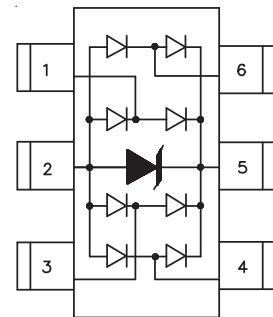
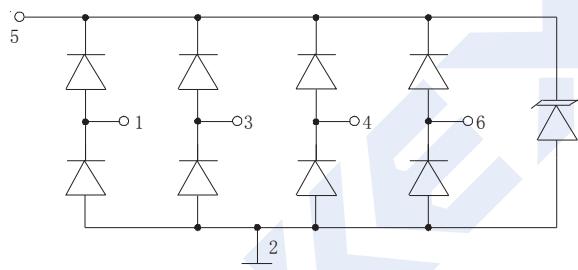
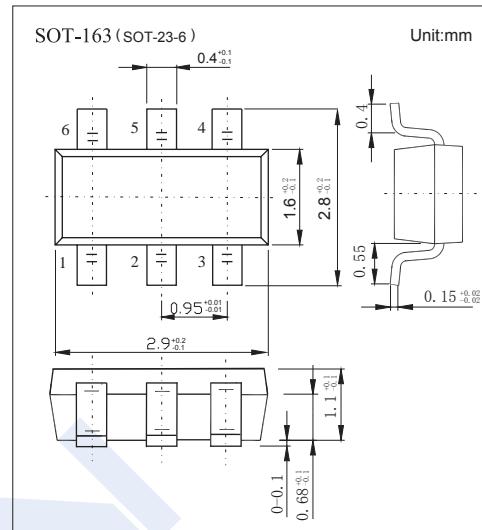


## Low Capacitance TVS Diode Array

### 1KE05-6

#### ■ Features

- ESD protection for high-speed data lines to IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- Protects four I/O lines
- Low capacitance: 0.5pF typical
- Low clamping voltage
- Low operating voltage: 5V



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	15	KV
ESD per IEC 61000-4-2 (Contact)		8	
Peak Pulse Current (tp = 8/20μs)	I <sub>PP</sub>	5	A
Peak Pulse Power (tp = 8/20μs)	P <sub>PP</sub>	100	W
Lead Soldering Temperature	T <sub>L</sub>	260 (10 Sec)	°C
Junction Temperature	T <sub>J</sub>	125	
Storage Temperature range	T <sub>stg</sub>	-55 to 150	

## Low Capacitance TVS Diode Array

### 1KE05-6

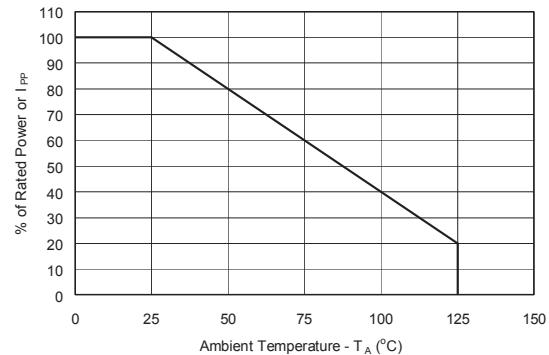
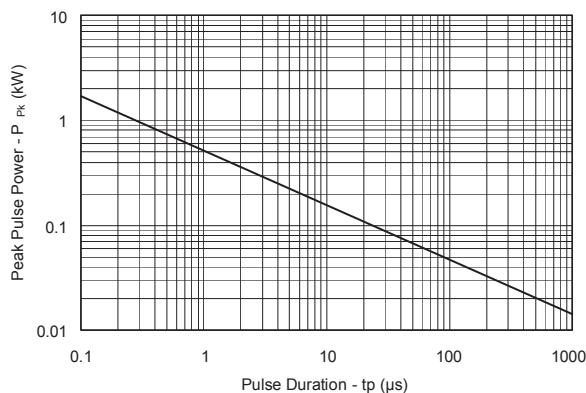
■ Electrical Characteristics  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Stand-Off Voltage	$V_{RWM}$	Pin 5 to 2			5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_t = 1 \text{ mA}$ Pin 5 to 2	6			
Forward voltage	$V_F$	$I_F = 15 \text{ mA}$			1.2	
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$ Any I/O pin to Ground			12	
		$I_{PP} = 5\text{A}$ , $t_p = 8/20\mu\text{s}$ Any I/O pin to Ground			16	
Reverse voltage leakage current	$I_R$	$V_{RWM} = 5\text{V}$ , $T=25^\circ\text{C}$ Pin 5 to 2			1.0	$\mu\text{A}$
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$ Any I/O pin to Ground		0.5	0.8	$\text{pF}$
		$V_R = 0\text{V}$ , $f = 1\text{MHz}$ Between I/O pins		0.3	0.4	

