

SPECIFICATION SHEET NO.	S0930- SMDJ12AL00S001	
ORIGINAL MFG/PART NO.	 LGE Diodes/SMDJ12A-L	
NEXTGEN PART CODE	SMDJ12AL00S001	Indicate This Code For RFQ /Order
DATE	Sep. 30, 2025	
REVISION	A4	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Transient Voltage Suppressor (TVs) Diodes, SMDJ Series Case SMC/DO-214AB, 2 Pads, Unidirectional Type, Reverse Stand-off Voltage (VR) 12V , Peak Pulse Power: 3000 Watts, Reverse Surge Current: 150.75A Max. Operating Junction Temp. Range -55°C ~+150°C Package in Tape/Reel, 3000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE			
Issued/Checked/Approved			
Effective Date: Sep. 30, 2025			

CUSTOMER APPROVE	
Date:	

MAIN FEATURE

- Glass Passivated Chip
- 3000W Peak Pulse Power Capability With a 10/1000 μ s Waveform, Repetitive Rate (Duty Cycle):0.01 %
- Uni-Directional and Bi-directional Polarity Option
- Low Leakage
- 5% VBR Voltage Tolerance
- Excellent Clamping Capability
- Very Fast Response Time
- Short Lead Time
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)



*Image shown is a representation only.
Exact specifications should be obtained
from the product dimension.*



APPLICATION

- I/O Interface
- AC/DC Power Supply
- Low Frequency Signal Transmission Line (RS232, RS485, etc.)

ELECTRICAL CHARACTERISTICS

- See Page 6 ~Page 17 For Different Part Code
- All Parameters are Subject To NextGen Components' Final Confirmation

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code SMDJ12AL00S001 For RFQ and Order.

PART CODE GUIDE

RFQ
[Request For Quotation](#)

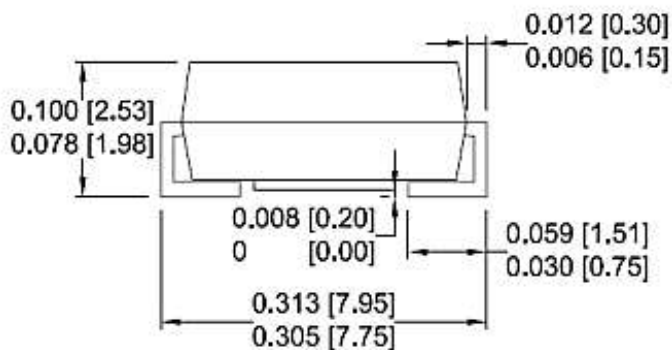
CODE	NAME	KEY SPECIFICATION OPTION
SMDJ	Product Series Code	SMD Transient Voltage Suppressors (TVs) Diodes, Case SMC/DO-214AB, 2 Pads,
12A	Mode code	12A: Working Peak Reverse Voltage 12V, Uni-directional Polarity Type Reverse Surge Current: 150.75A Max.
L00S	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
001	Parameters Code	Letter or Digits (A~Z, a~z or 0~9)
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 1~9) for Special Parametric; Blank: N/A

DIMENSION- Unit: Inch [mm], Case SMC/DO-214AB Outline

Top View



Side View



Recommend Pad Layout



SYMBOL	A	B	C	D	E
Unit (Inch)	0.17	0.16	0.311	0.15	0.472
Unit (mm)	4.30	4.10	7.90	3.80	12.0

MECHANICAL DATA

CASE	EXPOXY	LEAD	POLARITY	MOUNTING POSITION	MARKING
JEDEC SMC/DO-214AB Molded Plastic Body	UL 94V-0 Rate Flame Retardant	Solderable per MIL-STD 750, Method 2026	Color Band Denotes Cathode End Except Bipolar	Any	See Marking Code List

MAX. RATING & CHARACTERISTICS - Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOLS	VALUE	UNITS
Peak Power Dissipation with 10/1000μs Waveform See Note 1	P _{pp}	3000	W
Peak Pulse Current with a 10/1000μs waveform See Note 1	I _{pp}	See Page 6~ Page 17	A
Power Dissipation On Infinite Heatsink at T _L = 75 °C	P _D	6.5	W
Peak Forward Surge Current 8.3ms Single Half Sine- Wave Unidirectional Type Only	I _{FSM}	300	A
Maximum instantaneous forward voltage at 100A for Unidirectional Type Only	V _F	3.5/5.0	V
Operating Junction And Storage Temperature Range	T _J , T _{STG}	-55 ~ +150	°C

