



USMS05

Preliminary

TVS

TVS DIODE ARRAY FOR ESD AND LATCH-UP PROTECTION

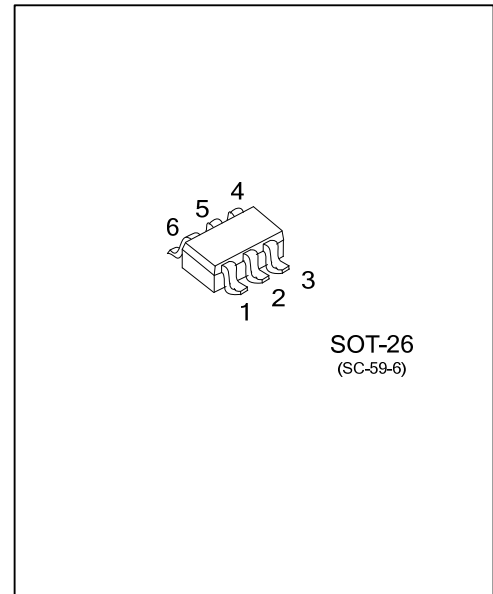
DESCRIPTION

The UTC USMS05 is TVS diode array, it uses UTC's advanced technology to provide customers with low leakage current, low operating and clamping voltage, etc.

The UTC USMS05 is suitable for ESD and latch-up protection.

FEATURES

- \* 4 Protect I/O lines
- \* Low leakage current (Max.=20µA @ V<sub>RWM</sub>=5V, T=25°C)
- \* Low operating and clamping voltages

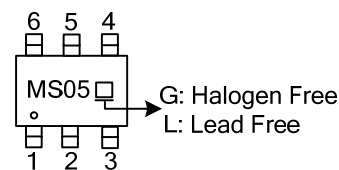


ORDERING INFORMATION

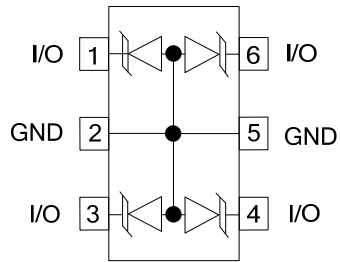
Ordering Number		Package	Packing
Lead Free	Halogen Free		
USMS05L-AG6-R	USMS05G-AG6-R	SOT-26	Tape Reel

<p>USMS05L-AG6-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Halogen Free</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) AG6 : SOT-26</li> <li>(3) L: Lead Free, G: Halogen Free</li> </ul>
---	---

MARKING



■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	I/O	Terminal of ESD 1
2	GND	Ground
3	I/O	Terminal of ESD2
4	I/O	Terminal of ESD 3
5	GND	Ground
6	I/O	Terminal of ESD 4

### ■ ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	RATINGS	UNIT
ESD Voltage (HBM Contact) (Note 2)	Air	25	kV
	Contact	20	kV
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PK}$	350	W
Operating Temperature	$T_J$	-55~+125	°C
Storage Temperature	$T_{STG}$	-55~+150	°C

Note: 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. IEC 61000-4-2.

### ■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^\circ C$			20	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=5A, t_p=8/20\mu s$			9.8	V
		$I_{PP}=24A, t_p=8/20\mu s$			14.5	V
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu s$			24	A
Junction Capacitance	$C_j$	Between I/O Pins and Ground $V_R=0V, f=1MHz$		325	400	pF

UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.