

## TPK15KPXX TVS Rectifier

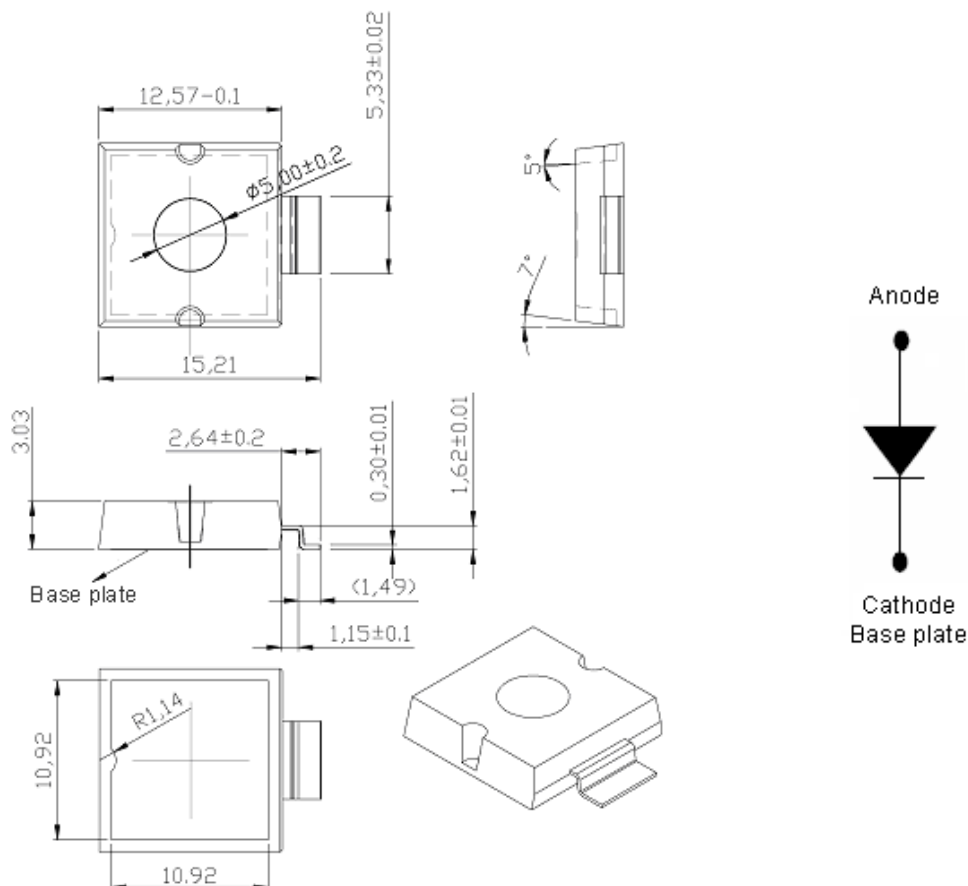
### Applications:

- Protection from switching transients and induced RF

### Features:

- Low profile surface mount
- Unidirectional and Bidirectional
- Fast response
- Suppresses transients up to 15kW @ 10/1000µs
- Marking : body marked with TPK15KPXXX
- This is a Pb – Free Device
- Open top for heat dissipation and different connection options
- All SMC parts are traceable to the wafer lot
- All part are 100% tested: electrical, 1x surge test, visual inspection
- Additional testing can be offered upon request

### Mechanical Dimensions: In mm



### SPD-4

- China - Germany - Korea - Singapore - United States ●
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) ●

