1.5KA6.8 thru 1.5KA47A

Vishay General Semiconductor

PAR[®] Transient Voltage Suppressors

High Temperature Stability and High Reliability Conditions



PRIMARY CHARACTERISTICS						
V _{WM}	5.5 V to 40.2 V					
V _{BR}	6.8 V to 47 V					
P _{PPM}	1500 W					
PD	6.5 W					
I _{FSM}	200 A					
T _J max.	185 °C					
Polarity	Uni-directional					
Package	1.5KE					

TYPICAL APPLICATIONS

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, automotive and telecommunication.

FEATURES

- Junction passivation optimized design passivated anisotropic rectifier technology
- $T_J = 185$ °C capability suitable for high reliability and automotive requirement

· Available in uni-directional polarity only

- ROHS COMPLIANT
- 1500 W peak pulse power capability with a 10/1000 μs waveform
- Excellent clamping capability
- Very fast response time
- Low incremental surge resistance
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- AEC-Q101 qualified
- Material categorization: For definitions of compliance please see <u>www.vishay.com/doc?99912</u>

MECHANICAL DATA

Case: Molded epoxy body over passivated junction Molding compound meets UL 94 V-0 flammability rating Base P/NHE3 - RoHS-compliant, AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

HE3 suffix meets JESD 201 class 2 whisker test

Polarity: Color band denotes cathode end

MAXIMUM RATINGS ($T_A = 25 \text{ °C}$ unless otherwise noted)							
PARAMETER	SYMBOL	LIMIT	UNIT				
Peak pulse power dissipation with a 10/1000 μs waveform $^{(1)}$ (fig. 1)	P _{PPM}	1500	W				
Peak pulse current at T_A = 25 °C with a 10/1000 μs waveform $^{(1)}$ (fig. 3)	I _{PPM}	See next table	А				
Power dissipation on infinite heatsink at T_L = 75 °C (fig. 5)	PD	6.5	W				
Peak forward surge current 8.3 ms single half sine-wave (2)	I _{FSM}	200	А				
Maximum instantaneous forward voltage at 100 A ⁽²⁾	V _F	3.5	V				
Operating junction and storage temperature range	T _J , T _{STG}	- 65 to + 185	°C				

Notes

⁽¹⁾ Non-repetitive current pulse, per fig. 3 and derated above $T_A = 25 \text{ °C}$ per fig. 2

 $^{(2)}$ 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

For technical questions within your region: <u>DiodesAmericas@vishay.com</u>, <u>DiodesAsia@vishay.com</u>, <u>DiodesEurope@vishay.com</u> THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT <u>www.vishay.com/doc?91000</u>