Note

1. Non-repetitive Current Pulse Per Fig.5 And Derated Above T_A= 25 °C Per Fig.1
2. Measured On 8.3 ms Single Half Sine-wave Or Equivalent Square Wave, Duty Cycle = 4 Pulses Per Minute Max.
3. V_F<3.5V for devices of V_{BR}<200V and V_F<5.0V for devices of V_{BR}>201V

UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	Vc @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ050L00S001	5	6.4	7.3	10	800	312.5	9.6	RDD
SMDJ050AL0S001	5	6.4	7	10	800	326.09	9.2	RDE
SMDJ060L00S001	6	6.67	8.15	10	800	263.16	11.4	RDF
SMDJ060AL0S001	6	6.67	7.37	10	800	291.26	10.3	RDG
SMDJ065L00S001	6.5	7.22	8.82	10	500	243.90	12.3	RDH
SMDJ065AL0S001	6.5	7.22	7.98	10	500	267.86	11.2	RDK
SMDJ070L00S001	7	7.78	9.51	10	200	225.56	13.3	RDL
SMDJ070AL0S001	7	7.78	8.6	10	200	250.00	12	PDM
SMDJ075L00S001	7.5	8.33	10.2	1	100	209.79	14.3	PDN
SMDJ075AL0S001	7.5	8.33	9.21	1	100	232.56	12.9	PDP
SMDJ080L00S001	8	8.89	10.9	1	50	200.00	15	PDQ
SMDJ080AL0S001	8	8.89	9.83	1	50	220.59	13.6	PDR
SMDJ085L00S001	8.5	9.44	11.5	1	20	188.68	15.9	PDS
SMDJ085AL0S001	8.5	9.44	10.4	1	20	208.33	14.4	PDT
SMDJ090L00S001	9	10	12.2	1	10	177.51	16.9	PDU
SMDJ090AL0S001	9	10	11.1	1	10	194.81	15.4	PDV
SMDJ10L000S001	10	11.1	13.6	1	5	159.57	18.8	PDW
SMDJ10AL00S001	10	11.1	12.3	1	5	176.47	17	PDX
SMDJ11L000S001	11	12.2	14.9	1	2	149.25	20.1	PDY
SMDJ11AL00S001	11	12.2	13.5	1	2	164.84	18.2	PDZ

UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	μA	A	V	
SMDJ12L000S001	12	13.3	16.3	1	2	136.36	22	PED
SMDJ12AL00S001	12	13.3	14.7	1	2	150.75	19.9	PEE
SMDJ13L000S001	13	14.4	17.6	1	2	126.05	23.8	PEF
SMDJ13AL00S001	13	14.4	15.9	1	2	139.53	21.5	PEG
SMDJ14L000S001	14	15.6	19.1	1	2	116.28	25.8	PEH
SMDJ14AL00S001	14	15.6	17.2	1	2	129.31	23.2	PEK
SMDJ15L000S001	15	16.7	20.4	1	2	111.52	26.9	PEL
SMDJ15AL00S001	15	16.7	18.5	1	2	122.95	24.4	PEM
SMDJ16L000S001	16	17.8	21.8	1	2	104.17	28.8	PEN
SMDJ16AL00S001	16	17.8	19.7	1	2	115.38	26	PEP
SMDJ17L000S001	17	18.9	23.1	1	2	98.36	30.5	PEQ
SMDJ17AL00S001	17	18.9	20.9	1	2	108.70	27.6	PER
SMDJ18L000S001	18	20	24.4	1	2	93.17	32.2	PES
SMDJ18AL00S001	18	20	22.1	1	2	102.74	29.2	PET
SMDJ19L000S001	19	21.13	25.76	1	2	88.21	34.0	PEA
SMDJ19AL00S001	19	21.1	23.3	1	2	97.47	30.8	PEB
SMDJ20L000S001	20	22.2	27.1	1	2	83.80	35.8	PEU
SMDJ20AL00S001	20	22.2	24.5	1	2	92.59	32.4	PEV
SMDJ22L000S001	22	24.4	29.8	1	2	76.14	39.4	PEW
SMDJ22AL00S001	22	24.4	26.9	1	2	84.51	35.5	PEX

UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	μA	A	V	
SMDJ24L000S001	24	26.7	32.6	1	2	69.77	43	PEY
SMDJ24AL00S001	24	26.7	29.5	1	2	77.12	38.9	PEZ
SMDJ26L000S001	26	28.9	35.3	1	2	64.38	46.6	PFD
SMDJ26AL00S001	26	28.9	31.9	1	2	71.26	42.1	PFE
SMDJ28L000S001	28	31.1	38	1	2	60.00	50	PFF
SMDJ28AL00S001	28	31.1	34.4	1	2	66.08	45.4	PFG
SMDJ30L000S001	30	33.3	40.7	1	2	56.07	53.5	PFH
SMDJ30AL00S001	30	33.3	36.8	1	2	61.98	48.4	PFK
SMDJ33L000S001	33	36.7	44.9	1	2	50.85	59	PFL
SMDJ33AL00S001	33	36.7	40.6	1	2	56.29	53.3	PFM
SMDJ36L000S001	36	40	48.9	1	2	46.66	64.3	PFN
SMDJ36AL00S001	36	40	44.2	1	2	51.64	58.1	PFP
SMDJ40L000S001	40	44.4	54.3	1	2	42.02	71.4	PFQ
SMDJ40AL00S001	40	44.4	49.1	1	2	46.51	64.5	PFR
SMDJ43L000S001	43	47.8	58.4	1	2	39.11	76.7	PFS
SMDJ43AL00S001	43	47.8	52.8	1	2	43.23	69.4	PFT
SMDJ45L000S001	45	50	61.1	1	2	37.36	80.3	PFU
SMDJ45AL00S001	45	50	55.3	1	2	41.27	72.7	PFV
SMDJ48L000S001	48	53.3	65.1	1	2	35.09	85.5	PFW
SMDJ48AL00S001	48	53.3	58.9	1	2	38.76	77.4	PFX

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		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ51L000S001	51	56.7	69.3	1	2	32.93	91.1	PFY
SMDJ51AL00S001	51	56.7	62.7	1	2	36.41	82.4	PFZ
SMDJ54L000S001	54	60	73.3	1	2	31.15	96.3	RGD
SMDJ54AL00S001	54	60	66.3	1	2	34.44	87.1	RGE
SMDJ58L000S001	58	64.4	78.7	1	2	29.13	103	RGF
SMDJ58AL00S001	58	64.4	71.2	1	2	32.05	93.6	PGG
SMDJ60L000S001	60	66.7	81.5	1	2	28.04	107	RGH
SMDJ60AL00S001	60	66.7	73.7	1	2	30.99	96.8	PGK
SMDJ64L000S001	64	71.1	86.9	1	2	26.32	114	PGL
SMDJ64AL00S001	64	71.1	78.6	1	2	29.13	103	PGM
SMDJ70L000S001	70	77.8	95.1	1	2	24	125	PGN
SMDJ70AL00S001	70	77.8	86	1	2	26.55	113	PGP
SMDJ75L000S001	75	83.3	102	1	2	22.39	134	PGQ
SMDJ75AL00S001	75	83.3	92.1	1	2	24.79	121	PGR
SMDJ78L000S001	78	86.7	106	1	2	21.58	139	PGS
SMDJ78AL00S001	78	86.7	95.8	1	2	23.81	126	PGT
SMDJ80L000S001	80	88.96	108.8	1	2	20.95	143.2	PGA
SMDJ80AL00S001	80	88.8	97.6	1	2	23.15	129.6	PGB
SMDJ85L000S001	85	94.4	115	1	2	19.87	151	PGU
SMDJ85AL00S001	85	94.4	104	1	2	21.9	137	PGV

