

# Protection devices



## Selection guide





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## IEC61000-4-2 ESD protection

Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
<b>Bidirectional</b>										
ESDARF01-1BM2	1	> 8/15	0.1	1	0.7	3	-	-	125	SOD-882
ESDARF02-1BU2CK	1	> 8/20	3.6	0.1	5	0.2	-	-	150	ST0201
ESDALCL5-1BM2	1	> 8/15	1	0.001	5	26	-	-	150	SOD-882
ESDALC5-1BM2	1	> 8/15	5	0.1	5	27	-	-	125	SOD-882
ESDALC5-1BT2	1	> 8/15	5	0.06	5	27	-	-	125	SOD-882T
ESDALC5-1BT2Y(**)	1	> 8/15	5	0.06	5	27	-	-	125	SOD-882T
ESDAULC5-1BF4	1	> 30/30	3	0.07	5.8	1.5	-	4	150	ST0201
ESDALC5-1BF4	1	> 8/15	5	0.1	5.8	10	-	-	150	ST0201
ESDA5-1BF4	1	> 8/15	5	0.1	5.8	45	-	-	150	ST0201
ESDARF02-1BU2	1	> 8/15	3	0.07	6	0.24	-	17	150	ST0201
ESDAXLC6-1BU2K	1	> 8/20	3	0.07	6	0.24	-	17	150	ST0201
ESDAXLC6-1BT2	1	> 8/15	6	0.07	6	0.4	-	-	150	SOD-882T
ESDAXLC6-1BT2Y(**)	1	> 8/15	6	0.07	6	0.4	-	-	150	SOD-882T
ESDAXLC6-1BU2	1	> 8/15	3	0.07	6	0.4	-	-	150	ST0201
ESDAVLC6-1BV2	1	> 12/15	3	0.05	6	7.5	-	-	150	ST01005
ESDALC6V1-1BU2	1	> 8/15	3	0.1	6.1	5	-	-	125	ST0201
ESDALC8-1BF4	1	> 8/15	6	0.05	7	30	-	-	150	ST0201
ESDAVLC8-1BM2	1	> 8/15	3	0.05	8.5	4.5	-	-	125	SOD-882
ESDAVLC8-1BT2	1	> 8/15	3	0.05	8.5	4.5	-	-	125	SOD-882T
ESDAVLC8-1BT2Y(**)	1	> 8/15	3	0.05	8.5	4.5	-	-	125	SOD-882T
ESDAVLC8-1BU2	1	> 8/15	3	0.1	8.5	5	-	-	125	ST0201

Note: (\*) Qualified in Q3/2016, (\*\*) Automotive-grade (AEC-Q101 qualified)

Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
ESDAVLC12-1BV2	1	> 8/15	10.5	0.07	12	7	-	-	125	ST01005
ESDALC14-1BF4	1	> 8/15	12	0.1	14	22	-	-	150	ST0201
ESDA14V2-1BF3	1	> 8/15	12	0.5	14.2	10	-	-	125	CSP 400 $\mu\text{m}$
ESDAXLC18-1BF4	1	> 10/30	18	0.03	19	0.45	-	13	150	ST0201
ESDL20-1BF4(*)	1	> 20/30	20	0.01	22	13	-	0.7	150	ST0201
ESDLIN03-1BWY(**)	1	> 30/30	26.5	0.01	27	3	-	0.3	175	SOT323-3L
ESDLIN1524BJ(**)	1	> 30/30	15/24	0.05	17,1/25,4	16	-	-	150	SOD-323
ESDV5-1BF4(*)	1	> 12/30	5.5	0.1	5.8	5	-	2	150	ST0201
ESDZV5-1BF4(*)	1	> 18/30	5.5	0.1	5.8	6	-	-	150	ST0201
ESDZV5H-1BF4(*)	1	> 8/15	5.5	0.1	7	4	-	1	150	ST0201
ESDA14V2-2BF3	2	> 8/15	12	0.5	14.2	12	-	-	125	CSP 400 $\mu\text{m}$
ESDCAN03-2BWY(**)	2	> 30/30	24	0.01	25	3	-	0.3	175	SOT323-3L
ESDCAN01-2BLY(**)	2	> 30/30	24	0.1	25	30 max	-	0.1	150	SOT23-3L
ESDCAN02-2BWY(**)	2	> 30/30	26.5	0.01	27	3	-	0.3	175	SOT323-3L
ESDCAN24-2BLY(**)	2	> 30/30	24	0.1	27	30 max	-	0.1	150	SOT23-3L
ESDAULC6-3BP6	3	> 8/15	5	0.5	6	1	-	-	150	SOT-666
ESDAVLC5-4BX4	4	> 8/15	3	0.05	5.5	10	-	-	150	QFN-4L
ESDALC5-4BN4	4	> 8/15	5	0.06	5.5	13	-	-	125	QFN-4L
ESDA6V1BC6	4	> 8/15	5	1	6.1	20	-	-	150	SOT23-6L
ESDA6V1-4BC6	4	> 8/15	3	1	6.1	45	-	-	150	SOT23-6L
ESDAVLC8-4BN4	4	> 8/15	3	0.05	8.5	4.5	-	-	150	QFN-4L
DALC208SC6	4	> 8/15	5	1	9	7	-	-	150	SOT23-6L
DALC208SC6Y(**)	4	> 8/15	5	1	9	7	-	-	150	SOT23-6L
ESDA14V2-4BF2	4	> 8/15	12	1	14.2	15	-	-	125	CSP 500 $\mu\text{m}$

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Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
ESDA14V2BP6	4	> 8/15	12	1	14.2	20	-	-	125	SOT-666
ESDA14V2-4BF3	4	> 8/15	12	0.5	14.2	15 (max)	-	-	125	CSP 400 $\mu\text{m}$
DA108S1	4	> 8/15	15	2	18	34	-	-	150	SO-8
ESDA25-4BP6	4	> 8/15	24	1	25	22	-	-	150	SOT-666
ESDAVLC7-5BU6	5	> 8/15	6	0.03	7	5	-	-	150	QFN-6L
DALC112S1	6	> 6/8	15	2	18	7	-	-	150	SO-8
DA112S1	6	> 8/15	15	2	18	34	-	-	150	SO-8
ESDA25B1	6	> 8/15	24	2	25	15	-	-	150	SO-8
<b>Unidirectional</b>										
ESDA5-1F4	1	> 30/30	5.5	100	5.8	110	-	-	150	ST0201
ESDAULC6-1U2	1	> 8/15	3	0.1	6	0.8	-	5.2	150	ST0201
ESDAVLC6-1V2	1	> 12/15	3	0.05	6	7.5	-	-	150	ST01005
ESDAXLC6-1MY2	1	> 8/15	3	0.1	6	0.35 max	-	-	150	SOD-882
ESDALC6-1U2	1	> 8/15	3	0.1	6.1	12	-	-	150	ST0201
ESDALC6V1-1U2	1	> 8 / -	3	0.1	6.1	12	-	-	125	ST0201
ESDALC6V1-1M2	1	> 8/15	3	0.1	6.1	22	-	-	125	SOD-882
ESDA7P60-1U1M	1	> 30/30	5.5	0.2	6.4	450	-	-	150	DFN-2L
ESDA8P80-1U1M	1	> 30/30	6.3	0.2	6.9	480	-	-	150	DFN-2L
ESDA8V2-1J	1	> 8/15	5	0.5	8.2	210	-	-	125	SOD-323
ESDA8V2-1MX2	1	> 8/15	5	0.5	8.2	350	-	-	125	QFN 2L
ESDALC12-1T2	1	> 8/15	10	0.2	12	15	-	-	125	SOD-882T
ESDA12-1K	1	> 8/15	10	0.5	12	200	-	-	150	SOD523
ESDA13P70-1U1M	1	> 30/30	12	0.2	12.5	390	-	-	150	DFN-2L
ESDA15P60-1U1M	1	> 30/30	13.2	0.05	13.6	335	-	-	150	DFN-2L

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Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
ESDAVLC14-1V2	1	> 12/15	12	0.1	14	7.5	-	-	150	ST01005
ESDALC14V2-1U2	1	> 8/16	3	0.1	14.2	6	-	-	125	ST0201
ESDAVLC14-1U2	1	> 8/15	12	0.1	14.2	6	-	-	125	ST0201
ESDA17P50-1U1M	1	> 30/30	15	0.05	15.6	290	-	-	150	DFN-2L
ESDA18-1F4	1	> 8/15	12	0.02	16	120	-	-	125	CSP 300 $\mu\text{m}$
ESDA18-1F2	1	> 8/15	10	0.5	16	230	-	-	125	CSP 500 $\mu\text{m}$
ESDA18-1K	1	> 8/15	16	0.5	18	200	-	-	150	SOD523
ESDA20P50-1U1M	1	> 30/30	18	0.05	18.5	240	-	-	150	DFN-2L
ESDA25P35-1U1M	1	> 30/30	22	0.2	23.3	190	-	-	150	DFN-2L
ESDA5V3L	2	> 8/15	3	2	5.3	220	-	-	150	SOT-23
ESDA5V3LY(*)	2	> 8/15	3	2	5.3	220	-	-	150	SOT-23
USBULC6-2F7	2	> 10/30	3	0.07	5.5	1	-	4.5	125	CSP 350 $\mu\text{m}$
HSP061-2N4	2	> 8/15	3	0.1	6	0.6	0.3	6	150	QFN-4L
USBULC6-2N4	2	> 8/15	3	0.1	6	0.6	-	6	150	QFN-4L
HSP062-2M6	2	> 8/15	5	0.5	6	0.8	0.55	6	125	QFN-6L
HSP061-2M6	2	> 8/15	5	0.5	6	0.85	0.42	6	125	QFN-6L
USBULC6-2M6	2	> 8/15	5	0.5	6	0.95	0.5	6	150	QFN-6L
USBULC6-2F4	2	> 8/15	3	0.1	6	1	-	5	125	CSP 300 $\mu\text{m}$
ESDALCL6-2SC6	2	> 8/15	1	0.001	6	2.5	-	-	125	SOT23-6L
USBLC6-2P6	2	> 8/15	5	1	6	2.5	1.2	3	125	SOT-666
USBLC6-2SC6	2	> 8/15	5	1	6	2.5	1.2	3	125	SOT23-6L
USBLC6-2SC6Y(**)	2	> 8/15	5	1	6	2.5	1.2	3	125	SOT23-6L
USBULC6-2F3	2	> 8/15	3	0.1	6	1.2 (max)	-	4	125	CSP 400 $\mu\text{m}$
ESDALC6V1M3	2	> 8/15	5	0.5	6.1	11	-	-	125	SOT883