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DEWICE TYPE V00.1 AGE V0.1 AGE V0.1 AGE IESH VG.1 AGE V0.1 AGE V0.1 AGE IENRAU- VG.1 AGE V0.1 AGE V0.1 AGE IENRAU- VG.1 AGE V0.1 AGE V0.1 AGE IENRAU- VG.1 AGE V0.1 AGE V0.1 AGE IESA V0.1 AGE IES	ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
Imit Max. Istration Istration <thistratin< th=""> Istration <</thistratin<>	DEVICE TYPE	VOLT V _{BR} ⁽¹⁾	AGE AT I _T	CURRENT	VOLTAGE V _{WM}	REVERSE LEAKAGE	MAXIMUM REVERSE LEAKAGE	PULSE CURRENT	CLAMPING VOLTAGE	MAXIMUM TEMP. COEFFICIENT OF V _{BR}
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		MIN.	MAX.	(111-7)	(•)	Ι _D (μΑ)		(A)	V _c (V)	(%/°C)
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1.5KA6.8	6.12	7.48	10	5.50	1000	10 000	139	10.8	0.057
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.5KA6.8A	6.45	7.14	10	5.80	1000	10 000	143	10.5	0.057
1.5KA8.27.389.02106.63200200012012.50.061.5KA8.2A7.798.61107.02200200012412.10.061.5KA9.1A8.1910.01.07.375050010913.80.061.5KA9.1A8.659.551.07.785050011213.40.061.5KA109.0011.01.08.102020010015.00.071.5KA10A9.5010.51.08.552020010314.50.071.5KA119.9012.11.08.925.05092.616.20.071.5KA1210.813.21.09.722.01086.717.30.071.5KA1210.813.21.09.722.01086.717.30.071.5KA1311.714.31.010.52.01088.418.20.081.5KA1311.714.31.010.52.01078.919.00.081.5KA1513.516.31.012.11.01068.222.00.081.5KA1513.516.31.012.11.01068.222.00.081.5KA1514.315.81.012.81.01063.823.50.081.5KA1614.417.61.012.91.01063.	1.5KA7.5	6.75	8.25	10	6.05	500	5000	128	11.7	0.061
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1.5KA7.5A	7.13	7.88	10	6.40	500	5000	133	11.3	0.061
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.5KA8.2	7.38	9.02	10	6.63	200	2000	120	12.5	0.065
1.5KA9.1A 8.65 9.55 1.0 7.78 50 500 112 13.4 0.06 $1.5KA10$ 9.00 11.0 1.0 8.10 20 200 100 15.0 0.07 $1.5KA10A$ 9.50 10.5 1.0 8.55 20 200 103 14.5 0.07 $1.5KA11$ 9.90 12.1 1.0 8.92 5.0 50 92.6 16.2 0.07 $1.5KA11A$ 10.5 11.6 1.0 9.40 5.0 50 96.2 15.6 0.07 $1.5KA12$ 10.8 13.2 1.0 9.72 2.0 10 86.7 17.3 0.07 $1.5KA12$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.7 14.3 1.0 10.5 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.7 14.3 1.0 10.5 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 <t< td=""><td>1.5KA8.2A</td><td>7.79</td><td>8.61</td><td>10</td><td>7.02</td><td>200</td><td>2000</td><td>124</td><td>12.1</td><td>0.065</td></t<>	1.5KA8.2A	7.79	8.61	10	7.02	200	2000	124	12.1	0.065
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1.5KA9.1	8.19	10.0	1.0	7.37	50	500	109	13.8	0.068
1.5KA10A 9.50 10.5 1.0 8.55 20 200 103 14.5 0.07 $1.5KA11$ 9.90 12.1 1.0 8.92 5.0 50 92.6 16.2 0.07 $1.5KA11A$ 10.5 11.6 1.0 9.40 5.0 50 96.2 15.6 0.07 $1.5KA12$ 10.8 13.2 1.0 9.72 2.0 10 86.7 17.3 0.07 $1.5KA12A$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13A$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13A$ 11.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA15$ 14.3 15.8 1.0 12.8 1.0 10 70.8 21.2 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 14.4 17.6 1.0 13.6 1.0 10 56.6 26.5 0.08 $1.5KA16$ 16.2 19.8 1.0 14.5 1.0 10 51.5 29.1 0.09 $1.5KA20$ 18.0 22.0 1.0 16.2 1.0 10 54.2 27.7 <td>1.5KA9.1A</td> <td>8.65</td> <td>9.55</td> <td>1.0</td> <td>7.78</td> <td>50</td> <td>500</td> <td>112</td> <td>13.4</td> <td>0.068</td>	1.5KA9.1A	8.65	9.55	1.0	7.78	50	500	112	13.4	0.068