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Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	Vc @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ90L000S001	90	100	122	1	2	18.75	160	PGW
SMDJ90AL00S001	90	100	111	1	2	20.55	146	PGX
SMDJ100L00S001	100	111	136	1	2	16.76	179	PGY
SMDJ100AL0S001	100	111	123	1	2	18.52	162	PGZ
SMDJ110L00S001	110	122	149	1	2	15.31	196	PHD
SMDJ110AL0S001	110	122	135	1	2	16.95	177	PHE
SMDJ120L00S001	120	133	163	1	2	14.02	214	PHF
SMDJ120AL0S001	120	133	147	1	2	14.54	193	PHG
SMDJ130L00S001	130	144	176	1	2	12.99	231	PHH
SMDJ130AL0S001	130	144	159	1	2	14.35	209	PHK
SMDJ140L00S001	140	155.68	190.4	1	2	11.97	250.6	PHA
SMDJ140AL0S001	140	155	171	1	2	13.23	226.8	PHB
SMDJ150L00S001	150	167	204	1	2	11.19	268	PHL
SMDJ150AL0S001	150	167	185	1	2	12.35	243	PHM
SMDJ160L00S001	160	178	218	1	2	10.45	287	PHN
SMDJ160AL0S001	160	178	197	1	2	11.58	259	PHP
SMDJ170L00S001	170	189	231	1	2	9.87	304	PHQ
SMDJ170AL0S001	170	189	209	1	2	10.91	275	PHR
SMDJ180L00S001	180	200.16	244.8	1	2	9.31	322.2	PHS
SMDJ180AL0S001	180	200	220	1	2	10.29	291.6	PHT

UNIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - $T_a = 25^{\circ}\text{C}$

[illegible]

BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	Vc @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ050CLOS001	5	6.4	7.3	10	800	312.5	9.6	DDD
SMDJ050CALS001	5	6.4	7	10	800	326.09	9.2	DDE
SMDJ060CLOS001	6	6.67	8.15	10	800	263.16	11.4	DDF
SMDJ060CALS001	6	6.67	7.37	10	800	291.26	10.3	DDG
SMDJ065CLOS001	6.5	7.22	8.82	10	500	243.90	12.3	DDH
SMDJ065CALS001	6.5	7.22	7.98	10	500	267.86	11.2	DDK
SMDJ070CLOS001	7	7.78	9.51	10	200	225.56	13.3	DDL
SMDJ070CALS001	7	7.78	8.6	10	200	250.00	12	DDM
SMDJ075CLOS001	7.5	8.33	10.2	1	100	209.79	14.3	DDN
SMDJ075CALS001	7.5	8.33	9.21	1	100	232.56	12.9	DDP
SMDJ080CLOS001	8	8.89	10.9	1	50	200.00	15	DDQ
SMDJ080CALS001	8	8.89	9.83	1	50	220.59	13.6	DDR
SMDJ085CLOS001	8.5	9.44	11.5	1	20	188.68	15.9	DDS
SMDJ085CAL0S01	8.5	9.44	10.4	1	20	208.33	14.4	DDT
SMDJ090CLOS001	9	10	12.2	1	10	177.51	16.9	DDU
SMDJ090CALS001	9	10	11.1	1	10	194.81	15.4	DDV
SMDJ10CLO0S001	10	11.1	13.6	1	5	159.57	18.8	DDW
SMDJ10CAL0S001	10	11.1	12.3	1	5	176.47	17	DDX
SMDJ11CLO0S001	11	12.2	14.9	1	2	149.25	20.1	DDY
SMDJ11CAL0S001	11	12.2	13.5	1	2	164.84	18.2	DDZ

BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ12CL00S001	12	13.3	16.3	1	2	136.36	22	DED
SMDJ12CAL0S001	12	13.3	14.7	1	2	150.75	19.9	DEE
SMDJ13CL00S001	13	14.4	17.6	1	2	126.05	23.8	DEF
SMDJ13CAL0S001	13	14.4	15.9	1	2	139.53	21.5	DEG
SMDJ14CL00S001	14	15.6	19.1	1	2	116.28	25.8	DEH
SMDJ14CAL0S001	14	15.6	17.2	1	2	129.31	23.2	DEK
SMDJ15CL00S001	15	16.7	20.4	1	2	111.52	26.9	DEL
SMDJ15CAL0S001	15	16.7	18.5	1	2	122.95	24.4	DEM
SMDJ16CL00S001	16	17.8	21.8	1	2	104.17	28.8	DEN
SMDJ16CAL0S001	16	17.8	19.7	1	2	115.38	26	DEP
SMDJ17CL00S001	17	18.9	23.1	1	2	98.36	30.5	DEQ
SMDJ17CAL0S001	17	18.9	20.9	1	2	108.70	27.6	DER
SMDJ18CL00S001	18	20	24.4	1	2	93.17	32.2	DES
SMDJ18CAL0S001	18	20	22.1	1	2	102.74	29.2	DET
SMDJ19CL00S001	19	21.13	25.76	1	2	88.21	34.0	DEA
SMDJ19CAL0S001	19	21.1	23.3	1	2	97.47	30.8	DEB
SMDJ20CL00S001	20	22.2	27.1	1	2	83.80	35.8	DEU
SMDJ20CAL0S001	20	22.2	24.5	1	2	92.59	32.4	DEV
SMDJ22CL00S001	22	24.4	29.8	1	2	76.14	39.4	DEW
SMDJ22CAL0S001	22	24.4	26.9	1	2	84.51	35.5	DEX

BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ24CL00S001	24	26.7	32.6	1	2	69.77	43	DEY
SMDJ24CAL0S001	24	26.7	29.5	1	2	77.12	38.9	DEZ
SMDJ26CL00S001	26	28.9	35.3	1	2	64.38	46.6	DFD
SMDJ26CAL0S001	26	28.9	31.9	1	2	71.26	42.1	DFE
SMDJ28CL00S001	28	31.1	38	1	2	60.00	50	DFF
SMDJ28CAL0S001	28	31.1	34.4	1	2	66.08	45.4	DFG
SMDJ30CL00S001	30	33.3	40.7	1	2	56.07	53.5	DFH
SMDJ30CAL0S001	30	33.3	36.8	1	2	61.98	48.4	DFK
SMDJ33CL00S001	33	36.7	44.9	1	2	50.85	59	DFL
SMDJ33CAL0S001	33	36.7	40.6	1	2	56.29	53.3	DFM
SMDJ36CL00S001	36	40	48.9	1	2	46.66	64.3	DFN
SMDJ36CAL0S001	36	40	44.2	1	2	51.64	58.1	DFP
SMDJ40CL00S001	40	44.4	54.3	1	2	42.02	71.4	DFQ
SMDJ40CAL0S001	40	44.4	49.1	1	2	46.51	64.5	DFR
SMDJ43CL00S001	43	47.8	58.4	1	2	39.11	76.7	DFS
SMDJ43CAL0S001	43	47.8	52.8	1	2	43.23	69.4	DFT
SMDJ45CL00S001	45	50	61.1	1	2	37.36	80.3	DFU
SMDJ45CAL0S001	45	50	55.3	1	2	41.27	72.7	DFV
SMDJ48CL00S001	48	53.3	65.1	1	2	35.09	85.5	DFW
SMDJ48CAL0S001	48	53.3	58.9	1	2	38.76	77.4	DFX

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Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ51CL00S001	51	56.7	69.3	1	2	32.93	91.1	DFY
SMDJ51CAL0S001	51	56.7	62.7	1	2	36.41	82.4	DFZ
SMDJ54CL00S001	54	60	73.3	1	2	31.15	96.3	DGD
SMDJ54CAL0S001	54	60	66.3	1	2	34.44	87.1	DGE
SMDJ58CL00S001	58	64.4	78.7	1	2	29.13	103	DGF
SMDJ58CAL0S001	58	64.4	71.2	1	2	32.05	93.6	DGG
SMDJ60CL00S001	60	66.7	81.5	1	2	28.04	107	DGH
SMDJ60CAL0S001	60	66.7	73.7	1	2	30.99	96.8	DGK
SMDJ64CL00S001	64	71.1	86.9	1	2	26.32	114	DGL
SMDJ64CAL0S001	64	71.1	78.6	1	2	29.13	103	DGM
SMDJ70CL00S001	70	77.8	95.1	1	2	24	125	DGN
SMDJ70CAL0S001	70	77.8	86	1	2	26.55	113	DGP
SMDJ75CL00S001	75	83.3	102	1	2	22.39	134	DGQ
SMDJ75CAL0S001	75	83.3	92.1	1	2	24.79	121	DGR
SMDJ78CL00S001	78	86.7	106	1	2	21.58	139	DGS
SMDJ78CAL0S001	78	86.7	95.8	1	2	23.81	126	DGT
SMDJ80CL00S001	80	88.96	108.8	1	2	20.95	143.2	DGA
SMDJ80CAL0S001	80	88.8	97.6	1	2	23.15	129.6	DGB
SMDJ85CL00S001	85	94.4	115	1	2	19.87	151	DGU
SMDJ85CAL0S001	85	94.4	104	1	2	21.9	137	DGV

BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	μA	A	V	
SMDJ90CL00S001	90	100	122	1	2	18.75	160	DGW
SMDJ90CAL0S001	90	100	111	1	2	20.55	146	DGX
SMDJ100CL0S001	100	111	136	1	2	16.76	179	DGY
SMDJ100CALS001	100	111	123	1	2	18.52	162	DGZ
SMDJ110CL0S001	110	122	149	1	2	15.31	196	DHD
SMDJ110CALS001	110	122	135	1	2	16.95	177	DHE
SMDJ120CL0S001	120	133	163	1	2	14.02	214	DHF
SMDJ120CALS001	120	133	147	1	2	14.54	193	DHG
SMDJ130CL0S001	130	144	176	1	2	12.99	231	DHH
SMDJ130CALS001	130	144	159	1	2	14.35	209	DHK
SMDJ140CL0S001	140	155.68	190.4	1	2	11.97	250.6	DHA
SMDJ140CALS001	140	155	171	1	2	13.23	226.8	DHB
SMDJ150CL0S001	150	167	204	1	2	11.19	268	DHL
SMDJ150CALS001	150	167	185	1	2	12.35	243	DHM
SMDJ160CL0S001	160	178	218	1	2	10.45	287	DHN
SMDJ160CALS001	160	178	197	1	2	11.58	259	DHP
SMDJ170CL0S001	170	189	231	1	2	9.87	304	DHQ
SMDJ170CALS001	170	189	209	1	2	10.91	275	DHR
SMDJ180CL0S001	180	200.16	244.8	1	2	9.31	322.2	DHS
SMDJ180CALS001	180	200	220	1	2	10.29	291.6	DHT

BIDIRECTIONAL TYPE- ELECTRICAL CHARACTERISTICS - Ta = 25°C

Part Code	Working Peak Reverse Voltage	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max. Reverse Surge Current	Max. Clamping Voltage	Marking Code
		VBR @ IT						
	VRWM	Min.	Max.	IT	IR @ VRWM	IPP	VC @ IPP	
	V	V	V	mA	µA	A	V	
SMDJ190CL0S001	190	211.28	258.4	1	2	8.82	340.1	DHU
SMDJ190CALS001	190	211	232	1	2	9.75	307.8	DHV
SMDJ200CALS001	200	224	247	1	2	9.26	324	DHW
SMDJ220CALS001	220	246	272	1	2	8.43	356	DHX
SMDJ250CALS001	250	279	309	1	2	7.41	405	DHZ
SMDJ300CALS001	300	335	371	1	2	6.17	486	DJE
SMDJ350CALS001	350	391	432	1	2	5.29	567	DJG
SMDJ400CALS001	400	447	494	1	2	4.63	648	DJK
SMDJ440CALS001	440	492	543	1	2	4.21	713	DJM

Note:

- Suffix 'A ' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device
- Add suffix 'C 'or ' CA ' after part number to specify Bi-directional devices
- For Bi-Directional devices having VR of 10 volts and under, the IR limit is double

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, $T_a=25^{\circ}\text{C}$ Unless Otherwise Specified.