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Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
ESDA6V1L	2	> 8/15	5.25	20	6.1	140	-	-	150	SOT-23
ESDA6V1LY <sup>(*)</sup>	2	> 8/15	5.25	20	6.1	140	-	-	150	SOT-23
ESDA14V2L	2	> 8/15	12	5	14.2	90	-	-	150	SOT-23
ESDA14V2LY <sup>(**)</sup>	2	> 8/15	12	5	14.2	90	-	-	150	SOT-23
ESDA25L	2	> 8/15	24	1	25	50	-	-	150	SOT-23
ESDA25LY <sup>(*)</sup>	2	> 8/15	24	1	25	50	-	-	150	SOT-23
ESDA25W	2	> 8/15	24	1	25	65	-	-	125	SOT323-3L
USBULC6-3F3	3	> 8/15	3	0.1	4	1	-	8.5	125	CSP 400 $\mu\text{m}$
ESDA5V3SC5	4	> 8/15	3	2	5.3	280	-	-	150	SOT23-5L
ESDA5V3SC6	4	> 8/15	3	2	5.3	280	-	-	150	SOT23-6L
ESDA5V3SC6Y <sup>(**)</sup>	4	> 8/15	3	2	5.3	280	-	-	150	SOT23-6L
HSP051-4M10	4	> 8/15	3	0.07	6	0.5	0.3	10	150	QFN-10L
HSP051-4N10	4	> 8/15	3	0.07	6	0.5	0.3	10	150	QFN-10L
HSP061-4NY8	4	> 8/15	5	0.1	6	0.5	-	6	150	QFN 2x1-8L
HSP061-4M10	4	> 8/15	3	0.07	6	0.6	0.3	8.7	150	QFN-10L
HDMIULC6-4F3	4	> 8/15	3	0.1	6	0.7	0.05	7	125	CSP 400 $\mu\text{m}$
DVIULC6-4SC6	4	> 8/15	5	0.5	6	0.85	0.42	6	125	SOT23-6L
DVIULC6-4SC6Y <sup>(**)</sup>	4	> 8/15	5	0.5	6	0.85	0.42	6	125	SOT23-6L
HDMIULC6-4SC6	4	> 8/15	5	0.5	6	0.85	0.42	6	125	SOT23-6L
DSILC6-4P6	4	> 8/15	5	0.5	6	2	1	2.2	125	SOT-666
DSILC6-4F2	4	> 8/15	5	0.5	6	2.5	1.25	2.2	125	CSP 500 $\mu\text{m}$
ESDALCL6-4P6A	4	> 8/15	1	0.001	6	2.5	-	-	150	SOT-666
USBLC6-4SC6	4	> 8/15	5	2	6	3	1.85	0.8	125	SOT23-6L
USBLC6-4SC6Y <sup>(**)</sup>	4	> 8/15	5	2	6	3	1.85	0.8	125	SOT23-6L

Note: (\*) Qualified in Q3/2016, (\*\*) Automotive-grade (AEC-Q101 qualified)

Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ (pF)	typ (pF)	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
DSILC6-4SC6	4	> 8/ -	5	0.5	6	4.1	2.1	0.83	125	SOT23-6L
USB6B1RL	4	> 8/15	5.25	10	6	15	25	-	150	SO-8
ESDALC6-4N4	4	> 8/15	3	0.1	6.1	9.5	-	-	150	QFN-4L
ESDALC6V1P5	4	> 8/15	3	0.1	6.1	12	-	-	150	SOT-665
ESDALC6V1P6	4	> 8/15	3	0.1	6.1	12	-	-	150	SOT-666
ESDALC6V1W5	4	> 8/15	3	0.1	6.1	12	-	-	150	SOT323-5L
ESDA6V1P6	4	> 8/15	3	0.5	6.1	70	-	-	150	SOT-666
ESDA6V1W5	4	> 8/15	3	1	6.1	90	-	-	125	SOT323-5L
ESDA6V1SC5	4	> 8/15	5.25	20	6.1	190	-	-	150	SOT23-5L
ESDA6V1SC6	4	> 8/15	5.25	20	6.1	190	-	-	150	SOT23-6L
ESDA6V1SC6Y <sup>(*)</sup>	4	> 8/15	5.25	20	6.1	190	-	-	150	SOT23-6L
ESDA14V2SC5	4	> 8/15	12	5	14.2	100	-	-	150	SOT23-5L
ESDA14V2SC5Y <sup>(**)</sup>	4	> 8/15	12	5	14.2	100	-	-	150	SOT23-5L
ESDA14V2SC6	4	> 8/15	12	5	14.2	100	-	-	150	SOT23-6L
ESDA19SC6	4	> 8/15	15	0.1	19	80	-	-	125	SOT23-6L
ESDA25W5	4	> 8/15	24	1	25	30	-	-	125	SOT323-3L
ESDA25SC6	4	> 8/15	24	1	25	60	-	-	150	SOT23-6L
ESDA25SC6Y <sup>(*)</sup>	4	> 8/15	24	1	25	60	-	-	150	SOT23-6L
ESDALC6-5T6	5	> 8/15	3	0.1	6.1	7	-	-	150	QFN-6L
ESDA6V1-5T6	5	> 8/15	3	0.1	6.1	12	-	-	125	QFN 6L
ESDALC6V1-5M6	5	> 8/15	3	0.07	6.1	12	-	-	125	QFN-6L
ESDALC6V1-5P6	5	> 8/15	3	0.07	6.1	12	-	-	125	SOT-666
ESDALC6V1-5P6M	5	> 8/15	3	0.07	6.1	12	-	-	125	SOT-666
ESDALC6V1-5T6	5	> 8/15	3	0.1	6.1	12	-	-	125	QFN 6L

Note: (\*) Qualified in Q3/2016, (\*\*) Automotive-grade (AEC-Q101 qualified)



Part number	Number of lines	IEC 61000-4-2 contact/air	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM}$	Breakdown voltage $V_{BR} @ I_R = 1 \text{ mA}$	Capacitance I/O to GND @ 0 V bias	Capacitance I/O to I/O @ 0 V	Bandwidth @ -3 dB	Junction temperature	Package
		(kV)	(V)	max ( $\mu\text{A}$ )	min (V)	typ ( $\mu\text{F}$ )	typ ( $\mu\text{F}$ )	GHz	max (Tj) ( $^{\circ}\text{C}$ )	
<b>ESDA6V1-5SC6</b>	5	> 8/15	3	1	6.1	50	-	-	150	SOT23-6L
<b>ESDA6V1-5W6</b>	5	> 8/15	3	1	6.1	50	-	-	125	SOT323-6L
<b>ESDA6V1-5M6</b>	5	> 8/15	3	0.5	6.1	70	-	-	125	QFN-6L
<b>ESDA6V1-5P6</b>	5	> 8/15	3	0.5	6.1	70	-	-	150	SOT-666
<b>ESDA17-5SC6</b>	5	> 8/15	14	0.075	17	35	-	-	125	SOT23-6L
<b>ESDA6V1U1</b>	6	> 8/15	5	2	6.1	100	-	-	125	S0-8
<b>HSP061-8M16</b>	8	> 8/15	5	0.5	6	0.6	-	6.3	150	QFN-16L
<b>ESDAULC6-8F3</b>	8	> 8/15	3	0.1	6	1	-	-	85	CSP 400 $\mu\text{m}$

Note: (\*) Qualified in Q3/2016, (\*\*) Automotive-grade (AEC-Q101 qualified)

# IEC61000-4-5 8-20 $\mu$ s TVS

Part number	Number of protected lines	Peak pulse power (PPP) 8/20 $\mu$ s	Peak pulse current IPP 8/20 $\mu$ s @ 25 °C	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(A)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
LFTVS10-1F3	1	350	5	8	0.5	10	15	13	1	CSP 400 $\mu$ m
LFTVS18-1F3	1	350	5	10	0.5	18	1	19	1	CSP 400 $\mu$ m
ESDA18-1K	1	500	12	16	0.1	16	1	34	1	SOD-523
ESDA18-1F4	1	350	13	12	0.1	16	1	20	1	CSP 300 $\mu$ m
ESDA12-1K	1	500	16	10	0.1	12	1	28	1	SOD-523
ESDA18-1F2	1	700	20	12	0.1	16	1	20	1	CSP 500 $\mu$ m
LBP01-0810B	1	-	24	3	0.1	8	3	-	-	SMB
ESDA8V2-1J	1	500	24	6	0.1	8	1	20	24	SOD-323
LBP01-0803SC5	1	-	24	3	0.1	8	2	-	-	SOT23-5L
SPT02-236DDB	1	1400	25	36	1	38	1	46	2	QFN-2L
ESDA25P35-1U1M	1	1400	35	22	0.2	23.3	1	45	35	DFN-2L
ESDA20P50-1U1M	1	1100	40	18	0.05	18.5	1	-	40	DFN-2L
ESDA17P50-1U1M	1	1100	46	15	0.05	15.6	1	26.5	46	DFN-2L
ESDA15P60-1U1M	1	1200	57	13.2	0.05	13.6	1	21.7	50	DFN-2L
ESDA7P60-1U1M	1	700	60	5.5	0.2	6.4	1	11.6	60	DFN-2L
ESDA13P70-1U1M	1	1300	70	12	0.2	12.5	1	20	60	DFN-2L
ESDA8P80-1U1M	1	1100	80	6.3	0.2	6.9	1	13.2	80	DFN-2L
LNBTVS3-220U	1	8750	250	20	1	22	1	35	250	SMB
LNBTVS4-220S	1	11690	334	20	1	22	1	35	334	SMC
LNBTVS4-221S	1	10688	334	20	1	22	1	32	334	SMC
LNBTVS4-222S	1	10020	334	20	1	22	1	30	334	SMC
LNBTVS4-304S	1	15030	334	28	1	30	1	45	334	SMC