1.5KA11 9.90 12.1 1.0 8.92 5.0 50 92.6 16.2 0.07 $1.5KA11A$ 10.5 11.6 1.0 9.40 5.0 50 96.2 15.6 0.07 $1.5KA12$ 10.8 13.2 1.0 9.72 2.0 10 86.7 17.3 0.07 $1.5KA12$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.7 14.3 1.0 10.5 2.0 10 78.9 19.0 0.08 $1.5KA13$ 11.7 14.3 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA13$ 12.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 68.8 23.5 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 15.2 16.8 1.0 14.5 1.0 10 56.6 26.5 0.08 $1.5KA16$ 15.2 19.8 1.0 14.5 1.0 10 59.5 25.2 0.08 $1.5KA18$ 16.2 19.8 1.0 15.3 1.0 10 59.5 25.2 <t< td=""><td>1.5KA10</td><td>9.00</td><td>11.0</td><td>1.0</td><td>8.10</td><td>20</td><td>200</td><td>100</td><td>15.0</td><td>0.073</td></t<>	1.5KA10	9.00	11.0	1.0	8.10	20	200	100	15.0	0.073
1.5KA11A 10.5 11.6 1.0 9.40 5.0 50 96.2 15.6 0.07 $1.5KA12$ 10.8 13.2 1.0 9.72 2.0 10 86.7 17.3 0.07 $1.5KA12A$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.7 14.3 1.0 10.5 2.0 10 78.9 19.0 0.08 $1.5KA13$ 11.7 14.3 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA15$ 13.5 16.3 1.0 12.8 1.0 10 68.2 22.0 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 68.8 23.5 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 16.2 19.8 1.0 14.5 1.0 10 66.7 22.5 0.08 $1.5KA18$ 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 $1.5KA20$ 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 $1.5KA20$ 18.0 22.0 1.0 17.1 1.0 10 54.2 27.7 <	1.5KA10A	9.50	10.5	1.0	8.55	20	200	103	14.5	0.073
1.5KA12 10.8 13.2 1.0 9.72 2.0 10 86.7 17.3 0.07 $1.5KA12A$ 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 $1.5KA13$ 11.7 14.3 1.0 10.5 2.0 10 78.9 19.0 0.08 $1.5KA13$ 12.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA15$ 14.3 15.8 1.0 12.8 1.0 10 70.8 21.2 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 63.8 23.5 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 14.4 17.6 1.0 14.5 1.0 10 66.7 22.5 0.08 $1.5KA18$ 16.2 19.8 1.0 14.5 1.0 10 55.6 25.2 0.08 $1.5KA20$ 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 $1.5KA20$ 18.0 22.0 1.0 17.1 1.0 10 54.2 27.7 <t< td=""><td>1.5KA11</td><td>9.90</td><td>12.1</td><td>1.0</td><td>8.92</td><td>5.0</td><td>50</td><td>92.6</td><td>16.2</td><td>0.075</td></t<>	1.5KA11	9.90	12.1	1.0	8.92	5.0	50	92.6	16.2	0.075
1.5KA12A 11.4 12.6 1.0 10.2 2.0 10 89.8 16.7 0.07 1.5 KA13 11.7 14.3 1.0 10.5 2.0 10 78.9 19.0 0.08 1.5 KA13A 12.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 1.5 KA15 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 1.5 KA15 14.3 15.8 1.0 12.8 1.0 10 70.8 21.2 0.08 1.5 KA16 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 1.5 KA16 14.4 17.6 1.0 13.6 1.0 10 66.7 22.5 0.08 1.5 KA16 14.4 17.6 1.0 14.5 1.0 10 66.7 22.5 0.08 1.5 KA16 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 1.5 KA18 16.2 19.8 1.0 14.5 1.0 10 51.5 29.1 0.09 1.5 KA20 18.0 22.0 1.0 16.2 1.0 10 54.2 27.7 0.09 1.5 KA20A 19.0 21.0 1.0 17.1 1.0 10 47.0 31.9 0.09 1.5 KA24 20.9 23.1 1.0 17.8 1.0 10 49.0 30.6 <td>1.5KA11A</td> <td>10.5</td> <td>11.6</td> <td>1.0</td> <td>9.40</td> <td>5.0</td> <td>50</td> <td>96.2</td> <td>15.6</td> <td>0.076</td>	1.5KA11A	10.5	11.6	1.0	9.40	5.0	50	96.2	15.6	0.076
1.5KA13 11.7 14.3 1.0 10.5 2.0 10 78.9 19.0 0.08 $1.5KA13A$ 12.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 $1.5KA15$ 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 $1.5KA15$ 14.3 15.8 1.0 12.8 1.0 10 70.8 21.2 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 63.8 23.5 0.08 $1.5KA16$ 14.4 17.6 1.0 12.9 1.0 10 66.7 22.5 0.08 $1.5KA16$ 15.2 16.8 1.0 13.6 1.0 10 66.7 22.5 0.08 $1.5KA18$ 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 $1.5KA20$ 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 $1.5KA20$ 18.0 22.0 1.0 17.1 1.0 10 54.2 27.7 0.09 $1.5KA24$ 21.6 26.4 1.0 17.8 1.0 10 47.0 31.9 0.09 $1.5KA24$ 22.8 25.2 1.0 20.5 1.0 10 43.2 34.7 0.09 $1.5KA24$ 22.8 25.2 1.0 20.5 1.0 10 43.2 34.7 <t< td=""><td>1.5KA12</td><td>10.8</td><td>13.2</td><td>1.0</td><td>9.72</td><td>2.0</td><td>10</td><td>86.7</td><td>17.3</td><td>0.076</td></t<>	1.5KA12	10.8	13.2	1.0	9.72	2.0	10	86.7	17.3	0.076
