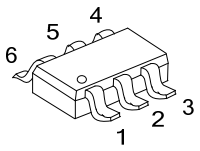
UESD5V0L5U

Preliminary ***TVS***

UNI-DIRECTIONAL ESD / TRANSIENT PROTECTION DIODE



SOT-363

■ DESCRIPTION

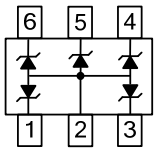
The UTC **UESD5V0L5U** is uni-directional ESD transient bidirectional protection diode, it uses UTC's advanced technology to provide customers with low leakage current and high integration, etc.

The UTC **UESD5V0L5U** is suitable for ESD protection and high density boards.

■ FEATURES

* Uni-directional, working voltage: V_{RWM}=5V
* Ultra low clamping voltage, protects against both positive and negative ESD strikes
* Ultra low dynamic resistance: R_{DYN} down to 0.3Ω
* Very fast response time

■ SYMBOL



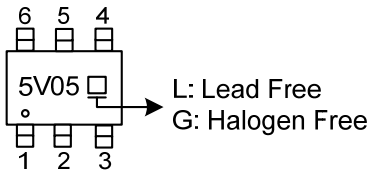
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UESD5V0L5UL-AL6-R	UESD5V0L5UG-AL6-R	SOT-363	Tape Reel

Note: Pin Assignment: E: Emitter B: Base C: Collector

UESD5V0L5UG-AL6-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) AL6: SOT-363 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



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

PARAMETER			SYMBOL	RATINGS	UNIT
ESD Discharge	IEC61000-4-2	Air Discharge	V_{ESD}	±25	kV
		Contact Discharge		±20	kV
Peak Pulse Current	IEC61000-4-5	t_p=8/20μs	I_{PP}	±10.0	A
Peak Pulse Power			P_{PK}	66	W
Operating Junction Temperature			T_J	-55 ~ +150	°C
Operating Temperature			T_{OPR}	-55 ~ +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 Stand-Off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	I_R=1mA	5.7	6.5	7.5	V
Forward Voltage Drop	V_F	I_F=1mA			0.9	V
Reverse Current	I_R	V_R=5.0V			1.0	uA
Diode capacitance	C_d	V_R=0V, f=1MHz		66	76	pF
		V_R=2.5V, f=1MHz		38		pF
Dynamic impedance	R_d	I_{PPM}=5A, t_P=8/20μs		0.3		Ω
Clamping Voltage	V_{CL}	I_{PP}=5A, t_P=8/20μs		8.2		V
		I_{PP}=8A, t_P=8/20μs		9.0		V

Note: Device stressed with 8/20μs exponential decay waveform according to IEC 61000-4-5.