Part number	Number of protected lines	Peak pulse power (PPP) 8/20 $\mu$ s	Peak pulse current IPP 8/20 $\mu$ s @ 25 °C	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(A)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
LNBTVS6-220S	1	17500	500	20	1	22	1	35	500	SMC
LNBTVS6-221S	1	16000	500	20	1	22	1	32	500	SMC
STIEC45-24ACS	1	21000	500	24	0.2	26.7	1	42	500	SMC
STIEC45-24AS	1	21000	500	24	0.2	26.7	1	42	500	SMC
STIEC45-26ACS	1	22500	500	26	0.2	28.9	1	45	500	SMC
STIEC45-26AS	1	22500	500	26	0.2	28.9	1	45	500	SMC
LNBTVS6-304S	1	22500	500	28	1	30	1	45	500	SMC
STIEC45-27AS	1	23500	500	27	0.2	30	1	47	500	SMC
STIEC45-28ACS	1	24500	500	28	0.2	31.1	1	49	500	SMC
STIEC45-28AS	1	24500	500	28	0.2	31.1	1	49	500	SMC
STIEC45-30ACS	1	27500	500	30	0.2	33.3	1	55	500	SMC
STIEC45-30AS	1	27500	500	30	0.2	33.3	1	55	500	SMC
STIEC45-33ACS	1	29500	500	33	0.2	36.7	1	59	500	SMC
STIEC45-33AS	1	29500	500	33	0.2	36.7	1	59	500	SMC
SPT02-236DDB	2	1400	25	36	1	38	1	46	2	QFN-2L
SPT01-335DEE	3	92	2	36	1	38	1	46	2	QFN 3x3
PEP01-5841	4	2700	24	58	0.2	64.4	1	100	24	SO-8
SLVU2.8-4A1	4	600	30	2.8	0.2	-	-	15	24	SO-8
ITA6V5B1	4	300	40	5	10	6.5	1	12	25	SO-8
ITA10B1	4	300	40	8	4	10	1	19	25	SO-8
ITA18B1	4	300	40	15	4	18	1	29	25	SO-8
ITA25B1	4	300	40	24	4	25	1	38	25	SO-8
ITA6V1U1	6	300	40	5	10	6.1	1	12	25	SO-8
SLVU2.8-8A1	8	600	30	2.8	0.2	-	-	15	24	SO-8

Part number	Number of protected lines	Peak pulse power (PPP) 8/20 $\mu$ s	Peak pulse current IPP 8/20 $\mu$ s @ 25 °C	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(A)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
STIEC45-28AS	1	24500	500	28	0.2	31.1	1	49	500	SMC
STIEC45-30AS	1	27500	500	30	0.2	33.3	1	55	500	SMC
STIEC45-33AS	1	29500	500	33	0.2	36.7	1	59	500	SMC

# Standard 10/1000 $\mu$ s TVS

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM} @ V_{RM} @ 25\text{ °C}$	Breakdown voltage $V_{BR} @ I_R$	$I_R$	Clamping voltage $V_{CL} @$	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMX1J7.5A-TR	-	85	800	7.5	1	8.2	1	20	40	QFN-2L
BZW04-5V8	BZW04-5V8B	400	2200	5.8	10	6.45	10	13.4	174	DO-15
BZW04-7V8	BZW04-7V8B	400	2200	7.8	10	8.65	1	17.1	135	DO-15
BZW04-10	BZW04-10B	400	2200	10.2	5	11.4	1	21.7	106	DO-15
BZW04-13	BZW04-13B	400	2200	12.8	5	14.3	1	27.2	85	DO-15
BZW04-15	BZW04-15B	400	2200	15.3	1	17.1	1	32.5	71	DO-15
BZW04-26	BZW04-26B	400	2200	25.6	0.5	28.5	1	53.5	43	DO-15
BZW04-28	BZW04-28B	400	2200	28.2	0.5	31.4	1	59	39	DO-15
BZW04-31	BZW04-31B	400	2200	30.8	0.5	34.2	1	64.3	36	DO-15
BZW04-33	BZW04-33B	400	2200	33.3	0.5	37.1	1	69.7	33	DO-15
BZW04-37	BZW04-37B	400	2200	37	0.5	40.9	1	76.7	30	DO-15
BZW04-48	BZW04-48B	400	2200	47.8	0.5	53.2	1	100	23	DO-15
BZW04-58	BZW04-58B	400	2200	58	0.5	64.6	1	121	19	DO-15
BZW04-70	BZW04-70B	400	2200	70	0.5	77.9	1	146	16	DO-15
BZW04-239	BZW04-239B	400	2200	239	0.5	266	1	494	4.6	DO-15
BZW04-299	BZW04-299B	400	2200	299	0.5	332	1	618	3.7	DO-15
BZW04-342	BZW04-342B	400	2200	342	0.5	380	1	706	3.2	DO-15
BZW04-376	BZW04-376B	400	2200	376	0.5	418	1	776	3	DO-15
SMAJ5.0A-TR	SMAJ5.0CA-TR	400	2200	5	20	6.4	10	13.4	174	SMA
SMAJ6.0A-TR	SMAJ6.0CA-TR	400	2200	6	20	6.7	10	13.7	170	SMA
SMAJ6.5A-TR	SMAJ6.5CA-TR	400	2200	6.5	20	7.2	10	14.5	160	SMA
SMAJ8.5A-TR	SMAJ8.5CA-TR	400	2200	8.5	20	9.4	1	19.5	124	SMA
SMAJ10A-TR	SMAJ10CA-TR	400	2200	10	0.2	11.1	1	21.7	106	SMA

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMAJ12A-TR	SMAJ12CA-TR	400	2200	12	0.2	13.3	1	25.3	91	SMA
SMAJ13A-TR	SMAJ13CA-TR	400	2200	13	0.2	14.4	1	27.2	85	SMA
SMAJ15A-TR	SMAJ15CA-TR	400	2200	15	0.2	16.7	1	32.5	71	SMA
SMAJ18A-TR	SMAJ18CA-TR	400	2200	18	0.2	20	1	39.3	59	SMA
SMAJ20A-TR	SMAJ20CA-TR	400	2200	20	0.2	22.2	1	42.8	54	SMA
SMAJ22A-TR	SMAJ22CA-TR	400	2200	22	0.2	24.4	1	48.3	48	SMA
SMAJ24A-TR	SMAJ24CA-TR	400	2200	24	0.2	26.7	1	50	46	SMA
SMAJ26A-TR	SMAJ26CA-TR	400	2200	26	0.2	28.9	1	53.5	43	SMA
SMAJ28A-TR	SMAJ28CA-TR	400	2200	28	0.2	31.1	1	59	39	SMA
SMAJ30A-TR	SMAJ30CA-TR	400	2200	30	0.2	33.3	1	64.3	36	SMA
SMAJ33A-TR	SMAJ33CA-TR	400	2200	33	0.2	36.7	1	69.7	33	SMA
SMAJ40A-TR	SMAJ40CA-TR	400	2200	40	0.2	44.4	1	84	27	SMA
SMAJ43A-TR	SMAJ43CA-TR	400	2200	43	0.2	47.8	1	91	25	SMA
SMAJ48A-TR	SMAJ48CA-TR	400	2200	48	0.2	53.3	1	100	23	SMA
SMAJ58A-TR	SMAJ58CA-TR	400	2200	58	0.2	64.4	1	121	19	SMA
SMAJ70A-TR	SMAJ70CA-TR	400	2200	70	0.2	77.8	1	146	16	SMA
SMAJ85A-TR	SMAJ85CA-TR	400	2200	85	0.2	94.4	1	178	13	SMA
SMAJ130A-TR	SMAJ130CA-TR	400	2200	130	0.2	144	1	265	9	SMA
SMAJ154A-TR	SMAJ154CA-TR	400	2200	154	0.2	171	1	317	7	SMA
SMAJ170A-TR	SMAJ170CA-TR	400	2200	170	0.2	189	1	353	6.5	SMA
SMAJ188A-TR	SMAJ188CA-TR	400	2200	188	0.2	209	1	388	6	SMA
SM4T6V7AY(*)	SM4T6V7CAY(*)	400	2300	5	20	6.4	10	13.4	174	SMA
SM4T7V6AY(*)	SM4T7V6CAY(*)	400	2300	6.5	20	7.2	10	14.5	160	SMA
SM4T10AY(*)	SM4T10CAY(*)	400	2300	8.5	20	9.4	1	19.5	124	SMA

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SM4T12AY(*)	SM4T12CAY(*)	400	2300	10	0.2	11.1	1	21.7	106	SMA
SM4T14AY(*)	SM4T14CAY(*)	400	2300	12	0.2	13.3	1	25.3	91	SMA
SM4T15AY(*)	SM4T15CAY(*)	400	2300	13	0.2	14.4	1	27.2	85	SMA
SM4T18AY(*)	SM4T18CAY(*)	400	2300	15	0.2	16.7	1	32.5	71	SMA
SM4T21AY(*)	SM4T21CAY(*)	400	2300	18	0.2	20	1	39.3	59	SMA
SM4T23AY(*)	SM4T23CAY(*)	400	2300	20	0.2	22.2	1	42.8	54	SMA
SM4T26AY(*)	SM4T26CAY(*)	400	2300	22	0.2	24.4	1	48.3	48	SMA
SM4T28AY(*)	SM4T28CAY(*)	400	2300	24	0.2	26.7	1	50	46	SMA
SM4T30AY(*)	SM4T30CAY(*)	400	2300	26	0.2	28.9	1	53.5	43	SMA
SM4T33AY(*)	SM4T33CAY(*)	400	2300	28	0.2	31.1	1	59	39	SMA
SM4T35AY(*)	SM4T35CAY(*)	400	2300	30	0.2	33.3	1	64.3	36	SMA
SM4T39AY(*)	SM4T39CAY(*)	400	2300	33	0.2	36.7	1	69.7	33	SMA
SM4T47AY(*)	SM4T47CAY(*)	400	2300	40	0.2	44.4	1	84	27	SMA
SM4T50AY(*)	SM4T50CAY(*)	400	2300	43	0.2	47.8	1	91	25	SMA
SM4T56AY(*)	SM4T56CAY(*)	400	2300	48	0.2	53.3	1	100	23	SMA
SM4T68AY(*)	SM4T68CAY(*)	400	2300	58	0.2	64.4	1	121	19	SMA
SM4T82AY(*)	SM4T82CAY(*)	400	2300	70	0.2	77.8	1	146	16	SMA
SMA4F5.0A-TR	-	400	2200	5	10	6.4	10	13.4	174	SMA Flat
SMM4F5.0A-TR	-	400	2200	5	10	6.46	10	13.3	174	STMiteFlat
SMM4F6.0A-TR	-	400	2200	6	10	6.65	10	13.7	170	STMiteFlat
SMM4F6.5A-TR	-	400	2200	6.5	10	7.13	10	14.5	160	STMiteFlat
SMM4F8.5A-TR	-	400	2200	8.5	10	9.5	1	19.5	124	STMiteFlat
SMM4F10A-TR	-	400	2200	10	0.2	11.4	1	21.7	106	STMiteFlat
SMM4F12A-TR	-	400	2200	12	0.2	13.3	1	25.3	91	STMiteFlat

