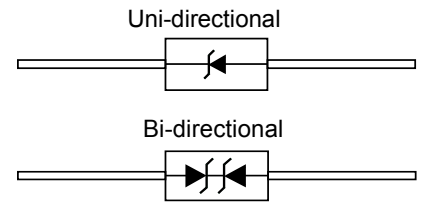


1500W Transient Voltage Suppression Diode

Description

The 1.5KE Series is designed specifically to protect sensitive electronic equipment from voltage transients induced by lightning and other transient voltage events.



Feature

- Working peak reverse voltage range-380V.
- Peak power dissipation 1500W@10x1000us Pulse.
- Excellent clamping capability.
- Fast response time : typically less than 1ns.
- Typical I_R less than 1uA above 22V.
- Plastic material has UL flammability classification 94V-O
- RoHS compliant in lead-free versions.

Applications

1.5KE Series are ideal for the protection of I/O Interfaces, V_{CC} bus and other vulnerable circuits used in Telecom, Computer Industrial and Consumer electronic application

Mechanical Characteristics

CASE: JEDEC DO-201 Molded Plastic over glass passivated junction.

Mounting Position: Any

Polarity: by cathode band denotes uni-directional device.

Terminal: Solder plated, solderable per MIL-STD-750, Method 2026

Maximum Ratings And Characteristics @ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Value	Units
Peak Pulse Power Dissipation on 10/1000 us Waveform(Note1,2,FIG.1)	P_{PPM}	Min 1500	W
Peak Pulse Current of on 10/1000us Waveform (Note1,FIG.3)	I_{PPM}	See Table 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load,(JEDEC Method)(Note2.3)	I_{FSM}	200	Amps
Operating Junction Temperature Range	T_J	-55 to 150	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A=25^\circ\text{C}$ per Fig.2.
2. Mounted on 5.0mm^2 (0.03mm thick) Copper Pads to each terminal.
3. 8.3 ms single half sine-wave,or equivalent square wave,Duty cycle=4 pluses per minute maximum.

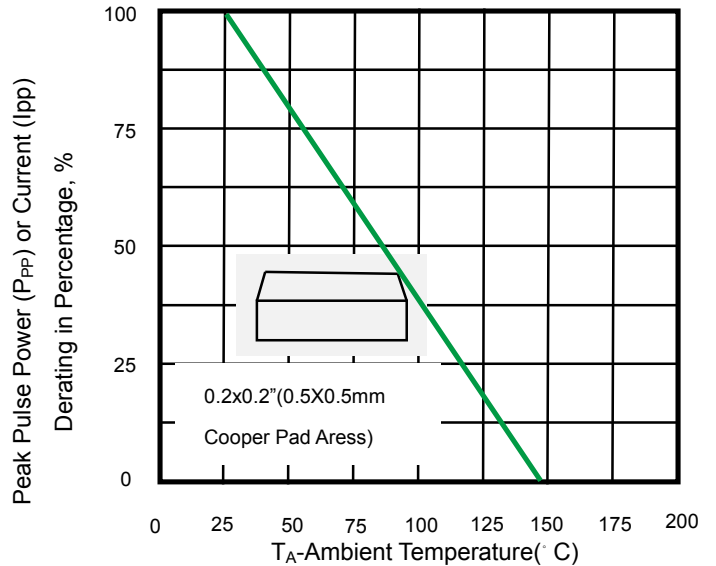
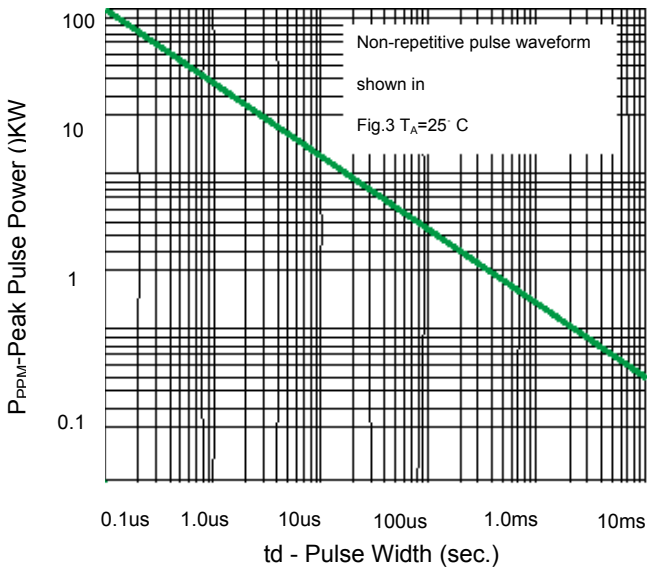
Electrical characteristics per line@25°C