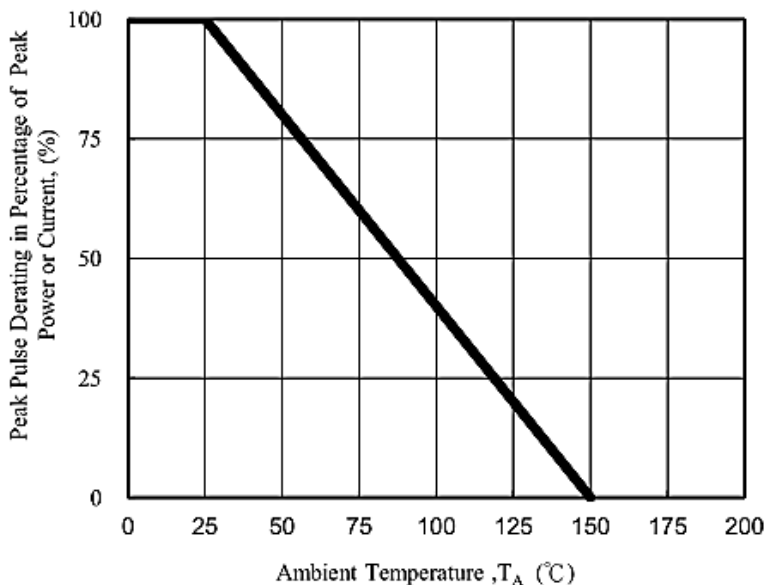


Fig. 1 - Pulse Derating Curve

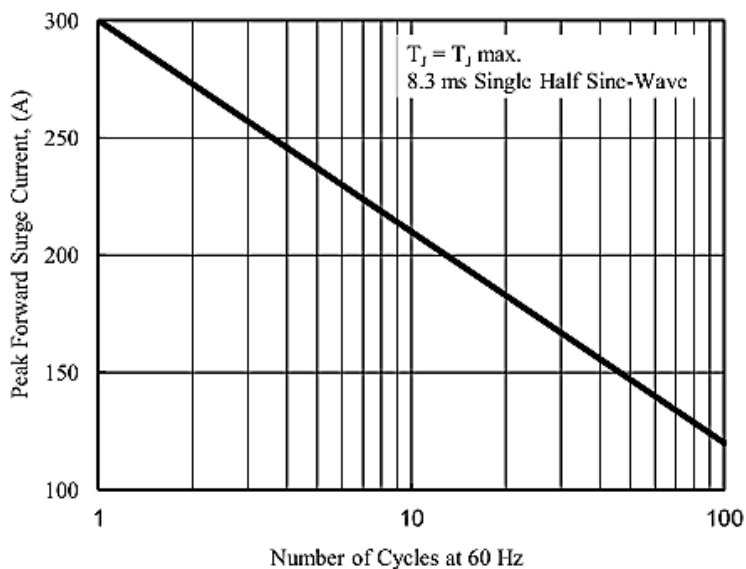


Fig. 2 - Maximum Non-Repetitive
Surge Current

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.



Fig. 3 - Steady State Power Derating Curve

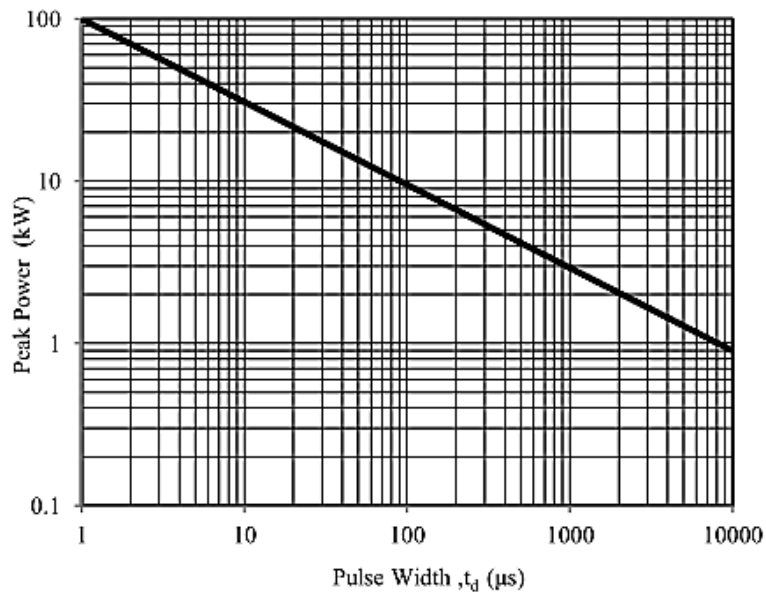


Fig. 4 - Peak Pulse Power Rating Curve

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, $T_a=25^{\circ}\text{C}$ Unless Otherwise Specified.



Fig. 5 - Pulse Waveform



Fig. 6 - Typical Junction Capacitance

RECOMMENDED SOLDERING PARAMETERS – FOR REFERENCE ONLY


PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		20 ~ 40 seconds
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	SMC/DO-214AB
Carrier width	A	0.1	6.15
Carrier Length	B	0.1	8.41
Carrier Depth	C	0.1	2.42
Sprocket hole	d	0.05	1.50
13"Reel outside diameter	D	2.0	330.0
13"Reel inner diameter	D1	Min.	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	7.50
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	16.00
Reel width	W1	1.0	16.50
Qty./Reel (pcs)	3000		

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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8. *NextGen* requires that customers first obtain an RMA (Returned Merchandise Authorization) number prior to returning any products. Returns must be made within 30 days of the date of invoice, be in the original packaging, unused and like-new condition. At the time of quoting or purchasing, a product may say that it is Non-Cancelable/ Non-Returnable (NCNR). These products are not returnable and not refundable.