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMM4F13A-TR	-	400	2200	13	0.2	14.3	1	27.2	85	STMiteFlat
SMM4F15A-TR	-	400	2200	15	0.2	17.1	1	32.5	71	STMiteFlat
SMM4F18A-TR	-	400	2200	18	0.2	20.9	1	39.3	59	STMiteFlat
SMM4F20A-TR	-	400	2200	20	0.2	22.8	1	42.8	54	STMiteFlat
SMM4F24A-TR	-	400	2200	24	0.2	26.6	1	50	46	STMiteFlat
SMM4F26A-TR	-	400	2200	26	0.2	28.5	1	53.5	43	STMiteFlat
SMM4F28A-TR	-	400	2200	28	0.2	31.4	1	59	39	STMiteFlat
SMM4F33A-TR	-	400	2200	33	0.2	37.1	1	69.7	33	STMiteFlat
BZW06-5V8	BZW06-5V8B	600	4000	5.8	1000	6.45	10	13.4	298	DO-15
BZW06-6V4	BZW06-6V4B	600	4000	6.4	500	7.13	10	14.5	276	DO-15
BZW06-10	BZW06-10B	600	4000	10.2	5	11.4	1	21.7	184	DO-15
BZW06-13	BZW06-13B	600	4000	12.8	5	14.3	1	27.2	147	DO-15
BZW06-15	BZW06-15B	600	4000	15.3	0.5	17.1	1	32.5	123	DO-15
BZW06-19	BZW06-19B	600	4000	18.8	0.5	20.9	1	39.3	102	DO-15
BZW06-23	BZW06-23B	600	4000	23.1	0.5	25.7	1	48.3	83	DO-15
BZW06-26	BZW06-26B	600	4000	25.6	0.5	28.5	1	53.5	75	DO-15
BZW06-28	BZW06-28B	600	4000	28.2	0.5	31.4	1	59	68	DO-15
BZW06-31	BZW06-31B	600	4000	30.8	0.5	34.2	1	64.3	62	DO-15
BZW06-33	BZW06-33B	600	4000	33.3	0.5	37.1	1	69.7	57	DO-15
BZW06-37	BZW06-37B	600	4000	37	0.5	40.9	1	76.7	52	DO-15
BZW06-48	BZW06-48B	600	4000	47.8	0.5	53.2	1	100	40	DO-15
BZW06-58	BZW06-58B	600	4000	58	0.5	64.6	1	121	33	DO-15
BZW06-171	BZW06-171B	600	4000	171	0.5	190	1	353	11.3	DO-15
BZW06-273	BZW06-273B	600	4000	273	0.5	304	1	564	7.1	DO-15



Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
BZW06-342	BZW06-342B	600	4000	342	0.5	380	1	706	5.7	DO-15
BZW06-376	BZW06-376B	600	4000	376	0.5	418	1	776	5.7	DO-15
P6KE6V8A	P6KE6V8CA	600	4000	5.8	10	6.45	10	13.4	298	DO-15
P6KE7V5A	P6KE7V5CA	600	4000	6.4	10	7.13	10	14.5	276	DO-15
P6KE10A	P6KE10CA	600	4000	8.55	1	9.5	1	18.6	215	DO-15
P6KE12A	P6KE12CA	600	4000	10	0.5	11.4	1	21.7	184	DO-15
P6KE15A	P6KE15CA	600	4000	12.8	0.5	14.3	1	27.2	147	DO-15
P6KE18A	P6KE18CA	600	4000	15.3	0.5	17.1	1	32.5	123	DO-15
P6KE24A	P6KE24CA	600	4000	20	0.5	22.8	1	42.8	93	DO-15
P6KE27A	P6KE27CA	600	4000	23.1	0.5	25.7	1	48.3	83	DO-15
P6KE30A	P6KE30CA	600	4000	25.6	0.5	28.5	1	53.5	75	DO-15
P6KE33A	P6KE33CA	600	4000	28.2	0.5	31.4	1	59	68	DO-15
P6KE36A	P6KE36CA	600	4000	30.8	0.5	34.2	1	64.3	62	DO-15
P6KE39A	P6KE39CA	600	4000	33.3	0.5	37.1	1	69.7	57	DO-15
P6KE47A	P6KE47CA	600	4000	40	0.5	44.7	1	84	48	DO-15
P6KE56A	P6KE56CA	600	4000	47.8	0.5	53.2	1	100	40	DO-15
P6KE68A	P6KE68CA	600	4000	58.1	0.5	64.6	1	121	33	DO-15
P6KE82A	P6KE82CA	600	4000	70.1	0.5	77.9	1	146	27	DO-15
P6KE150A	P6KE150CA	600	4000	128	0.5	143	1	265	15	DO-15
P6KE180A	P6KE180CA	600	4000	154	0.5	171	1	317	12.6	DO-15
P6KE200A	P6KE200CA	600	4000	171	0.5	190	1	353	11.3	DO-15
P6KE220A	P6KE220CA	600	4000	188	0.5	209	1	388	10.3	DO-15
P6KE250A	P6KE250CA	600	4000	213	0.5	237	1	442	9	DO-15
P6KE300A	P6KE300CA	600	4000	256	0.5	285	1	529	7.6	DO-15

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
P6KE400A	P6KE400CA	600	4000	342	0.5	380	1	706	5.7	DO-15
P6KE440A	P6KE440CA	600	4000	376	0.5	418	1	776	5.2	DO-15
SMLVT3V3		600	2000	3.3	200	4.1	1	10.3	200	SMB
SM6T6V8A	SM6T6V8CA	600	4000	5.8	20	6.45	10	13.4	298	SMB
SM6T7V5A	SM6T7V5CA	600	4000	6.4	20	7.13	10	14.5	276	SMB
SM6T10A	SM6T10CA	600	4000	8.55	20	9.5	1	18.6	215	SMB
SM6T12A	SM6T12CA	600	4000	10.2	0.2	11.4	1	21.7	184	SMB
SM6T15A	SM6T15CA	600	4000	12.8	0.2	14.3	1	27.2	147	SMB
SM6T18A	SM6T18CA	600	4000	15.3	0.2	17.1	1	32.5	123	SMB
SM6T22A	SM6T22CA	600	4000	18.8	0.2	20.9	1	39.3	102	SMB
SM6T24A	SM6T24CA	600	4000	20.5	0.2	22.8	1	42.8	93	SMB
SM6T27A	SM6T27CA	600	4000	23.1	0.2	25.7	1	48.3	83	SMB
SM6T30A	SM6T30CA	600	4000	25.6	0.2	28.5	1	53.5	75	SMB
SM6T33A	SM6T33CA	600	4000	28.2	0.2	31.4	1	59	68	SMB
SM6T36A	SM6T36CA	600	4000	30.8	0.2	34.2	1	64.3	62	SMB
SM6T39A	SM6T39CA	600	4000	33.3	0.2	37.1	1	69.7	57	SMB
SM6T56A	SM6T56CA	600	4000	47.6	0.2	53.2	1	100	40	SMB
SM6T68A	SM6T68CA	600	4000	58.1	0.2	64.6	1	121	33	SMB
SM6T100A	SM6T100CA	600	4000	85.5	0.2	95	1	178	22.5	SMB
SM6T150A	SM6T150CA	600	4000	128	0.2	143	1	265	15	SMB
SM6T200A	SM6T200CA	600	4000	171	0.2	190	1	353	11.3	SMB
SM6T220A	SM6T220CA	600	4000	188	0.2	209	1	388	10.3	SMB
-	SM6T250CAY(*)	600	4000	213	0.2	213	1	400	10	SMB
SM6T6V8AY(*)	SM6T6V8CAY(*)	600	4000	5.8	20	6.45	10	13.4	298	SMB

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SM6T7V5AY(*)	SM6T7V5CAY(*)	600	4000	6.4	20	7.13	10	14.5	276	SMB
SM6T10AY(*)	SM6T10CAY(*)	600	4000	8.55	20	9.5	1	18.6	215	SMB
SM6T12AY(*)	SM6T12CAY(*)	600	4000	10.2	0.2	11.4	1	21.7	184	SMB
SM6T15AY(*)	SM6T15CAY(*)	600	4000	12.8	0.2	14.3	1	27.2	147	SMB
SM6T16V5AY(*)	SM6T16V5CAY(*)	600	4000	14.1	0.2	15.7	1	29	136	SMB
SM6T18AY(*)	SM6T18CAY(*)	600	4000	15.3	0.2	17.1	1	32.5	123	SMB
SM6T22AY(*)	SM6T22CAY(*)	600	4000	18.8	0.2	20.9	1	39.3	102	SMB
SM6T24AY(*)	SM6T24CAY(*)	600	4000	20.5	0.2	22.8	1	42.8	93	SMB
SM6T27AY(*)	SM6T27CAY(*)	600	4000	23.1	0.2	25.7	1	48.3	83	SMB
SM6T30AY(*)	SM6T30CAY(*)	600	4000	25.6	0.2	28.5	1	53.5	75	SMB
SM6T33AY(*)	SM6T33CAY(*)	600	4000	28.2	0.2	31.4	1	59	68	SMB
SM6T36AY(*)	SM6T36CAY(*)	600	4000	30.8	0.2	34.2	1	64.3	62	SMB
SM6T39AY(*)	SM6T39CAY(*)	600	4000	33.3	0.2	37.1	1	69.7	57	SMB
SM6T42AY(*)	SM6T42CAY(*)	600	4000	36	0.2	40	1	76	52	SMB
SM6T47AY(*)	SM6T47CAY(*)	600	4000	40	0.2	44.4	1	84	48	SMB
SM6T56AY(*)	SM6T56CAY(*)	600	4000	47.6	0.2	53.2	1	100	40	SMB
SM6T68AY(*)	SM6T68CAY(*)	600	4000	58.1	0.2	64.6	1	121	33	SMB
SM6T75AY(*)	SM6T75CAY(*)	600	4000	64.1	0.2	71.3	1	134	30	SMB
SM6T82AY(*)	SM6T82CAY(*)	600	4000	70	0.2	77.8	1	146	27	SMB
SMA6F5.0A-TR	-	600	4000	5	10	6.4	10	13.4	298	SMA Flat
SMA6F12AVCL	-	600	4000	12	0.2	13.3	1	22.9	157	SMA Flat
SMA6F13A-TR	-	600	4000	13	0.2	14.4	1	23.9	147	SMA Flat
SMA6J5.0A-TR	SMA6J5.0CA-TR	600	4000	5	10	6.4	10	13.4	298	SMA
SMA6J6.0A-TR	SMA6J6.0CA-TR	600	4000	6	10	6.7	10	13.7	290	SMA

