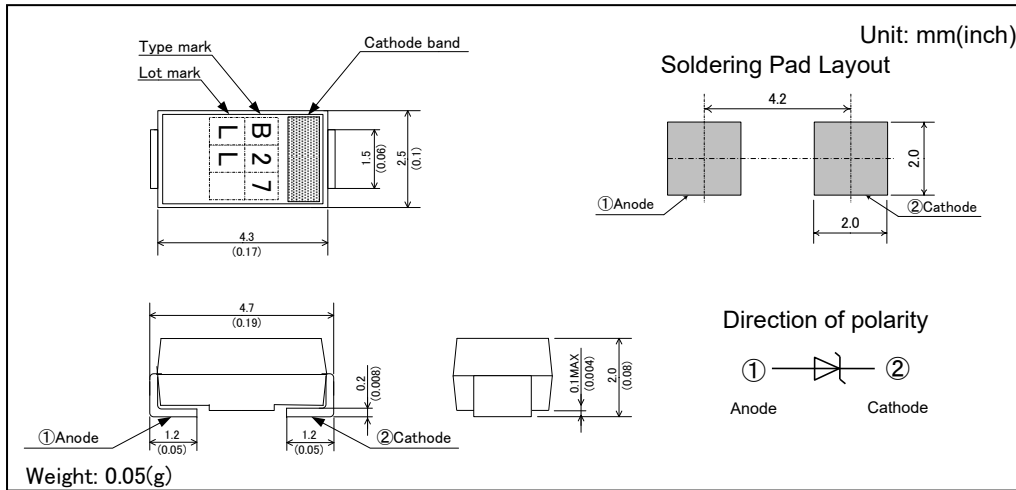


DAM1MB

FEATURES

- High transient reverse power capability suitable
- Available for automotive use
- AEC-Q101 qualified
- RoHS compliant
- Molding compound equivalent to UL 94 V-0
- MSL equivalent to level 1
- Type of packaging: 1500pcs/tape and reel

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Items	Symbols	Units	Ratings
Non-Repetitive Peak Reverse One-Cycle Dissipation	P_{RSM}	W	400 (10/1000 μ s waveform, $T_j=25^\circ\text{C}$ start) 600 (Rectangular pulse $t=0.1\text{ms}$ $T_j=25^\circ\text{C}$ start)
Surge(Non-Repetitive) Forward Current	I_{FSM}	A	40 (8.3ms single half sine-wave, $T_j=40^\circ\text{C}$ start)
Operating Junction Temperature	T_j	$^\circ\text{C}$	-65 ~ +185
Storage Temperature	T_{stg}	$^\circ\text{C}$	-65 ~ +185
Stand-off Voltage	V_{RM}	V	Refer to characteristics column