1.5KA13A 12.4 13.7 1.0 11.1 2.0 10 82.4 18.2 0.08 1.5KA15 13.5 16.3 1.0 12.1 1.0 10 68.2 22.0 0.08 1.5KA15 14.3 15.8 1.0 12.8 1.0 10 70.8 21.2 0.08 1.5KA16 14.4 17.6 1.0 12.9 1.0 10 63.8 23.5 0.08 1.5KA16 15.2 16.8 1.0 13.6 1.0 10 66.7 22.5 0.08 1.5KA18 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20 19.0 21.0 1.7.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 <td>1.5KA12A</td> <td>11.4</td> <td>12.6</td> <td>1.0</td> <td>10.2</td> <td>2.0</td> <td>10</td> <td>89.8</td> <td>16.7</td> <td>0.078</td>	1.5KA12A	11.4	12.6	1.0	10.2	2.0	10	89.8	16.7	0.078
1.5KA1513.516.31.012.11.01068.222.00.081.5KA15A14.315.81.012.81.01070.821.20.081.5KA1614.417.61.012.91.01063.823.50.081.5KA16A15.216.81.013.61.01066.722.50.081.5KA1816.219.81.014.51.01056.626.50.081.5KA18A17.118.91.015.31.01059.525.20.081.5KA2018.022.01.016.21.01051.529.10.091.5KA20A19.021.01.017.11.01054.227.70.091.5KA22A20.923.11.017.81.01047.031.90.091.5KA24A22.825.21.020.51.01043.234.70.091.5KA2421.626.41.019.41.01043.233.20.091.5KA2724.329.71.021.81.01036.439.10.091.5KA3027.033.01.024.31.01034.543.50.091.5KA3329.736.31.025.61.01031.447.70.09	1.5KA13	11.7	14.3	1.0	10.5	2.0	10	78.9	19.0	0.081
1.5KA15A14.315.81.012.81.01070.821.20.081.5KA1614.417.61.012.91.01063.823.50.081.5KA1615.216.81.013.61.01066.722.50.081.5KA1816.219.81.014.51.01056.626.50.081.5KA1817.118.91.015.31.01059.525.20.081.5KA2018.022.01.016.21.01051.529.10.091.5KA20A19.021.01.017.11.01054.227.70.091.5KA22A19.824.21.017.81.01047.031.90.091.5KA2420.923.11.018.81.01043.234.70.091.5KA2422.825.21.020.51.01043.233.20.091.5KA2724.329.71.021.81.01038.439.10.091.5KA3027.033.01.024.31.01034.543.50.091.5KA30A28.531.51.025.61.01034.543.50.091.5KA3329.736.31.026.81.01031.447.70.09	1.5KA13A	12.4	13.7	1.0	11.1	2.0	10	82.4	18.2	0.081
1.5KA16 14.4 17.6 1.0 12.9 1.0 10 63.8 23.5 0.08 1.5KA16A 15.2 16.8 1.0 13.6 1.0 10 66.7 22.5 0.08 1.5KA18 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 1.5KA18A 17.1 18.9 1.0 15.3 1.0 10 59.5 25.2 0.08 1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20 18.0 22.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA24 20.9 23.1 1.0 18.8 1.0 10 43.2 34.7 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 </td <td>1.5KA15</td> <td>13.5</td> <td>16.3</td> <td>1.0</td> <td>12.1</td> <td>1.0</td> <td>10</td> <td>68.2</td> <td>22.0</td> <td>0.084</td>	1.5KA15	13.5	16.3	1.0	12.1	1.0	10	68.2	22.0	0.084
1.5KA16A 15.2 16.8 1.0 13.6 1.0 10 66.7 22.5 0.08 1.5KA18 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 1.5KA18 17.1 18.9 1.0 15.3 1.0 10 59.5 25.2 0.08 1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 47.0 31.9 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24 22.8 25.2 1.0 20.5 1.0 </td <td>1.5KA15A</td> <td>14.3</td> <td>15.8</td> <td>1.0</td> <td>12.8</td> <td>1.0</td> <td>10</td> <td>70.8</td> <td>21.2</td> <td>0.084</td>	1.5KA15A	14.3	15.8	1.0	12.8	1.0	10	70.8	21.2	0.084
1.5KA18 16.2 19.8 1.0 14.5 1.0 10 56.6 26.5 0.08 1.5KA18A 17.1 18.9 1.0 15.3 1.0 10 59.5 25.2 0.08 1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 </td <td>1.5KA16</td> <td>14.4</td> <td>17.6</td> <td>1.0</td> <td>12.9</td> <td>1.0</td> <td>10</td> <td>63.8</td> <td>23.5</td> <td>0.086</td>	1.5KA16	14.4	17.6	1.0	12.9	1.0	10	63.8	23.5	0.086