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMA6J6.5A-TR	SMA6J6.5CA-TR	600	4000	6.5	10	7.2	10	14.5	276	SMA
SMA6J8.5A-TR	SMA6J8.5CA-TR	600	4000	8.5	10	9.4	1	18.7	205	SMA
SMA6J10A-TR	SMA6J10CA-TR	600	4000	10	0.2	11.1	1	19.6	184	SMA
SMA6J12A-TR	SMA6J12CA-TR	600	4000	12	0.2	13.3	1	23.5	157	SMA
SMA6J13A-TR	SMA6J13CA-TR	600	4000	13	0.2	14.4	1	23.9	147	SMA
SMA6J15A-TR	SMA6J15CA-TR	600	4000	15	0.2	16.7	1	27.7	123	SMA
SMA6J18A-TR	SMA6J18CA-TR	600	4000	18	0.2	20	1	33.2	102	SMA
SMA6J20A-TR	SMA6J20CA-TR	600	4000	20	0.2	22.2	1	36.8	93	SMA
SMA6J24A-TR	SMA6J24CA-TR	600	4000	24	0.2	26.7	1	44.3	80	SMA
SMA6J26A-TR	SMA6J26CA-TR	600	4000	26	0.2	28.9	1	47.9	75	SMA
SMA6J28A-TR	SMA6J28CA-TR	600	4000	28	0.2	31.1	1	51.6	68	SMA
SMA6J33A-TR	SMA6J33CA-TR	600	4000	33	0.2	36.7	1	60.8	57	SMA
SMA6J40A-TR	SMA6J40CA-TR	600	4000	40	0.2	44.4	1	73.6	48	SMA
SMA6J48A-TR	SMA6J48CA-TR	600	4000	48	0.2	53.3	1	88.4	40	SMA
SMA6J58A-TR	SMA6J58CA-TR	600	4000	58	0.2	64.4	1	100	33	SMA
SMA6J70A-TR	SMA6J70CA-TR	600	4000	70	0.2	77.8	1	120	27	SMA
SMA6J85A-TR	SMA6J85CA-TR	600	4000	85	0.2	94	1	146	22.5	SMA
SMA6J100A-TR	SMA6J100CA-TR	600	4000	100	0.2	111	1	172	19	SMA
SMA6J130A-TR	SMA6J130CA-TR	600	4000	130	0.2	144	1	223	15	SMA
SMA6J154A-TR	SMA6J154CA-TR	600	4000	154	0.2	171	1	265	12.6	SMA
SMA6J170A-TR	SMA6J170CA-TR	600	4000	170	0.2	189	1	292	11.3	SMA
SMA6J188A-TR	SMA6J188CA-TR	600	4000	188	0.2	209	1	323	10.3	SMA
SMA6T6V7AY(*)	SMA6T6V7CAY(*)	600	4000	5	20	6.4	10	13.4	298	SMA
SMA6T7V6AY(*)	SMA6T7V6CAY(*)	600	4000	6.5	20	7.2	10	14.5	276	SMA

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMA6T10AY(*)	SMA6T10CAY(*)	600	4000	8.6	20	9.5	1	18.6	215	SMA
SMA6T12AY(*)	SMA6T12CAY(*)	600	4000	10.2	0.2	11.4	1	21.7	184	SMA
SMA6T14AY(*)	SMA6T14CAY(*)	600	4000	12	0.2	13.3	1	23.5	157	SMA
SMA6T15AY(*)	SMA6T15CAY(*)	600	4000	12.8	0.2	14.3	1	27.2	147	SMA
SMA6T18AY(*)	SMA6T18CAY(*)	600	4000	15.3	0.2	17.1	1	32.3	123	SMA
SMA6T22AY(*)	SMA6T22CAY(*)	600	4000	18.8	0.2	20.9	1	39.3	102	SMA
SMA6T24AY(*)	SMA6T24CAY(*)	600	4000	20.5	0.2	22.8	1	42.8	93	SMA
SMA6T28AY(*)	SMA6T28CAY(*)	600	4000	24	0.2	26.7	1	44.3	80	SMA
SMA6T30AY(*)	SMA6T30CAY(*)	600	4000	25.6	0.2	28.5	1	53.5	75	SMA
SMA6T33AY(*)	SMA6T33CAY(*)	600	4000	28.2	0.2	31.4	1	59	68	SMA
SMA6T39AY(*)	SMA6T39CAY(*)	600	4000	33.3	0.2	37.1	1	69.7	57	SMA
SMA6T47AY(*)	SMA6T47CAY(*)	600	4000	40	0.2	44.4	1	73.6	48	SMA
SMA6T56AY(*)	SMA6T56CAY(*)	600	4000	47.6	0.2	53.2	1	100	40	SMA
SMA6T68AY(*)	SMA6T68CAY(*)	600	4000	58.1	0.2	64.6	1	121	33	SMA
SMA6T82AY(*)	SMA6T82CAY(*)	600	4000	70	0.2	77.8	1	120	27	SMA
SMBJ5.0A-TR	SMBJ5.0CA-TR	600	4000	5	20	6.4	10	13.4	298	SMB
SMBJ6.0A-TR	SMBJ6.0CA-TR	600	4000	6	20	6.7	10	13.7	290	SMB
SMBJ6.5A-TR	SMBJ6.5CA-TR	600	4000	6.5	20	7.2	10	14.5	276	SMB
SMBJ8.5A-TR	SMBJ8.5CA-TR	600	4000	8.5	10	9.9	1	19.5	205	SMB
SMBJ10A-TR	SMBJ10CA-TR	600	4000	10	20	11.1	1	21.7	184	SMB
SMBJ12A-TR	SMBJ12CA-TR	600	4000	12	0.2	13.3	1	25.3	157	SMB
SMBJ13A-TR	SMBJ13CA-TR	600	4000	13	0.2	14.4	1	27.2	147	SMB
SMBJ15A-TR	SMBJ15CA-TR	600	4000	15	0.2	16.7	1	32.5	123	SMB
SMBJ16A-TR	SMBJ16CA-TR	600	4000	16	0.2	18.7	1	32.5	123	SMB

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMBJ18A-TR	SMBJ18CA-TR	600	4000	18	0.2	20	1	39.3	102	SMB
SMBJ20A-TR	SMBJ20CA-TR	600	4000	20	0.2	23.4	1	42.8	93	SMB
SMBJ22A-TR	SMBJ22CA-TR	600	4000	22	0.2	24.4	1	48.3	83	SMB
SMBJ24A-TR	SMBJ24CA-TR	600	4000	24	0.2	26.7	1	50	80	SMB
SMBJ26A-TR	SMBJ26CA-TR	600	4000	26	0.2	28.9	1	53.5	75	SMB
SMBJ28A-TR	SMBJ28CA-TR	600	4000	28	0.2	31.1	1	59	68	SMB
SMBJ30A-TR	SMBJ30CA-TR	600	4000	30	0.2	33.3	1	64.3	62	SMB
SMBJ33A-TR	SMBJ33CA-TR	600	4000	33	0.2	36.7	1	69.7	57	SMB
SMBJ36A-TR	SMBJ36CA-TR	600	4000	36	0.2	40	1	76	52	SMB
SMBJ40A-TR	SMBJ40CA-TR	600	4000	40	0.2	44.4	1	84	48	SMB
SMBJ48A-TR	SMBJ48CA-TR	600	4000	48	0.2	53.3	1	100	40	SMB
SMBJ58A-TR	SMBJ58CA-TR	600	4000	58	0.2	64.4	1	121	33	SMB
SMBJ70A-TR	SMBJ70CA-TR	600	4000	70	0.2	77.8	1	146	27	SMB
SMBJ85A-TR	SMBJ85CA-TR	600	4000	85	0.2	94.4	1	178	22.5	SMB
SMBJ100A-TR	SMBJ100CA-TR	600	4000	100	0.2	117	1	212	19	SMB
SMBJ130A-TR	SMBJ130CA-TR	600	4000	130	0.2	144	1	265	15	SMB
SMBJ154A-TR	SMBJ154CA-TR	600	4000	154	0.2	171	1	317	12.6	SMB
SMBJ170A-TR	SMBJ170CA-TR	600	4000	170	0.2	189	1	353	11.3	SMB
SMBJ188A-TR	SMBJ188CA-TR	600	4000	188	0.2	209	1	388	10.3	SMB
1.5KE6V8A	1.5KE6V8CA	1500	10000	5.8	1000	6.8	10	13.4	746	DO-201
1.5KE7V5A	1.5KE7V5CA	1500	10000	6.4	500	7.5	10	14.5	690	DO-201
1.5KE12A	1.5KE12CA	1500	10000	10.2	1	12	1	21.7	461	DO-201
1.5KE15A	1.5KE15CA	1500	10000	12.8	1	15	1	27.2	368	DO-201
1.5KE18A	1.5KE18CA	1500	10000	15.3	1	18	1	32.5	308	DO-201

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
1.5KE22A	1.5KE22CA	1500	10000	18.8	1	22	1	39.3	254	D0-201
1.5KE24A	1.5KE24CA	1500	10000	20.5	1	24	1	42.8	234	D0-201
1.5KE30A	1.5KE30CA	1500	10000	25.6	1	30	1	53.5	187	D0-201
1.5KE33A	1.5KE33CA	1500	10000	28.2	1	33	1	59	169	D0-201
1.5KE36A	1.5KE36CA	1500	10000	30.8	1	36	1	64.3	156	D0-201
1.5KE39A	1.5KE39CA	1500	10000	33.3	1	39	1	69.7	143	D0-201
1.5KE43A	1.5KE43CA	1500	10000	36.8	1	43	1	76.8	130	D0-201
1.5KE47A	1.5KE47CA	1500	10000	40.2	1	47	1	84	119	D0-201
1.5KE56A	1.5KE56CA	1500	10000	47.8	1	56	1	100	100	D0-201
1.5KE62A	1.5KE62CA	1500	10000	53	1	62	1	111	90	D0-201
1.5KE68A	1.5KE68CA	1500	10000	58.1	1	68	1	121	83	D0-201
1.5KE75A	1.5KE75CA	1500	10000	64.1	1	75	1	134	76	D0-201
1.5KE82A	1.5KE82CA	1500	10000	70.1	1	82	1	146	69	D0-201
1.5KE100A	1.5KE100CA	1500	10000	85.5	1	100	1	178	56	D0-201
1.5KE130A	1.5KE130CA	1500	10000	111	1	130	1	230	43	D0-201
1.5KE180A	1.5KE180CA	1500	10000	154	1	180	1	317	31.5	D0-201
1.5KE200A	1.5KE200CA	1500	10000	171	1	200	1	353	28	D0-201
1.5KE220A	1.5KE220CA	1500	10000	188	1	220	1	388	26	D0-201
1.5KE250A	1.5KE250CA	1500	10000	213	1	250	1	442	23	D0-201
1.5KE300A	1.5KE300CA	1500	10000	256	1	300	1	529	19	D0-201
1.5KE350A	1.5KE350CA	1500	10000	299	1	350	1	618	16	D0-201
1.5KE400A	1.5KE400CA	1500	10000	342	1	400	1	706	14	D0-201
1.5KE440A	1.5KE440CA	1500	10000	376	1	440	1	776	13	D0-201
1.5KE10A	1.5KE10CA	1500	10000	-	8.55	-	10	-	10	-

