

Features

- ◆ Optimized for LAN protection applications
- ◆ Ideal for ESD protection of data lines in accordance with IEC 1000-4-2(IEC801-2)
- ◆ Ideal for EFT protection of data lines in accordance with IEC 1000-4-4(IEC801-2)
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated junction chip
- ◆ 600W peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BR} min

Mechanical Data

Case : Molded plastic body

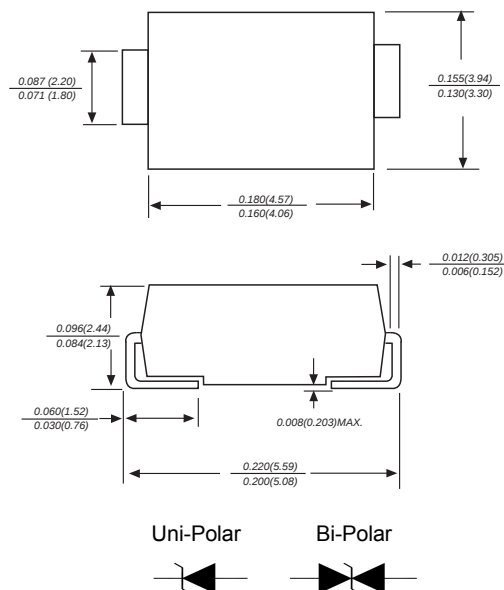
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0035 ounce, 0.098 grams

DO-214AA/SMB



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	SYMBOLS	VALUE	UNITS
Peak pulse power dissipation with a 10/1000μs wavetorm(NOTE 1,2,FIG.1)	P_{PPM}	Minimum 600	Watts
Peak forward surge current (Note 1,2,3)	I_{FSM}	100.0	Amps
Peak pulse current with a 10/1000μs waveform(NOTE 1)	I_{PPM}	See Table 1	Amps
Steady state power dissipation (Note 3)	$P_{M(AV)}$	5.0	Watts
Maximum instantaneous forward voltage at 50A(Note 3,4) unidirectional only	V_F	3.5/5.0	Volts
Operating junction and storage temperature range	T_{STG}, T_J	-55 to + 150	°C

Notes:1.Non-repetitive current pulse,per Fig.3 and derated above $T_A=25^{\circ}\text{C}$ per Fig.2

2.Mounted on 5.0mm copper pads to each terminal

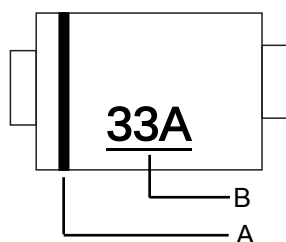
3.Measured on 8.3ms single half sine-wave.For uni-directional devices only.

4. $V_F=3.5\text{V}$ on SMB-5.0 thru SMB-220 devices and $V_F=5.0\text{V}$ on SMB-250 thru SMB-600 devices