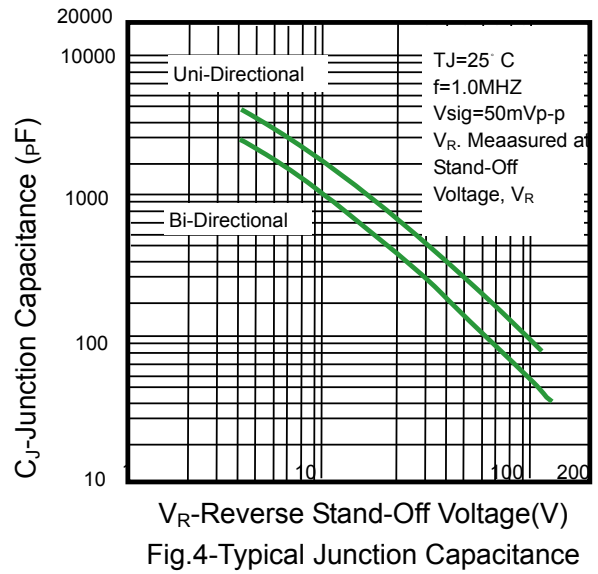
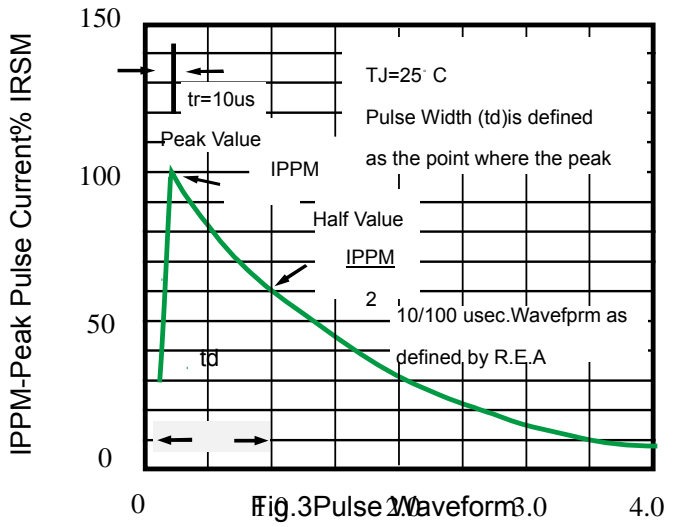
Part Number		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP}	Maximum Reverse Leakage I_R @ V_R (μ A)
(Uni)	(Bi)		MIN	MAX				
1.5KE6.8A	1.5KE6.8CA	5.80	6.45	7.14	10	10.5	144.8	1000.0
1.5KE7.5A	1.5KE7.5CA	6.40	7.13	7.88	10	11.3	134.5	500.0
1.5KE8.2A	1.5KE8.2CA	7.02	7.79	8.61	10	12.1	125.6	200.0
1.5KE9.1A	1.5KE9.1CA	7.78	8.65	9.55	1.0	13.4	113.4	50.0
1.5KE10A	1.5KE10CA	8.55	9.50	10.50	1.0	14.5	104.8	10.0
1.5KE11A	1.5KE11CA	9.40	10.50	11.60	1.0	15.6	97.4	5.0
1.5KE12A	1.5KE12CA	10.2	11.40	12.60	1.0	16.7	91.0	5.0
1.5KE13A	1.5KE13CA	11.1	12.40	13.70	1.0	18.2	83.5	5.0
1.5KE15A	1.5KE15CA	12.8	14.30	15.80	1.0	21.2	71.7	5.0
1.5KE16A	1.5KE16CA	13.6	15.20	16.80	1.0	22.5	67.6	5.0
1.5KE18A	1.5KE18CA	15.3	17.10	18.90	1.0	25.2	60.3	5.0
1.5KE20A	1.5KE20CA	17.1	19.00	21.00	1.0	27.7	54.9	5.0
1.5KE22A	1.5KE22CA	18.8	20.9	23.1	1.0	30.6	49.7	1.0
1.5KE24A	1.5KE24CA	20.5	22.8	25.2	1.0	33.2	45.8	1.0
1.5KE27A	1.5KE27CA	23.1	25.7	28.4	1.0	37.5	40.5	1.0
1.5KE30A	1.5KE30CA	25.6	28.5	31.5	1.0	41.4	36.7	1.0
1.5KE33A	1.5KE33CA	28.2	31.4	34.7	1.0	45.7	33.3	1.0
1.5KE36A	1.5KE36CA	30.8	34.2	37.8	1.0	49.9	30.5	1.0
1.5KE39A	1.5KE39CA	33.3	37.1	41.0	1.0	53.9	28.2	1.0
1.5KE43A	1.5KE43CA	36.8	40.9	45.2	1.0	59.3	25.6	1.0
1.5KE47A	1.5KE47CA	40.2	44.7	49.4	1.0	64.8	23.5	1.0
1.5KE51A	1.5KE51CA	43.6	48.5	53.6	1.0	70.1	21.7	1.0
1.5KE56A	1.5KE56CA	47.8	53.2	58.8	1.0	77.0	19.7	1.0
1.5KE62A	1.5KE62CA	53.0	58.9	65.1	1.0	85.0	17.9	1.0
1.5KE68A	1.5KE68CA	58.1	64.6	71.4	1.0	92.0	16.5	1.0
1.5KE75A	1.5KE75CA	64.1	71.3	78.8	1.0	103	14.8	1.0
1.5KE82A	1.5KE82CA	70.1	77.9	86.1	1.0	113	13.5	1.0
1.5KE91A	1.5KE91CA	77.8	86.5	95.5	1.0	125	12.2	1.0