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
1.5KE120A	1.5KE120CA	1500	10000	-	102	-	1	-	120	-
1.5KE150A	1.5KE150CA	1500	10000	-	128	-	1	-	150	-
1.5KE27A	1.5KE27CA	1500	10000	-	23.1	-	1	-	27	-
SM15T6V8A	SM15T6V8CA	1500	10000	5.8	500	6.45	10	13.4	746	SMC
SM15T7V5A	SM15T7V5CA	1500	10000	6.4	250	7.13	10	14.5	690	SMC
SM15T10A	SM15T10CA	1500	10000	8.55	10	9.5	1	18.6	538	SMC
SM15T12A	SM15T12CA	1500	10000	10.2	0.2	11.4	1	21.7	461	SMC
SM15T15A	SM15T15CA	1500	10000	12.8	0.2	14.3	1	27.2	368	SMC
SM15T18A	SM15T18CA	1500	10000	15.3	0.2	17.1	1	32.5	308	SMC
SM15T22A	SM15T22CA	1500	10000	18.8	0.2	20.9	1	39.3	254	SMC
SM15T24A	SM15T24CA	1500	10000	20.5	0.2	22.8	1	42.8	234	SMC
SM15T27A	SM15T27CA	1500	10000	23.1	0.2	25.7	1	48.3	207	SMC
SM15T30A	SM15T30CA	1500	10000	25.6	0.2	28.5	1	53.5	187	SMC
SM15T33A	SM15T33CA	1500	10000	28.2	0.2	31.4	1	59	169	SMC
SM15T36A	SM15T36CA	1500	10000	30.8	0.2	34.2	1	64.3	156	SMC
SM15T39A	SM15T39CA	1500	10000	33.3	0.2	37.1	1	69.7	143	SMC
SM15T68A	SM15T68CA	1500	10000	58.1	0.2	64.6	1	121	83	SMC
SM15T75A	SM15T75CA	1500	10000	64.1	0.2	71.3	1	134	75	SMC
SM15T100A	SM15T100CA	1500	10000	85.5	0.2	95	1	178	56	SMC
SM15T150A	SM15T150CA	1500	10000	128	0.2	143	1	265	38	SMC
SM15T200A	SM15T200CA	1500	10000	171	0.2	190	1	353	28	SMC
SM15T220A	SM15T220CA	1500	10000	188	0.2	209	1	388	26	SMC
SM15T6V8AY(*)	SM15T6V8CAY(*)	1500	10000	5.8	500	6.45	10	13.4	746	SMC
SM15T7V5AY(*)	SM15T7V5CAY(*)	1500	10000	6.4	250	7.13	10	14.5	690	SMC

Note: (\*) Automotive-grade (AEC-Q101 qualified)



Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SM15T10AY(*)	SM15T10CAY(*)	1500	10000	8.55	10	9.5	1	18.6	538	SMC
SM15T12AY(*)	SM15T12CAY(*)	1500	10000	10.2	0.2	11.4	1	21.7	461	SMC
SM15T15AY(*)	SM15T15CAY(*)	1500	10000	12.8	0.2	14.3	1	27.2	368	SMC
SM15T18AY(*)	SM15T18CAY(*)	1500	10000	15.3	0.2	17.1	1	32.5	308	SMC
SM15T22AY(*)	SM15T22CAY(*)	1500	10000	18.8	0.2	20.9	1	39.3	254	SMC
SM15T24AY(*)	SM15T24CAY(*)	1500	10000	20.5	0.2	22.8	1	42.8	234	SMC
SM15T27AY(*)	SM15T27CAY(*)	1500	10000	23.1	0.2	25.7	1	48.3	207	SMC
SM15T30AY(*)	SM15T30CAY(*)	1500	10000	25.6	0.2	28.5	1	53.5	187	SMC
SM15T33AY(*)	SM15T33CAY(*)	1500	10000	28.2	0.2	31.4	1	59	169	SMC
SM15T36AY(*)	SM15T36CAY(*)	1500	10000	30.8	0.2	34.2	1	64.3	156	SMC
SM15T39AY(*)	SM15T39CAY(*)	1500	10000	33.3	0.2	37.1	1	69.7	143	SMC
SM15T47AY(*)	SM15T47CAY(*)	1500	10000	40.2	0.2	44.7	1	84	119	SMC
SM15T56AY(*)	SM15T56CAY(*)	1500	10000	48	0.2	53.3	1	100	100	SMC
SM15T68AY(*)	SM15T68CAY(*)	1500	10000	58.1	0.2	64.6	1	121	83	SMC
SM15T75AY(*)	SM15T75CAY(*)	1500	10000	64.1	0.2	71.3	1	134	75	SMC
SM15T82AY(*)	SM15T82CAY(*)	1500	10000	70	0.2	77.8	1	146	69	SMC
SMCJ5.0A-TR	SMCJ5.0CA-TR	1500	10000	5	500	6.4	10	13.4	746	SMC
SMCJ6.0A-TR	SMCJ6.0CA-TR	1500	10000	6	500	6.7	10	13.7	730	SMC
SMCJ6.5A-TR	SMCJ6.5CA-TR	1500	10000	6.5	250	7.2	10	14.5	690	SMC
SMCJ8.5A-TR	SMCJ8.5CA-TR	1500	10000	8.5	10	9.4	1	19.5	512	SMC
SMCJ10A-TR	SMCJ10CA-TR	1500	10000	10	0.2	11.1	1	21.7	461	SMC
SMCJ12A-TR	SMCJ12CA-TR	1500	10000	12	0.2	13.3	1	25.3	394	SMC
SMCJ13A-TR	SMCJ13CA-TR	1500	10000	13	0.2	14.4	1	27.2	368	SMC
SMCJ15A-TR	SMCJ15CA-TR	1500	10000	15	0.2	16.7	1	32.5	308	SMC

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMCJ18A-TR	SMCJ18CA-TR	1500	10000	18	0.2	20	1	39.3	254	SMC
SMCJ20A-TR	SMCJ20CA-TR	1500	10000	20	0.2	22.2	1	42.8	234	SMC
SMCJ22A-TR	SMCJ22CA-TR	1500	10000	22	0.2	24.4	1	48.3	207	SMC
SMCJ24A-TR	SMCJ24CA-TR	1500	10000	24	0.2	26.7	1	50	200	SMC
SMCJ26A-TR	SMCJ26CA-TR	1500	10000	26	0.2	28.9	1	53.5	187	SMC
SMCJ28A-TR	SMCJ28CA-TR	1500	10000	28	0.2	31.1	1	59	169	SMC
SMCJ30A-TR	SMCJ30CA-TR	1500	10000	30	0.2	33.3	1	64.3	156	SMC
SMCJ33A-TR	SMCJ33CA-TR	1500	10000	33	0.2	36.7	1	69.7	143	SMC
SMCJ40A-TR	SMCJ40CA-TR	1500	10000	40	0.2	44.4	1	84	119	SMC
SMCJ48A-TR	SMCJ48CA-TR	1500	10000	48	0.2	53.3	1	100	100	SMC
SMCJ58A-TR	SMCJ58CA-TR	1500	10000	58	0.2	64.4	1	121	83	SMC
SMCJ70A-TR	SMCJ70CA-TR	1500	10000	70	0.2	77.8	1	146	69	SMC
SMCJ85A-TR	SMCJ85CA-TR	1500	10000	85	0.2	94.4	1	178	56	SMC
SMCJ130A-TR	SMCJ130CA-TR	1500	10000	130	0.2	144	1	265	38	SMC
SMCJ154A-TR	SMCJ154CA-TR	1500	10000	154	0.2	171	1	317	31.5	SMC
SMCJ170A-TR	SMCJ170CA-TR	1500	10000	170	0.2	189	1	353	28	SMC
SMCJ188A-TR	SMCJ188CA-TR	1500	10000	188	0.2	209	1	388	26	SMC
SM5908	-	1500	-	5	300	6	1	8.5	120	SMC
1N5908	-	1500	-	5	300	-	1	8.5	120	DO-201
SMC30J5.0A	SMC30J5.0CA	3000	28000	5	500	6.4	10	9.2	327	SMC
SMC30J6.0A	SMC30J6.0CA	3000	28000	6	500	6.7	10	10.3	291	SMC
SMC30J6.5A	SMC30J6.5CA	3000	28000	6.5	250	7.2	10	11.2	268	SMC
SMC30J8.5A	SMC30J8.5CA	3000	28000	8.5	10	9.4	1	14.4	208	SMC
SMC30J10A	SMC30J10CA	3000	28000	10	0.2	11.1	1	17	176	SMC