**Technical Data**
**Green Products**
**Data Sheet N0174, Rev. B**
**ELECTRICAL CHARACTERISTICS @ 25 °C**

Part Number (Unidirectional)	Part Number (Bidirectional)	Stand-off Voltage $V_{wm}$ (Note 1) (V)	Breakdown Voltage $V_{BR}$ @ $I_{BR}$ (mA) (V)		Test Current $I_{BR}$ (mA)	Clamping Voltage $V_c$ ( $10 \times 1000$ ) @ $I_{PP}$ (V) Max	Stand By Current $I_D$ @ $V_{wm}$ ( $\mu A$ ) Max	Peak Pulse Current $I_{pp}$ Max	Temperatur e Coefficient Of $V_{BR}$ mV/°C Max
			Min	Max					
TPK15KP7.0A	TPK15KP7.0CA	7	7.78	8.60	150	12	3000	1251	5.0
TPK15KP7.5A	TPK15KP7.5CA	7.5	8.33	9.21	5	12.9	750	1164	6.0
TPK15KP8.0A	TPK15KP8.0CA	8	8.89	9.83	5	13.6	450	1101	6.0
TPK15KP8.5A	TPK15KP8.5CA	8.5	9.44	10.4	5	14.4	150	1141	7.0
TPK15KP9.0A	TPK15KP9.0CA	9	10	11.1	5	15.4	60	975	8.0
TPK15KP10A	TPK15KP10CA	10	11.1	12.3	5	17	45	882	9.0
TPK15KP11A	TPK15KP11CA	11	12.2	13.5	5	18.2	10	822	10
TPK15KP12A	TPK15KP12CA	12	13.3	14.7	5	19.9	10	753	11
TPK15KP13A	TPK15KP13CA	13	14.4	15.9	5	21.5	10	696	12
TPK15KP14A	TPK15KP14CA	14	15.6	17.2	5	23.2	10	645	13
TPK15KP15A	TPK15KP15CA	15	16.7	18.5	5	24.4	10	618	15
TPK15KP16A	TPK15KP16CA	16	17.8	19.7	5	26	10	576	16
TPK15KP17A	TPK15KP17CA	17	18.9	20.9	5	27.6	10	543	18
TPK15KP18A	TPK15KP18CA	18	20	22.1	5	29.2	10	516	19
TPK15KP20A	TPK15KP20CA	20	22.2	24.5	5	32.4	10	462	22
TPK15KP22A	TPK15KP22CA	22	24.4	26.9	5	35.5	10	423	24
TPK15KP24A	TPK15KP24CA	24	26.7	29.5	5	38.9	10	384	27
TPK15KP26A	TPK15KP26CA	26	28.9	31.9	5	42.1	10	357	29
TPK15KP28A	TPK15KP28CA	28	31.1	34.4	5	45.5	10	330	30
TPK15KP30A	TPK15KP30CA	30	33.3	36.8	5	48.4	10	309	35
TPK15KP33A	TPK15KP33CA	33	36.7	40.6	5	53.3	10	282	38
TPK15KP36A	TPK15KP36CA	36	40	44.2	5	58.1	10	258	40
TPK15KP40A	TPK15KP40CA	40	44.4	49.1	5	64.5	10	234	45
TPK15KP43A	TPK15KP43CA	43	47.8	52.8	5	69.4	10	216	49
TPK15KP45A	TPK15KP45CA	45	50	55.3	5	72.7	10	207	51
TPK15KP48A	TPK15KP48CA	48	53.3	58.9	5	77.4	10	195	55
TPK15KP51A	TPK15KP51CA	51	56.7	62.7	5	82.4	10	183	60
TPK15KP54A	TPK15KP54CA	54	60	66.3	5	87.1	10	171	64
TPK15KP58A	TPK15KP58CA	58	64.4	71.2	5	93.6	10	159	69
TPK15KP60A	TPK15KP60CA	60	66.7	73.7	5	96.8	10	156	70
TPK15KP64A	TPK15KP64CA	64	71.1	78.6	5	103	10	147	75
TPK15KP70A	TPK15KP70CA	70	77.8	86	5	113	10	132	84

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •



**Technical Data**  
**Data Sheet N0174, Rev. B**

*Green Products*

TPK15KP75A	TPK15KP75CA	75	83.3	92.1	5	121	10	123	90
TPK15KP78A	TPK15KP78CA	78	86.7	95.8	5	126	10	120	94
TPK15KP85A	TPK15KP85CA	85	94.4	104	5	137	10	108	102
TPK15KP90A	TPK15KP90CA	90	100	111	5	146	10	402	109
TPK15KP100A	TPK15KP100CA	100	111	123	5	162	10	93	122
TPK15KP110A	TPK15KP110CA	110	122	135	5	177	10	84	132
TPK15KP120A	TPK15KP120CA	120	133	147	5	193	10	78	145
TPK15KP130A	TPK15KP130CA	130	144	159	5	209	10	71	157
TPK15KP150A	TPK15KP150CA	150	167	185	5	243	10	62	183
TPK15KP160A	TPK15KP160CA	160	178	197	5	259	10	58	195
TPK15KP170A	TPK15KP170CA	170	189	209	5	275	10	55	207
TPK15KP180A	TPK15KP180CA	180	200	221	5	291	10	52	219
TPK15KP200A	TPK15KP200CA	200	222	245	5	322	10	47	243

- Note:** 1. Transient Voltage Suppressors are normally selected with reverse standoff voltage  $V_{WM}$ , which should be equal to or greater than the peak operating voltage.  
 2. TPK15KPXXA, "A" Suffix Designates Unidirectional Devices; TPK15KPXXCA, "CA" Suffix Designates Bidirectional Devices.

SYMBOLS & DEFINITIONS			
Symbol	Definition	Symbol	Definition
$V_{WM}$	Working Peak(Standoff) Voltage	$I_{PP}$	Peak Pulse Current
$V_{(BR)}$	Breakdown Voltage	$V_C$	Claming Voltage
$I_D$	Standby Current	$I_{(BR)}$	Breakdown Current for $V_{(BR)}$



**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..