■ Marking

Marking	V05
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■ Typical Characteristics

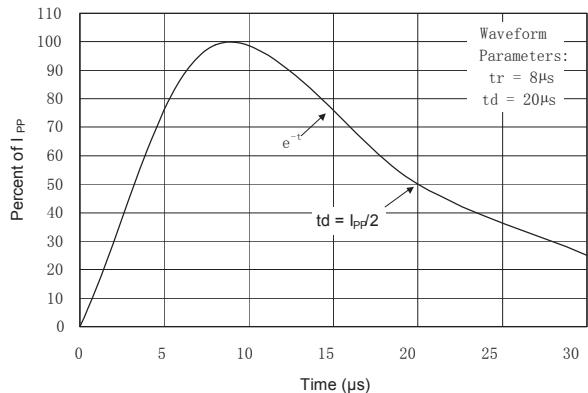


## Low Capacitance TVS Diode Array

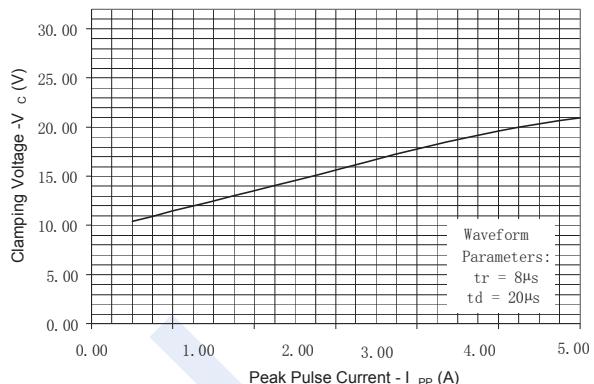
**1KE05-6**

■ Typical Characteristics

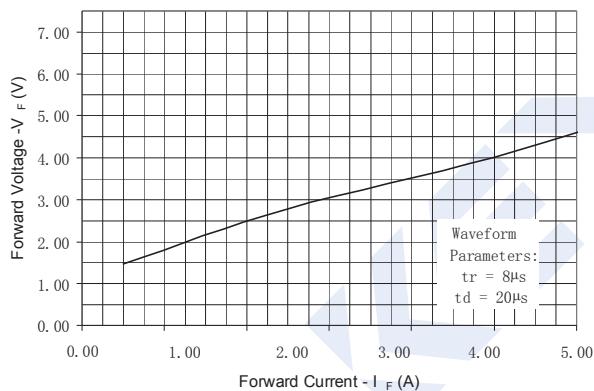
Pulse Waveform



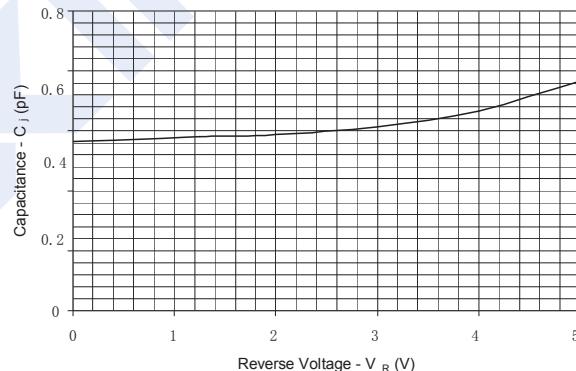
Clamping Voltage vs. Peak Pulse Current



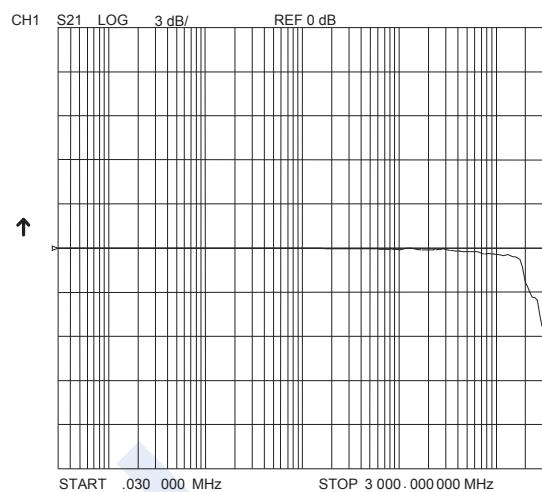
Forward Voltage vs. Forward Current



Capacitance vs. Reverse Voltage



Insertion Loss S21



Analog Cross Talk