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SMC30J12A	SMC30J12CA	3000	28000	12	0.2	13.3	1	19.9	151	SMC
SMC30J13A	SMC30J13CA	3000	28000	13	0.2	14.4	1	21.5	140	SMC
SMC30J15A	SMC30J15CA	3000	28000	15	0.2	16.7	1	24.4	123	SMC
SMC30J16A	SMC30J16CA	3000	28000	16	0.2	17.8	1	26	115	SMC
SMC30J18A	SMC30J18CA	3000	28000	18	0.2	20	1	29.2	103	SMC
SMC30J20A	SMC30J20CA	3000	28000	20	0.2	22.2	1	32.4	93	SMC
SMC30J22A	SMC30J22CA	3000	28000	22	0.2	24.4	1	35.5	85	SMC
SMC30J24A	SMC30J24CA	3000	28000	24	0.2	26.7	1	38.9	77	SMC
SMC30J26A	SMC30J26CA	3000	28000	26	0.2	28.9	1	42.1	71	SMC
SMC30J28A	SMC30J28CA	3000	28000	28	0.2	31.1	1	45.4	66	SMC
SMC30J30A	SMC30J30CA	3000	28000	30	0.2	33.3	1	48.4	62	SMC
SMC30J33A	SMC30J33CA	3000	28000	33	0.2	36.7	1	53.3	56	SMC
SMC30J36A	SMC30J36CA	3000	28000	36	0.2	40	1	58.1	48.41	SMC
SMC30J40A	SMC30J40CA	3000	28000	40	0.2	44.4	1	64.5	43.5	SMC
SMC30J48A	SMC30J48CA	3000	28000	48	0.2	53.2	1	76.6	38	SMC
SM30T6.8AY(*)	SM30T6.8CAY(*)	3000	20000	5	500	6.45	10	13.4	1649	SMC
SM30T7.5AY(*)	SM30T7.5CAY(*)	3000	20000	6.5	250	7.13	10	14.5	1604	SMC
SM30T10AY(*)	SM30T10CAY(*)	3000	20000	8.5	10	9.5	1	19.5	1387	SMC
SM30T12AY(*)	SM30T12CAY(*)	3000	20000	10	0.2	11.4	1	21.7	1170	SMC
SM30T15AY(*)	SM30T15CAY(*)	3000	20000	13	0.2	14.3	1	27.2	993	SMC
SM30T18AY(*)	SM30T18CAY(*)	3000	20000	15	0.2	16.7	1	32.5	926	SMC
SM30T19AY(*)	SM30T19CAY(*)	3000	20000	16	0.2	17.8	1	34.4	868	SMC
SM30T21AY(*)	SM30T21CAY(*)	3000	20000	18	0.2	20	1	39.3	800	SMC
SM30T23AY(*)	SM30T23CAY(*)	3000	20000	20	0.2	22.2	1	42.8	747	SMC

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
SM30T26AY(*)	SM30T26CAY(*)	3000	20000	22	0.2	24.4	1	48.3	701	SMC
SM30T28AY(*)	SM30T28CAY(*)	3000	20000	24	0.2	26.7	1	50	660	SMC
SM30T30AY(*)	SM30T30CAY(*)	3000	20000	26	0.2	28.9	1	53.5	626	SMC
SM30T33AY(*)	SM30T33CAY(*)	3000	20000	28	0.2	31.1	1	59	596	SMC
SM30T35AY(*)	SM30T35CAY(*)	3000	20000	30	0.2	33.3	1	64.3	569	SMC
SM30T39AY(*)	SM30T39CAY(*)	3000	20000	33	0.2	36.7	1	69.7	526	SMC
SM30T42AY(*)	SM30T42CAY(*)	3000	20000	36	0.2	40	1	76	503	SMC
SM30T47AY(*)	SM30T47CAY(*)	3000	20000	40	0.2	44.4	1	84	469	SMC
SM30T56AY(*)	SM30T56CAY(*)	3000	20000	48	0.2	53.2	1	100	409	SMC
BZW50-10	BZW50-10B	5000	60000	10	5	11.1	1	23.4	2564	R6
BZW50-12	BZW50-12B	5000	60000	12	5	13.3	1	28	2143	R6
BZW50-15	BZW50-15B	5000	60000	15	5	16.6	1	35	1714	R6
BZW50-18	BZW50-18B	5000	60000	18	5	20	1	41.5	1446	R6
BZW50-22	BZW50-22B	5000	60000	22	5	24.4	1	51	1177	R6
BZW50-27	BZW50-27B	5000	60000	27	5	30	1	62	968	R6
BZW50-33	BZW50-33B	5000	60000	33	5	36.6	1	76	789	R6
BZW50-39	BZW50-39B	5000	60000	39	5	43.3	1	90	667	R6
BZW50-47	BZW50-47B	5000	60000	47	5	52	1	108	556	R6
BZW50-56	BZW50-56B	5000	60000	56	5	62.2	1	129	465	R6
BZW50-68	BZW50-68B	5000	60000	68	5	75.6	1	157	382	R6
BZW50-82	BZW50-82B	5000	60000	82	5	91	1	189	317	R6
BZW50-100	BZW50-100B	5000	60000	100	5	111	1	228	263	R6
BZW50-120	BZW50-120B	5000	60000	120	5	133	1	274	219	R6
BZW50-150	BZW50-150B	5000	60000	150	5	166	1	343	175	R6

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
<b>BZW50-180</b>	<b>BZW50-180B</b>	5000	60000	180	5	200	1	410	146	R6
LDP01-26AY	-	5000	60000	22	1	24.4	1	42	1400	D <sup>2</sup> PAK
LDP01-28AY	-	5000	60000	24	1	26.7	1	45	1250	D <sup>2</sup> PAK
LDP01-30AY	-	5000	60000	27	1	28.9	1	49	1400	D <sup>2</sup> PAK
LDP01-33AY	-	5000	60000	28	1	31.1	1	56	1250	D <sup>2</sup> PAK
LDP01-35AY	-	5000	60000	30	1	33.3	1	60	1150	D <sup>2</sup> PAK
LDP01-39AY	-	5000	60000	33	1	36.7	1	66	1050	D <sup>2</sup> PAK
LDP01-42AY	-	5000	60000	36	1	40	1	71	1000	D <sup>2</sup> PAK
LDP01-47AY	-	5000	60000	40	1	44.4	1	76.5	950	D <sup>2</sup> PAK
LDP01-50AY	-	5000	60000	43	1	47.8	1	81	900	D <sup>2</sup> PAK
LDP01-56AY	-	5000	60000	48	1	53.3	1	90	770	D <sup>2</sup> PAK
LDP01-68AY	-	5000	60000	58	1	64.4	1	110	620	D <sup>2</sup> PAK
LDP01-82AY	-	5000	60000	70	1	77.8	1	135	550	D <sup>2</sup> PAK
LDP24A	-	-	-	24	50	25	1	-	-	R6
-	<b>LDP35CA</b>	-	-	35	5	36	1	-	-	R6
<b>STRVS118X02C</b>	-	-	-	85	0.2	95	1	118	2	SMC
<b>STRVS142X02F</b>	-	-	-	102	1	114	1	142	2	DO-201
<b>STRVS185X02E</b>	-	-	-	128	0.2	143	1	185	2	DO-15
<b>STRVS182X02F</b>	-	-	-	128	1	143	1	182	2	DO-201
<b>STRVS185X02B</b>	-	-	-	128	0.2	143	1	185	2	SMB
<b>STRVS225X02E</b>	-	-	-	154	0.5	171	1	225	2	DO-15
<b>STRVS222X02F</b>	-	-	-	154	1	171	1	222	2	DO-201
<b>STRVS241X02E</b>	-	-	-	171	0.5	190	1	241	2	DO-15
<b>STRVS252X02F</b>	-	-	-	171	1	190	1	252	2	DO-201

Note: (\*) Automotive-grade (AEC-Q101 qualified)

Part number Unidirectional	Part number Bidirectional	Peak pulse power (PPP) 10/1000 $\mu$ s 25 °C	Peak pulse current PPP 8/20 $\mu$ s	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$ @ 25 °C	Breakdown voltage $V_{BR}$ @ $I_R$	$I_R$	Clamping voltage $V_{CL}$ @	IPP 8/20 $\mu$ s	Package
		(W)	(W)	(V)	max ( $\mu$ A)	Min (V)	(mA)	(V)	(A)	
STRVS248X02C	-	-	-	171	0.5	190	1	248	2	SMC
STRVS280X02F	-	-	-	188	1	209	1	280	2	D0-201

## ITU-T K2x & GR-1089 Protection

Part number	Directionality	Peak pulse power (IPP) 10/1000 $\mu$ s GR-1089	Peak pulse current (IPP) 5/310 $\mu$ s ITU-T K20/21	Peak pulse current (IPP) 2/10 $\mu$ s GR-1089	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakover voltage $V_{BO}$	Capacitance @ $V_R = 2$ V	Holding current ( $I_H$ )	Package
		(A)	(A)	(A)	(V)	Max ( $\mu$ A)	Max (V)	Typ (pF)	Min (mA)	
SMP30-62	Bidirectional	30	40	100	62	5	82	40	150	SMA
SMP30-68	Bidirectional	30	40	100	68	5	90	40	150	SMA
SMP30-100	Bidirectional	30	40	100	100	5	133	35	150	SMA
SMP30-120	Bidirectional	30	40	100	120	5	160	30	150	SMA
SMP30-130	Bidirectional	30	40	100	130	5	173	30	150	SMA
SMP30-180	Bidirectional	30	40	100	180	5	240	25	150	SMA
SMP30-200	Bidirectional	30	40	100	200	5	267	25	150	SMA
SMP30-220	Bidirectional	30	40	100	220	5	293	20	150	SMA
SMP30-240	Bidirectional	30	40	100	240	5	320	20	150	SMA
SMP30-270	Bidirectional	30	40	100	270	5	360	20	150	SMA
TPA62	Bidirectional	50	65	100	62	5	82	40	150	DO-15
TPA100	Bidirectional	50	65	100	100	5	133	40	150	DO-15
TPA120	Bidirectional	50	65	100	120	5	160	35	150	DO-15
TPA130	Bidirectional	50	65	100	130	5	173	30	150	DO-15
TPA180	Bidirectional	50	65	100	180	5	240	30	150	DO-15
TPA200	Bidirectional	50	65	100	200	5	267	25	150	DO-15
TPA220	Bidirectional	50	65	100	220	5	293	25	150	DO-15
TPA240	Bidirectional	50	65	100	240	5	320	25	150	DO-15
TPA270	Bidirectional	50	65	100	270	5	360	25	150	DO-15
SMTPA62	Bidirectional	50	65	100	62	5	82	40	150	SMB
SMTPA68	Bidirectional	50	65	100	68	5	90	40	150	SMB
SMTPA100	Bidirectional	50	65	100	100	5	133	35	150	SMB