Marking	Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
	(W)	(V)	(uA)	Min.	Max.	(mA)	(A)	(V)
6V8A	600	5.8	1000	6.45	7.14	10	58.1	10.5
7V5A	600	6.4	500	7.13	7.88	10	54.0	11.3
8V2A	600	7.02	200	7.79	8.61	10	50.4	12.1
9V1A	600	7.78	50	8.65	9.55	1	45.5	13.4
10A	600	8.55	10	9.5	10.5	1	42.1	14.5
11A	600	9.4	5	10.5	11.6	1	39.1	15.6
12A	600	10.2	5	11.4	12.6	1	36.5	16.7
13A	600	11.1	1	12.4	13.7	1	33.5	18.2
15A	600	12.8	1	14.3	15.8	1	28.8	21.2
16A	600	13.6	1	15.2	16.8	1	27.1	22.5
18A	600	15.3	1	17.1	18.9	1	24.2	25.5
20A	600	17.1	1	19	21	1	22.0	27.7
22A	600	18.8	1	20.9	23.1	1	19.9	30.6
24A	600	20.5	1	22.8	25.2	1	18.4	33.2
27A	600	23.1	1	25.7	28.4	1	16.3	37.5
30A	600	25.6	1	28.5	31.5	1	14.7	41.4
33A	600	28.2	1	31.4	34.7	1	13.3	45.7
36A	600	30.8	1	34.2	37.8	1	12.2	49.9
39A	600	33.3	1	37.1	41	1	11.3	53.9
43A	600	36.8	1	40.9	45.2	1	10.3	59.3
47A	600	40.2	1	44.7	49.4	1	9.4	64.8
51A	600	43.6	1	48.5	53.6	1	8.7	70.1
56A	600	47.8	1	53.2	58.8	1	7.9	77
58A	600	52.78	1	55.1	60.9	1	7.7	79.8
62A	600	53	1	58.9	65.1	1	7.2	85
68A	600	58.1	1	64.6	71.4	1	6.6	92
75A	600	64.1	1	71.3	78.8	1	5.9	103
82A	600	70.1	1	77.9	86.1	1	5.4	113
91A	600	77.8	1	86.5	95.5	1	4.9	125
100A	600	85.5	1	95	105	1	4.5	137
110A	600	94	1	105	116	1	4.0	152
120A	600	102	1	114	126	1	3.7	165
130A	600	111	1	124	137	1	3.4	179
150A	600	128	1	143	158	1	2.9	207
160A	600	136	1	152	168	1	2.8	219
170A	600	145	1	162	179	1	2.6	234
180A	600	154	1	171	189	1	2.5	246
200A	600	171	1	190	210	1	2.2	274
220A	600	185	1	209	231	1	1.9	328
250A	600	214	1	237	263	1	1.8	344