CHARACTERISTICS $V_z=12\sim 51\text{V}(T_L=25^\circ\text{C})$

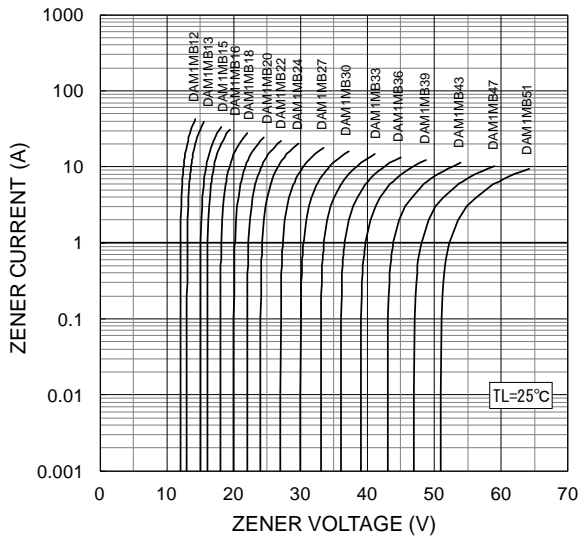
Type	Stand-off Voltage V_{RM} (V)	Characteristics				Maximum Peak Pulse Surge Current I_{PPM} (A)	Maximum Clamping Voltage at I_{PPM} V_C (V)
		Zener Voltage V_z (V)		Test Current I_z (mA)	Maximum Reverse Leakage at V_{RM} I_{RRM} (μA)		
		Minimum	Maximum				
DAM1MB12	9.7	11.4	12.7	1	5	23.1	17.3
DAM1MB13	10.5	12.4	14.1	1	5	21.1	19.0
DAM1MB15	12.1	13.5	15.6	1	1	18.2	22.0
DAM1MB16	12.9	15.3	17.1	1	1	17.0	23.5
DAM1MB18	14.5	16.8	19.1	1	1	15.1	26.5
DAM1MB20	16.2	18.8	21.2	1	1	13.7	29.1
DAM1MB22	17.8	20.8	23.3	1	1	12.5	31.9
DAM1MB24	19.4	22.7	25.6	1	1	11.5	34.7
DAM1MB27	21.8	25.1	28.9	1	1	10.2	39.1
DAM1MB30	24.3	28.0	32.0	1	1	9.2	43.5
DAM1MB33	26.8	31.0	35.0	1	1	8.4	47.7
DAM1MB36	29.1	33.4	38.6	1	1	7.7	52.0
DAM1MB39	31.6	36.1	41.9	1	1	7.1	56.4
DAM1MB43	34.8	39.8	46.2	1	1	6.5	61.9
DAM1MB47	38.0	43.3	50.7	1	1	5.9	67.7
DAM1MB51	41.3	46.9	55.1	1	1	5.4	74.0

DAM1MB

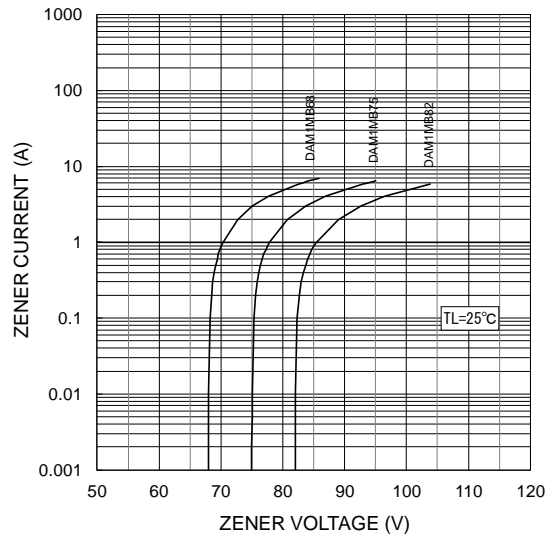
CHARACTERISTICS Vz=68~82V(TL=25°C)

Type	Stand-off Voltage V_{RM} (V)	Characteristics				Maximum Peak Pulse Surge Current I_{PPM} (A)	Maximum Clamping Voltage at I_{PPM} V_C (V)
		Zener Voltage V_Z (V)		Test Current I_Z (mA)	Maximum Reverse Leakage at V_{RM} I_{RRM} (μ A)		
		Minimum	Maximum				
DAM1MB68	55.1	61.2	74.8	1	1	4.1	98.0
DAM1MB75	60.7	67.5	82.5	1	1	3.7	107.6
DAM1MB82	66.4	73.8	90.2	1	1	3.4	117.9

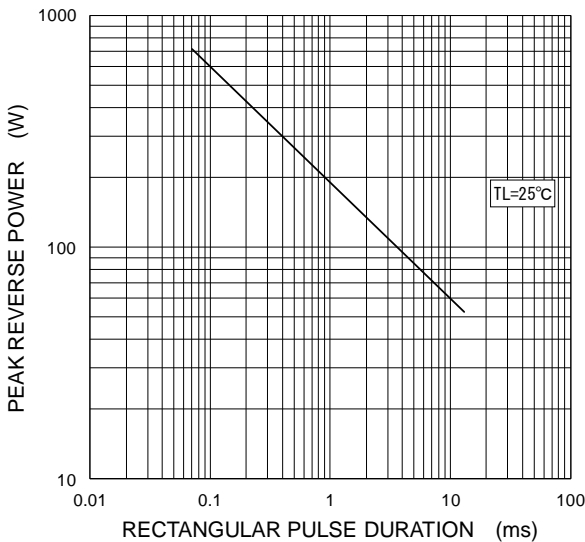
Typical zener characteristics (V_Z : 12 – 51V)