Part number	Directionality	Peak pulse power (IPP) 10/1000 $\mu$ s GR-1089	Peak pulse current (IPP) 5/310 $\mu$ s ITU-T K20/21	Peak pulse current (IPP) 2/10 $\mu$ s GR-1089	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakover voltage $V_{BO}$	Capacitance @ $V_R = 2$ V	Holding current ( $I_H$ )	Package
		(A)	(A)	(A)	(V)	Max ( $\mu$ A)	Max (V)	Typ (pF)	Min (mA)	
SMTPA120	Bidirectional	50	65	100	120	5	160	30	150	SMB
SMTPA130	Bidirectional	50	65	100	130	5	173	30	150	SMB
SMTPA180	Bidirectional	50	65	100	180	5	240	25	150	SMB
SMTPA200	Bidirectional	50	65	100	200	5	267	25	150	SMB
SMTPA220	Bidirectional	50	65	100	220	5	293	25	150	SMB
SMTPA240	Bidirectional	50	65	100	240	5	320	25	150	SMB
SMTPA270	Bidirectional	50	65	100	270	5	360	25	150	SMB
SMTPA320	Bidirectional	50	65	100	320	5	400	25	150	SMB
SMP50-62	Bidirectional	50	65	100	62	5	82	40	150	SMA
SMP50-68	Bidirectional	50	65	100	68	5	90	40	150	SMA
SMP50-100	Bidirectional	50	65	100	100	5	133	35	150	SMA
SMP50-120	Bidirectional	50	65	100	120	5	160	30	150	SMA
SMP50-130	Bidirectional	50	65	100	130	5	173	30	150	SMA
SMP50-180	Bidirectional	50	65	100	180	5	240	25	150	SMA
SMP50-200	Bidirectional	50	65	100	200	5	267	25	150	SMA
SMP50-220	Bidirectional	50	65	100	220	5	293	25	150	SMA
SMP50-240	Bidirectional	50	100	65	240	5	320	25	150	SMA
SMP50-270	Bidirectional	50	100	65	270	5	360	25	150	SMA
SMP50-320	Bidirectional	50	100	65	320	5	400	25	150	SMA
SMP75-8	Bidirectional	75	120	250	8	5	15	75	50	SMB
SMP80MC-120	Bidirectional	80	120	250	120	5	155	25	150	SMB
SMP80MC-140	Bidirectional	80	120	250	140	5	180	25	150	SMB
SMP80MC-160	Bidirectional	80	120	250	160	5	205	25	150	SMB
SMP80MC-200	Bidirectional	80	120	250	200	5	255	25	150	SMB



Part number	Directionality	Peak pulse power (IPP) 10/1000 $\mu$ s GR-1089	Peak pulse current (IPP) 5/310 $\mu$ s ITU-T K20/21	Peak pulse current (IPP) 2/10 $\mu$ s GR-1089	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakover voltage $V_{BO}$	Capacitance @ $V_R = 2$ V	Holding current ( $I_H$ )	Package
		(A)	(A)	(A)	(V)	Max ( $\mu$ A)	Max (V)	Typ (pF)	Min (mA)	
SMP80MC-230	Bidirectional	80	120	250	230	5	295	25	150	SMB
SMP80MC-270	Bidirectional	80	120	250	270	5	345	25	150	SMB
SMP80MC-320	Bidirectional	80	120	250	320	5	400	25	150	SMB
SMP100LC-8	Bidirectional	100	150	500	8	5	25	75	50 (typ)	SMB
SMP100LC-35	Bidirectional	100	150	500	35	5	55	55	150	SMB
SMP100LC-65	Bidirectional	100	150	500	65	5	85	90	150	SMB
SMP100LC-90	Bidirectional	100	150	500	90	5	125	80	150	SMB
SMP100LC-120	Bidirectional	100	150	500	120	5	160	75	150	SMB
SMP100LC-140	Bidirectional	100	150	500	140	5	190	65	150	SMB
SMP100LC-160	Bidirectional	100	150	500	160	5	205	65	150	SMB
SMP100LC-200	Bidirectional	100	150	500	200	5	255	60	150	SMB
SMP100LC-230	Bidirectional	100	150	500	230	5	295	60	150	SMB
SMP100LC-25	Bidirectional	100	150	500	25	5	40	65	150	SMB
SMP100LC-270	Bidirectional	100	150	500	270	5	345	60	150	SMB
SMP100LC-320	Bidirectional	100	150	500	320	5	400	50	150	SMB
SMP100LC-360	Bidirectional	100	150	500	360	5	460	50	150	SMB
SMP100LC-400	Bidirectional	100	150	500	400	5	540	45	150	SMB
SMP100MC-140	Bidirectional	100	150	500	140	5	180	60	150	SMB
SMP100MC-160	Bidirectional	100	150	500	160	5	205	50	150	SMB
SMP100MC-200	Bidirectional	100	150	500	200	5	255	45	150	SMB
SMP100MC-230	Bidirectional	100	150	500	230	5	295	40	150	SMB
SMP100MC-270	Bidirectional	100	150	500	270	5	345	40	150	SMB
SMP100MC-320	Bidirectional	100	150	500	320	5	400	35	150	SMB
SMP100MC-360	Bidirectional	100	150	500	360	5	460	35	150	SMB

Part number	Directionality	Peak pulse power (IPP) 10/1000 $\mu$ s GR-1089	Peak pulse current (IPP) 5/310 $\mu$ s ITU-T K20/21	Peak pulse current (IPP) 2/10 $\mu$ s GR-1089	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakover voltage $V_{BO}$	Capacitance @ $V_R = 2$ V	Holding current ( $I_H$ )	Package
		(A)	(A)	(A)	(V)	Max ( $\mu$ A)	Max (V)	Typ (pF)	Min (mA)	
SMP100MC-400	Bidirectional	100	150	500	400	5	540	30	150	SMB
SMP0720SCMC	Bidirectional	100	150	500	65	5	88	75	150	SMB
SMP0900SCMC	Bidirectional	100	150	500	75	5	98	75	150	SMB
SMP1100SCMC	Bidirectional	100	150	500	90	5	130	70	150	SMB
SMP1300SCMC	Bidirectional	100	150	500	120	5	160	70	150	SMB
SMP1500SCMC	Bidirectional	100	150	500	140	5	180	70	150	SMB
SMP1800SCMC	Bidirectional	100	150	500	170	5	220	65	150	SMB
SMP2100SCMC	Bidirectional	100	150	500	180	5	240	40	150	SMB
SMP2300SCMC	Bidirectional	100	150	500	190	5	260	40	150	SMB
SMP2600SCMC	Bidirectional	100	150	500	220	5	300	35	150	SMB
SMP3100SCMC	Bidirectional	100	150	500	275	5	350	35	150	SMB
ETP01-1621RL	Bidirectional	-	37.5	100	16	1	25	13	30	SO-8
ETP01-2821RL	Bidirectional	-	37.5	100	28	1	36	13	30	SO-8
THBT15011D	Bidirectional	30	40	-	135	5	150	75	150	SO-8
THBT20011D	Bidirectional	30	40	-	180	5	180	75	150	SO-8
TPI12011N	Bidirectional	30	40	90	105	10	120	30	150	SO-8
TPI8011N	Bidirectional	30	40	90	70	10	80	30	150	SO-8
TPN3021	Bidirectional	30	50	200	28	4	38	16	30	SO-8
DSL01-008SC5	Bidirectional	100	150	500	8	0.5	20	12	-	SOT23-5L
DSL01-010SC5	Bidirectional	100	150	500	10.5	0.5	30	10	-	SOT23-5L
DSL01-016SC5	Bidirectional	100	150	500	16	0.5	40	8.5	-	SOT23-5L
DSL01-024SC5	Bidirectional	100	150	500	24	0.5	50	7	-	SOT23-5L
DSL02-005SC5	Bidirectional	100	150	500	5	0.5	-	3	-	SOT23-5L
DSL02-008SC5	Bidirectional	100	150	500	8	0.5	-	3	-	SOT23-5L

Part number	Directionality	Peak pulse power (IPP) 10/1000 $\mu$ s GR-1089	Peak pulse current (IPP) 5/310 $\mu$ s ITU-T K20/Z1	Peak pulse current (IPP) 2/10 $\mu$ s GR-1089	Stand-off voltage $V_{RM}$	Leakage current $I_{RM}$ @ $V_{RM}$	Breakover voltage $V_{BO}$	Capacitance @ $V_R = 2$ V	Holding current ( $I_H$ )	Package
		(A)	(A)	(A)	(V)	Max ( $\mu$ A)	Max (V)	Typ (pF)	Min (mA)	
DSL02-010SC5	Bidirectional	100	150	500	10	0.5	-	3	-	SOT23-5L
DSL03-010SC6	Bidirectional	100	150	500	10	0.2	-	0.5	-	SOT23-6L
DSL03-022SC6	Bidirectional	100	150	500	24	0.2	-	0.5	-	SOT23-6L
DSL03-024SC6	Bidirectional	100	150	500	24	0.2	-	0.5	-	SOT23-6L
DSL04-005SC6	Bidirectional	100	150	500	5	0.2	-	1	-	SOT23-6L
DSL04-008SC6	Bidirectional	100	150	500	8	0.2	-	1	-	SOT23-6L
DSL04-010SC6	Bidirectional	100	150	500	10	0.2	-	1	-	SOT23-6L
DSL04-012SC6	Bidirectional	100	150	500	12	0.2	-	1	-	SOT23-6L
DSL04-016SC6	Bidirectional	100	150	500	16	0.2	-	1	-	SOT23-6L
DSL04-018SC6	Bidirectional	100	150	500	18	0.2	-	1	-	SOT23-6L
DSL04-020SC6	Bidirectional	100	150	500	20	0.2	-	1	-	SOT23-6L
DSL04-022SC6	Bidirectional	100	150	500	22	0.2	-	1	-	SOT23-6L
DSL04-024SC6	Bidirectional	100	150	500	24	0.2	-	1	-	SOT23-6L
DSL05-024SC6	Bidirectional	100	150	500	24	0.05	31	0.95	50	SOT23-6L
LCDP1521SRL	Unidirectional	2 x 25	2 x 40	2 x 90	175	5	-	-	150	SO-8
LCP1521SRL	Unidirectional	30	40	150	150	5	-	-	150	SO-8
LCP1531RL	Unidirectional	-	37.5	-	150	5	-	-	150	SO-8
LCP03-1501RL	Bidirectional	30	60	130	-53/83	5	-	-	150	SO-8
TPP25011	Unidirectional	30	40	75	60	6	340	90	180	SO-8
LCP02-150B1RL	Bidirectional	30	45	100	-120/+120	5	-	-	150	SO-8 wide
LCP12-150B1RL	Bidirectional	45	75	150	-120/+120	5	-	-	150	SO-8 wide
LCP22-150B1RL	Bidirectional	45	75	150	-120/+120	6	-	-	150	SO-8 wide
LCP3121RL	Bidirectional	100	150	200	-100/+100	0.5	-	-	100	SO-8
LCP154DJF	Unidirectional	100	150	500	-175	5	-	-	150	PowerFLAT 5x6

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