

### Very Low Capacitance ESD Protection

**V**<sub>RWM</sub>

5 V

#### **Features**

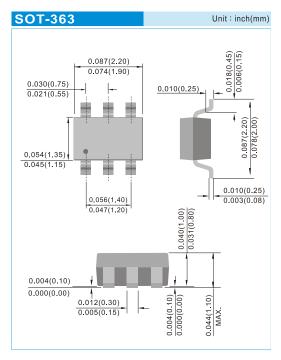
- Bidirectional ESD protection of one line
- IEC61000-4-2(ESD): ±15kV Air, ±8kV Contact
- IEC61000-4-4(EFT): 40A(5/50nS)
- IEC61000-4-5(Lightning): 3A(8/20μS)
- Low leakage current, maximum of 0.1μA at rated voltage
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

#### Mechanical Data

- Case: SOT-363, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0002 ounces, 0.006 grams
- Marking: K6E

#### **Applications**

- USB2.0 Data Line & Power Line Protection
- Video Graphics Cards
- Monitors and Flat Panel Displays Notebook computers
- Digital Video Interface(DVI)
- 10/100/1000 Ethernet
- ATM Interfaces
- Control Signal Lines Protection



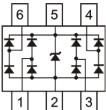


Fig.174(Top View)

### Maximum Ratings (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS	
Peak Pulse Current(8/20µs)	I <sub>PP</sub>	3	Α	
ESD IEC61000-4-2(Air)		±15	kV	
ESD IEC61000-4-2(Contact)	V <sub>ESD</sub>	±8		
Operating Junction Temperature Range	$T_J$	-55 to +125	°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C	





# Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Stand-Off Voltage	$V_{RWM}$	-	-	ı	5	V
Reverse Breakdown Voltage	$V_{BR}$	I <sub>BR</sub> =1mA, PIN 5 to GND	6	-	8.5	V
Reverse leakage current	I <sub>R</sub>	V <sub>R</sub> =5V, PIN 5 to GND	-	-	0.1	μА
Clamping Voltage	V <sub>CL</sub>	I <sub>PP</sub> =1A, t <sub>P</sub> =8/20μs	-	9	12	V
		I <sub>PP</sub> =3A, t <sub>P</sub> =8/20μs	-	12	20	
Off State Junction Capacitance	С	0Vdc Bias f=1MHz, Between any I/O pins to GND	-	0.8	1	pF
		0Vdc Bias f=1MHz, Between any I/O pins	-	0.4	-	





### TYPICAL CHARACTERISTIC CURVES

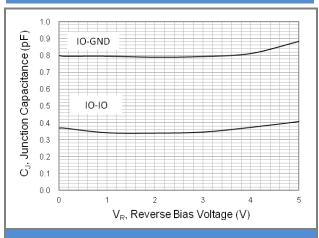


Fig.1 Typical Junction Capacitance

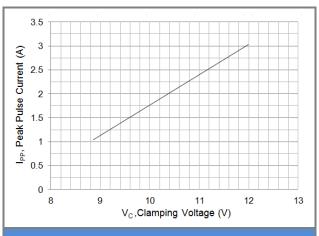


Fig.2 Typical Peak Clamping Voltage(8/20μs)

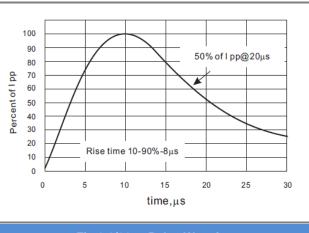
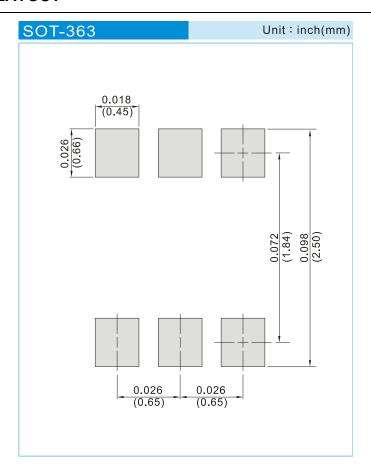


Fig.3 8/20µs Pulse Waveform





### **MOUNTING PAD LAYOUT**



### ORDER INFORMATION

• Packing information

T/R – 10K per 13" plastic Reel

T/R – 3K per 7" plastic Reel

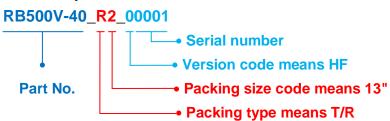




### Part No\_packing code\_Version

PJE5V0V1DW\_R1\_00001 PJE5V0V1DW\_R2\_00001

### For example:



Packing Code XX			Version Code XXXXX			
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	В	13"	2			
Tube Packing (T/P)	Т	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			





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