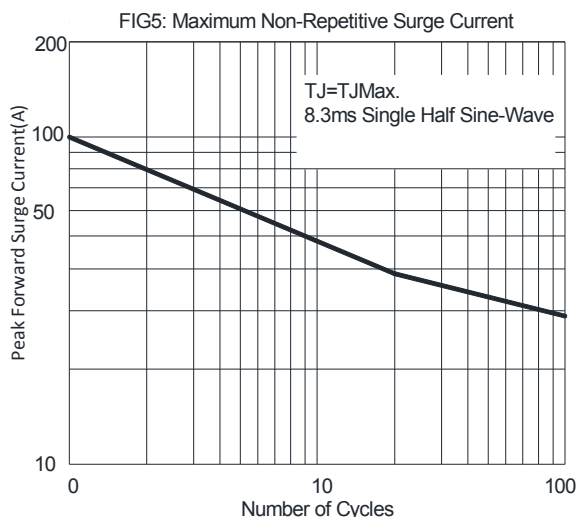
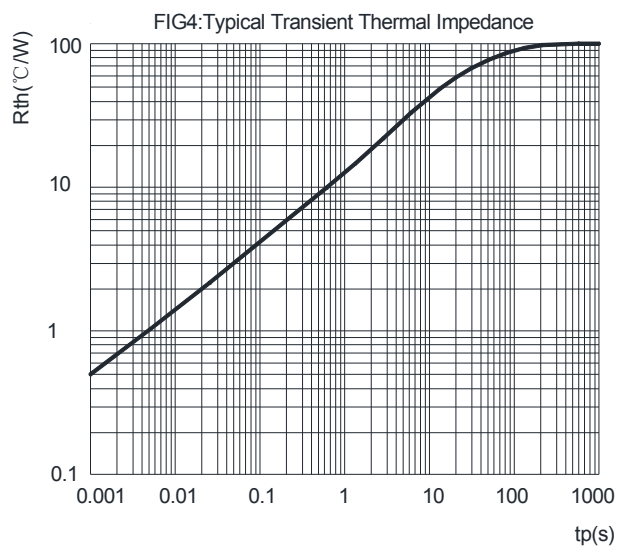
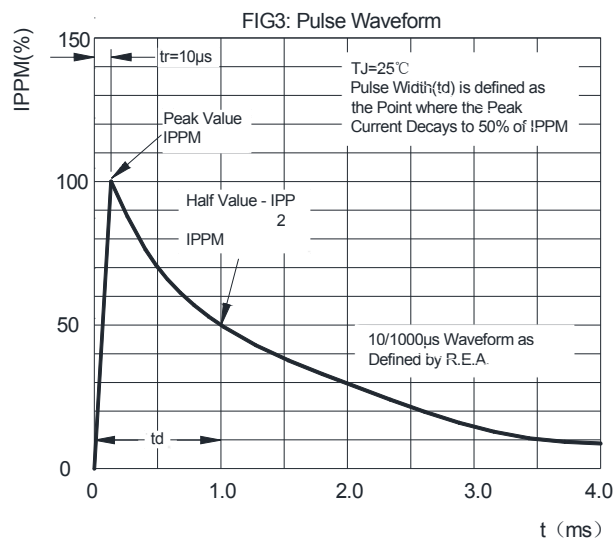
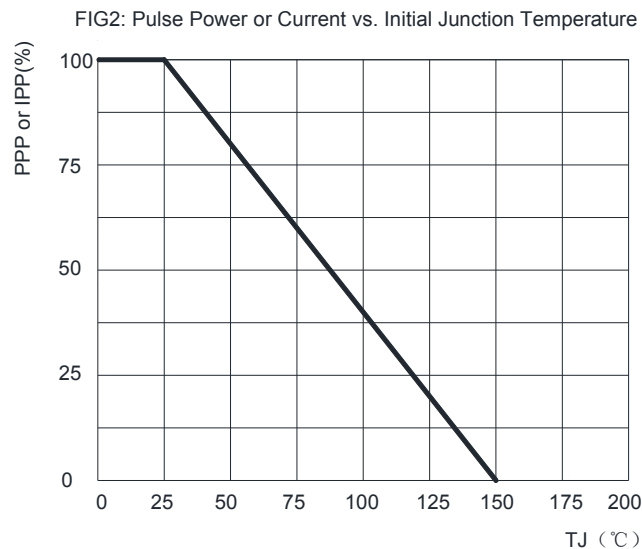
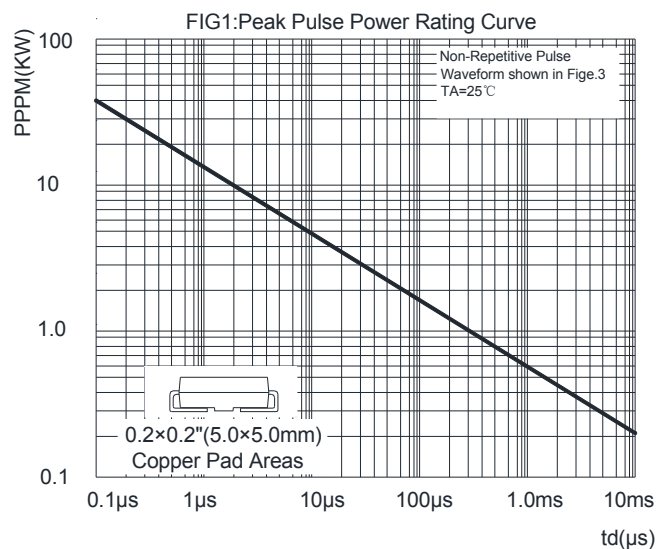
Marking	Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
	(W)	(V)	(uA)	Min.	Max.	(mA)	(A)	(V)
300A	600	256	1	285	315	1	1.5	414
350A	600	300	1	332	368	1	1.3	482
400A	600	342	1	380	420	1	1.1	548
440A	600	376	1	418	462	1	1.0	602
480A	600	408	1	456	504	1	0.9	658
510A	600	434	1	485	535	1	0.9	698
530A	600	451	1	503.5	556.5	1	0.8	725
540A	600	460	1	513	567	1	0.8	740
550A	600	468	1	522.5	577.5	1	0.8	760
600A	600	512	1	570	630	1	0.8	828