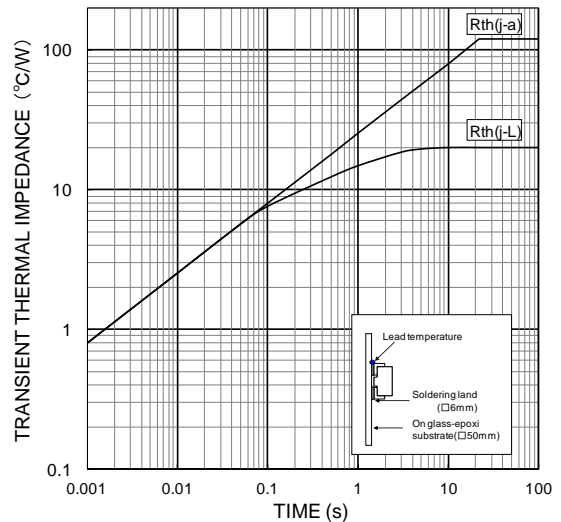
Typical zener characteristics (V_Z : 68 – 82V)



Typical reverse power characteristics (Rectangular pulse non-repetitive)

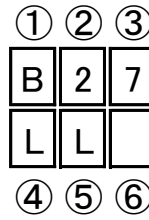
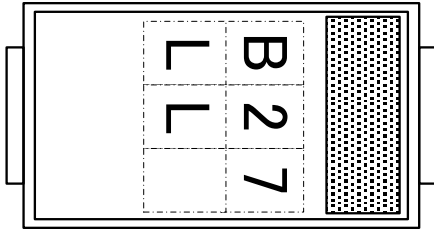


Transient thermal impedance



DAM1MB

Part number description



①	Type mark	"B" : DAM"B" series
②	Zener voltage	Zener voltage (two digits)
③		e.g. 27 → 27V
④	Year	Year of manufacture (the last digit)
⑤	Month	Month of manufacture
⑥	Blank	Here is blank.

	Mark	A	B	C	D	E	K	L	M	N	X	Y	Z
④	Year of manufacture (the last digit)	1	2	3	4	5	6	7	8	9	0	-	-
⑤	Month of manufacture	1	2	3	4	5	6	7	8	9	10	11	12

e.g. B27 Type: DAM"B" series
 LL Zener voltage: 27V
 Manufacturing date: Jul. 2017

Precautions for Safe Use and Notices

If semiconductor devices are handled in inappropriate manner, failures may result. For this reason, be sure to read "Precaution for Use" before use.



This mark indicates an item about which caution is required.



CAUTION

This mark indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury and damage to property.

CAUTION

- (1) Regardless of changes in external conditions during use "absolute maximum ratings" should never be exceeded in designing electronic circuits that employ semiconductors. In the case of pulse use, furthermore, "safe operating area(SOA)" precautions should be observed.
- (2) Semiconductor devices may experience failures due to accident or unexpected surge voltages. Accordingly, adopt safe design features, such as redundancy or prevention of erroneous action, to avoid extensive damage in the event of a failure.
- (3) In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, life-support-related medical equipment, fuel control equipment and various kinds of safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of user's fail-safe precautions or other arrangement. Or consult MPSD's sales department staff.

(If a semiconductor device fails, there may be cases in which the semiconductor device, wiring or wiring pattern will emit smoke or cause a fire or in which the semiconductor device will burst)

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1. This Datasheet contains the specifications, characteristics (in figures and tables), dimensions and handling notes concerning power semiconductor products (hereinafter called "products") to aid in the selection of suitable products.
2. The specifications and dimensions, etc. stated in this Datasheet are subject to change without prior notice to improve products characteristics. Before ordering, purchasers are advised to contact MPSD's sales department for the latest version of this Datasheet and specifications.
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