEC61000-4-2	Contact Discharge	V_{ESD}	± 25	kV
Peak Pulse current ($t_p=8/20\ \mu\text{s}$)			I_{PP}	± 2.5	A
Operating Junction Temperature			T_J	+125	$^{\circ}\text{C}$
Operating Temperature (Note 2)			T_{OPR}	-55 ~ +125	$^{\circ}\text{C}$
Storage Temperature			T_{STG}	-65 ~ +150	$^{\circ}\text{C}$

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** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse working voltage	V_{RMW}		-5.0		5.0	V
Reverse current	I_{R}	$V_{\text{R}}=3.0\text{V}$		<1	50	nA
Line capacitance	C_{L}	$V_{\text{R}}=0\text{V}$, $f=1\text{MHz}$		20	30	pF
Clamping voltage	V_{CL}	$I_{\text{PP}}=5\text{A}$, $t_p=30\text{ns}$		17		V
		$I_{\text{PP}}=5\text{A}$, $t_p=30\text{ns}$		20		V
		$I_{\text{PP}}=16\text{A}$, $t_p=30\text{ns}$		22		V
		$I_{\text{PP}}=16\text{A}$, $t_p=30\text{ns}$		25		V
Dynamic resistance	R_{DYN}	$t_p=30\text{ns}$		0.3		Ω

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