1.5KA18A 17.1 18.9 1.0 15.3 1.0 10 59.5 25.2 0.08 1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20A 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA20A 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0	1.5KA16A	15.2	16.8	1.0	13.6	1.0	10	66.7	22.5	0.086
1.5KA20 18.0 22.0 1.0 16.2 1.0 10 51.5 29.1 0.09 1.5KA20A 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22 20.9 23.1 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA24 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24A 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA30 27.0 33.0 1.0 23.1 1.0 </td <td>1.5KA18</td> <td>16.2</td> <td>19.8</td> <td>1.0</td> <td>14.5</td> <td>1.0</td> <td>10</td> <td>56.6</td> <td>26.5</td> <td>0.088</td>	1.5KA18	16.2	19.8	1.0	14.5	1.0	10	56.6	26.5	0.088
1.5KA20A 19.0 21.0 1.0 17.1 1.0 10 54.2 27.7 0.09 1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22 20.9 23.1 1.0 18.8 1.0 10 47.0 31.9 0.09 1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24A 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24A 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.	1.5KA18A	17.1	18.9	1.0	15.3	1.0	10	59.5	25.2	0.088
1.5KA22 19.8 24.2 1.0 17.8 1.0 10 47.0 31.9 0.09 1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0<	1.5KA20	18.0	22.0	1.0	16.2	1.0	10	51.5	29.1	0.090
1.5KA22A 20.9 23.1 1.0 18.8 1.0 10 49.0 30.6 0.09 1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27A 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 44.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA20A	19.0	21.0	1.0	17.1	1.0	10	54.2	27.7	0.090
1.5KA24 21.6 26.4 1.0 19.4 1.0 10 43.2 34.7 0.09 1.5KA24A 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27A 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 44.5 43.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA22	19.8	24.2	1.0	17.8	1.0	10	47.0	31.9	0.092
1.5KA24A 22.8 25.2 1.0 20.5 1.0 10 45.2 33.2 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA22A	20.9	23.1	1.0	18.8	1.0	10	49.0	30.6	0.092
1.5KA27 24.3 29.7 1.0 21.8 1.0 10 38.4 39.1 0.09 1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA24	21.6	26.4	1.0	19.4	1.0	10	43.2	34.7	0.094
1.5KA27A 25.7 28.4 1.0 23.1 1.0 10 40.0 37.5 0.09 1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA24A	22.8	25.2	1.0	20.5	1.0	10	45.2	33.2	0.094
1.5KA30 27.0 33.0 1.0 24.3 1.0 10 34.5 43.5 0.09 1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA27	24.3	29.7	1.0	21.8	1.0	10	38.4	39.1	0.096
1.5KA30A 28.5 31.5 1.0 25.6 1.0 10 36.2 41.4 0.09 1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA27A	25.7	28.4	1.0	23.1	1.0	10	40.0	37.5	0.096
1.5KA33 29.7 36.3 1.0 26.8 1.0 10 31.4 47.7 0.09	1.5KA30	27.0	33.0	1.0	24.3	1.0	10	34.5	43.5	0.097
	1.5KA30A	28.5	31.5	1.0	25.6	1.0	10	36.2	41.4	0.097
1.5KA33A 31.4 34.7 1.0 28.2 1.0 10 32.8 45.7 0.09	1.5KA33	29.7	36.3	1.0	26.8	1.0	10	31.4	47.7	0.098
	1.5KA33A	31.4	34.7	1.0	28.2	1.0	10	32.8	45.7	0.098
1.5KA36 32.4 39.6 1.0 29.1 1.0 10 28.8 52.0 0.09	1.5KA36	32.4	39.6	1.0	29.1	1.0	10	28.8	52.0	0.099
1.5KA36A 34.2 37.8 1.0 30.8 1.0 10 30.1 49.9 0.09	1.5KA36A	34.2	37.8	1.0	30.8	1.0	10	30.1	49.9	0.099
1.5KA39 35.1 42.9 1.0 31.6 1.0 10 26.6 56.4 0.10	1.5KA39	35.1	42.9	1.0	31.6	1.0	10	26.6	56.4	0.100
1.5KA39A 37.1 41.0 1.0 33.3 1.0 10 27.8 53.9 0.10	1.5KA39A	37.1	41.0	1.0	33.3	1.0	10	27.8	53.9	0.100
1.5KA43 38.7 47.3 1.0 34.8 1.0 20 24.2 61.9 0.10	1.5KA43	38.7	47.3	1.0	34.8	1.0	20	24.2	61.9	0.101
1.5KA43A 40.9 45.2 1.0 36.8 1.0 20 25.3 59.3 0.10	1.5KA43A	40.9	45.2	1.0	36.8	1.0	20	25.3	59.3	0.101
1.5KA47 42.3 51.7 1.0 38.1 1.0 20 22.1 67.8 0.10	1.5KA47	42.3	51.7	1.0	38.1	1.0	20	22.1	67.8	0.101
1.5KA47A 44.7 49.4 1.0 40.2 1.0 20 23.1 64.8 0.10	1.5KA47A	44.7	49.4	1.0	40.2	1.0	20	23.1	64.8	0.101