Marking For Uni-Polar

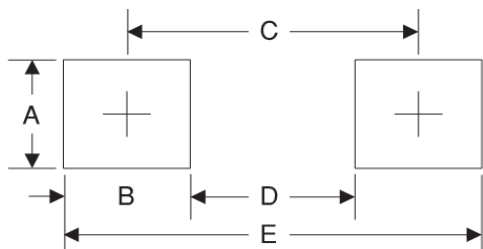


Symbol	Explanation
A	Color Band Denotes Cathode
B	Marking Code, as above sheet

Ratings And Characteristic Curves

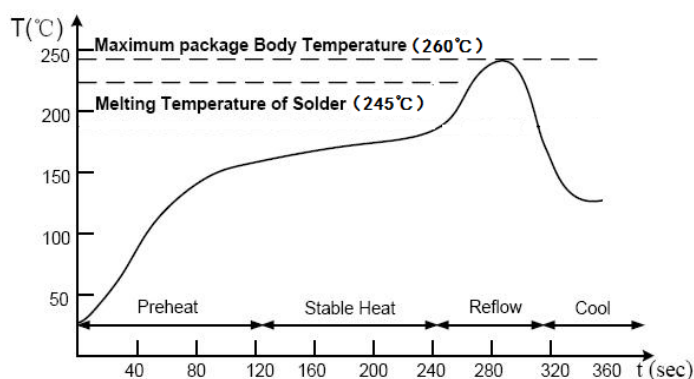


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	2.00	0.078
C	4.10	0.161
D	2.10	0.083
E	6.10	0.240

Suggested Soldering Temperature Profile

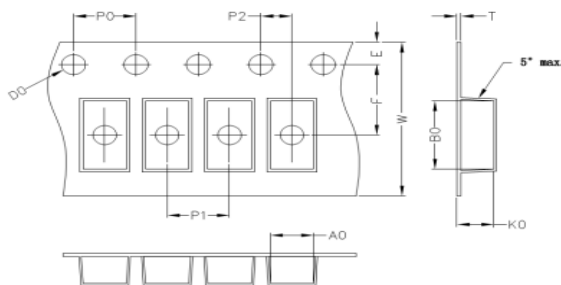


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
3.80	5.40	2.45	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMB	13'	330	3.0	340	6.0	360*360*360	48

NOTICE

The information presented in this document is for reference only. Involving product optimization and productivity improvement, ChipNobo reserves the right to adjust product indicators and upgrade some technical parameters. ChipNobo is entitled to be exempted from liability for any delay or non-delivery of the information disclosure process that occurs.

本文件中提供的信息仅供参考。涉及产品优化和生产效率改善，ChipNobo 有权调整产品指标和部分技术参数的升级，所出现信息披露过程存在延后或者不能送达的情形，ChipNobo 有获免责权。

The product listed herein is designed to be used with residential and commercial equipment, and do not support sensitive items and specialized equipment in areas where sanctions do exist. ChipNobo Co., Ltd or anyone on its behalf, assumes no responsibility or liability for any damages resulting from improper use.

此处列出的产品旨在民用和商业设备上使用，不支持确有制裁地区的敏感项目和特殊设备，ChipNobo 有限公司或其代表，对因不当使用而造成的任何损害不承担任何责任。

For additional information, please visit our website <http://www.chipnobo.com>, or consult your nearest Chipnobo sales office for further assistance.

欲了解更多信息，请访问我们的网站 <http://www.chipnobo.com>，或咨询离您最近的 Chipnobo 销售办事处以获得进一步帮助。