Part Number		Reverse Stand off Voltage V_R (Volts)	Breakdown Voltage V_{BR} (Volts) @ I_T		Test Current I_T (mA)	Maximum Clamping Voltage V_C @ I_{PP} (V)	Maximum Peak Pulse Current I_{PP}	Maximum Reverse Leakage I_R @ V_R (μA)
(Uni)	(Bi)		MIN	MAX				
1.5KE100A	1.5KE100CA	85.5	95.0	105	1.0	137	11.1	1.0
1.5KE110A	1.5KE110CA	94.0	105	116	1.0	152	10.0	1.0
1.5KE120A	1.5KE120CA	102	114	126	1.0	165	9.2	1.0
1.5KE130A	1.5KE130CA	111	124	137	1.0	179	8.5	1.0
1.5KE150A	1.5KE150CA	128	143	158	1.0	207	7.3	1.0
1.5KE160A	1.5KE160CA	136	152	168	1.0	219	6.9	1.0
1.5KE170A	1.5KE170CA	145	162	179	1.0	234	6.5	1.0
1.5KE180A	1.5KE180CA	154	171	189	1.0	246	6.2	1.0
1.5KE200A	1.5KE200CA	171	190	210	1.0	274	5.5	1.0
1.5KE220A	1.5KE220CA	185	209	231	1.0	328	4.6	1.0
1.5KE250A	1.5KE250CA	214	237	263	1.0	344	4.4	1.0
1.5KE300A	1.5KE300CA	256	285	315	1.0	414	3.7	1.0
1.5KE350A	1.5KE350CA	300	333	368	1.0	482	3.2	1.0
1.5KE400A	1.5KE400CA	342	380	420	1.0	548	2.8	1.0
1.5KE440A	1.5KE440CA	376	418	462	1.0	600	2.5	1.0

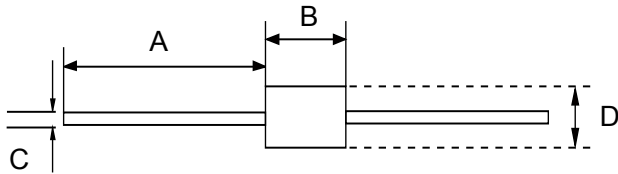
※ For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double

Ratings and Characteristic Curves $T_A=25^\circ C$ unless otherwise noted






Product dimension(DO-201)



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	1.000	-	25.4	-
B	0.285	0.375	7.2	9.5
C	0.038	0.042	0.96	1.07
D	0.188	0.210	4.8	5.3

Unit:mm


IMPORTANT NOTICE

 and **Prisemi**[®] are registered trademarks of **Prisemi Electronics Co., Ltd (Prisemi)** ,Prisemi reserves the right to make changes without further notice to any products herein. Prisemi makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Prisemi assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. “Typical” parameters which may be provided in Prisemi data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including “Typicals” must be validated for each customer application by customer’s technical experts. Prisemi does not convey any license under its patent rights nor the rights of others. The products listed in this document are designed to be used with ordinary electronic equipment or devices, Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

Website: <http://www.prisemi.com>

For additional information, please contact your local Sales Representative.

©Copyright 2009, Prisemi Electronics

 **Prisemi**[®] is a registered trademark of Prisemi Electronics

All rights are reserved.