Notes

 $^{(1)}~V_{BR}$ measured after I_T applied for 300 μs = square wave pulse or equivalent

⁽²⁾ Surge current waveform per fig. 3 and derate per fig. 2
⁽³⁾ All terms and symbols are consistent with ANSI/IEEE C62.35

Revision: 09-Feb-11

Document Number: 88300

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Vishay General Semiconductor

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
1.5KA6.8AHE3/54 (1)	0.916	54	1400	13" diameter paper tape and reel			

Note

(1) AEC-Q101 qualified

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

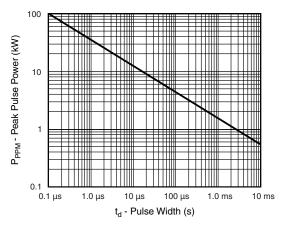


Fig. 1 - Peak Pulse Power Rating Curve

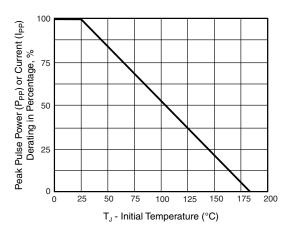


Fig. 2 - Pulse Power or Current vs. Initial Junction Temperature

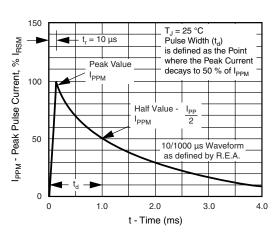


Fig. 3 - Pulse Waveform

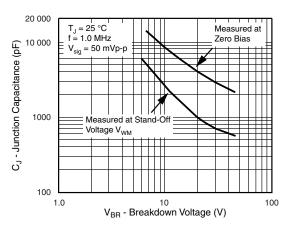


Fig. 4 - Typical Junction Capacitance Unidirectional



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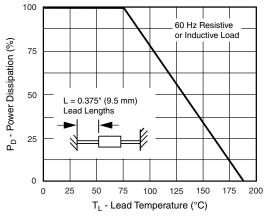


Fig. 5 - Power Derating Curve

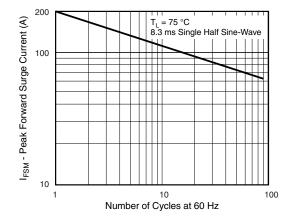
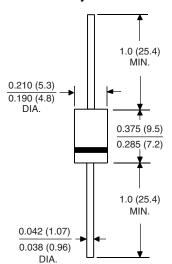


Fig. 6 - Maximum Non-Repetitive/Peak Forward Surge Current







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