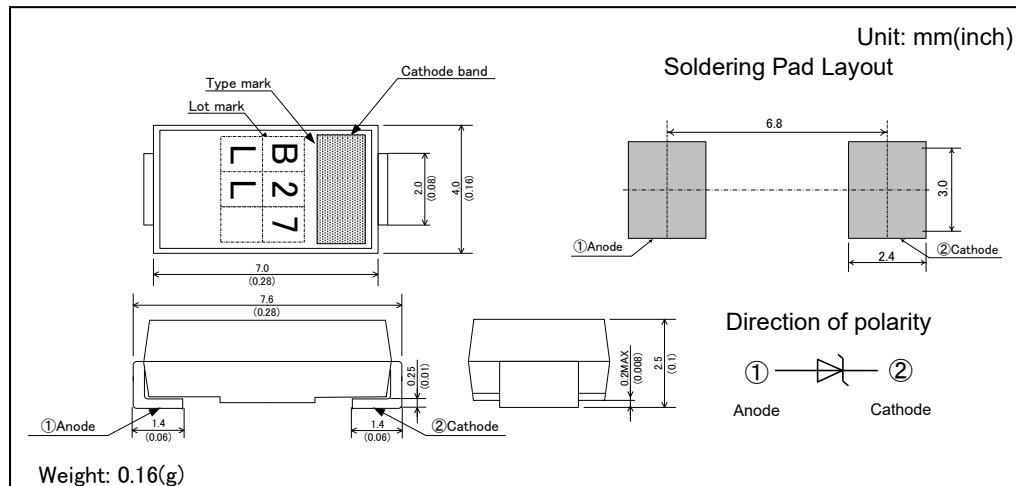


# DAM3MB

## 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: 800pcs/tape and reel

## OUTLINE DRAWING



## ABSOLUTE MAXIMUM RATINGS

Items	Symbols	Units	Ratings
Non-Repetitive Peak Reverse One-Cycle Dissipation	$P_{RSM}$	W	1200 (10/1000 $\mu$ s waveform, $T_J=25^{\circ}\text{C}$ start)
Surge (Non-Repetitive) Forward Current	$I_{FSM}$	A	1800 (Rectangular pulse $t=0.1\text{ms}$ $T_J=25^{\circ}\text{C}$ start)
Operating Junction Temperature	$T_J$	$^{\circ}\text{C}$	150 (8.3ms single half sine-wave, $T_J=40^{\circ}\text{C}$ start)
Storage Temperature	$T_{stg}$	$^{\circ}\text{C}$	-65 ~ +185
Stand-off Voltage	$V_{RM}$	V	-65 ~ +185
			Refer to characteristics column

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

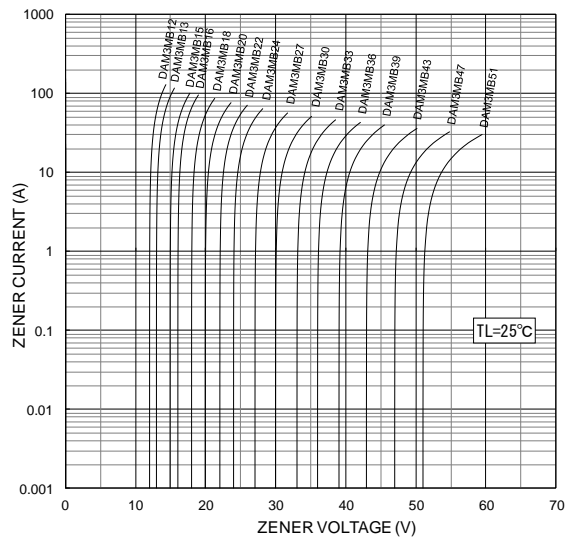
Type	Stand-off Voltage $V_{RM}$ (V)	Characteristics				Maximum Peak Pulse Surge Current $I_{PPM}$ (A)	Maximum Clamping Voltage at $I_{PPM}$ $V_C$ (V)
		Zener Voltage $V_Z$ (V)		Test Current $I_Z$ (mA)	Maximum Reverse Leakage at $V_{RM}$ $I_{RRM}$ ( $\mu A$ )		
		Minimum	Maximum				
DAM3MB12	9.7	11.4	12.7	1	5	69.4	17.3
DAM3MB13	10.5	12.4	14.1	1	5	63.2	19.0
DAM3MB15	12.1	13.5	15.6	1	1	54.5	22.0
DAM3MB16	12.9	15.3	17.1	1	1	51.1	23.5
DAM3MB18	14.5	16.8	19.1	1	1	45.3	26.5
DAM3MB20	16.2	18.8	21.2	1	1	41.2	29.1
DAM3MB22	17.8	20.8	23.3	1	1	37.6	31.9
DAM3MB24	19.4	22.7	25.6	1	1	34.6	34.7
DAM3MB27	21.8	25.1	28.9	1	1	30.7	39.1
DAM3MB30	24.3	28.0	32.0	1	1	27.6	43.5
DAM3MB33	26.8	31.0	35.0	1	1	25.2	47.7
DAM3MB36	29.1	33.4	38.6	1	1	23.1	52.0
DAM3MB39	31.6	36.1	41.9	1	1	21.3	56.4
DAM3MB43	34.8	39.8	46.2	1	1	19.4	61.9
DAM3MB47	38.0	43.3	50.7	1	1	17.7	67.7
DAM3MB51	41.3	46.9	55.1	1	1	16.2	74.0

# DAM3MB

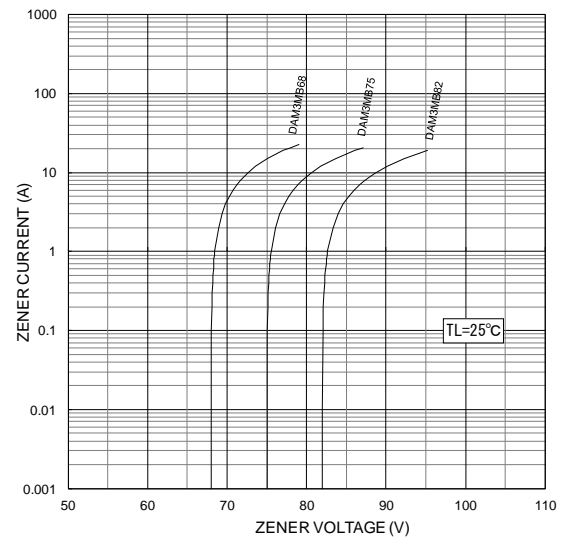
## CHARACTERISTICS $V_z=68\sim 82V(T_L=25^\circ\text{C})$

Type	Stand-off Voltage V <sub>RM</sub> (V)	Characteristics				Maximum Peak Pulse Surge Current I <sub>PPM</sub> (A)	Maximum Clamping Voltage at I <sub>PPM</sub> V <sub>C</sub> (V)
		Zener Voltage Vz (V)		Test Current Iz (mA)	Maximum Reverse Leakage at V <sub>RM</sub> I <sub>RRM</sub> (μA)		
		Minimum	Maximum				
DAM3MB68	55.1	61.2	74.8	1	1	12.2	98.0
DAM3MB75	60.7	67.5	82.5	1	1	11.2	107.6
DAM3MB82	66.4	73.8	90.2	1	1	10.2	117.9

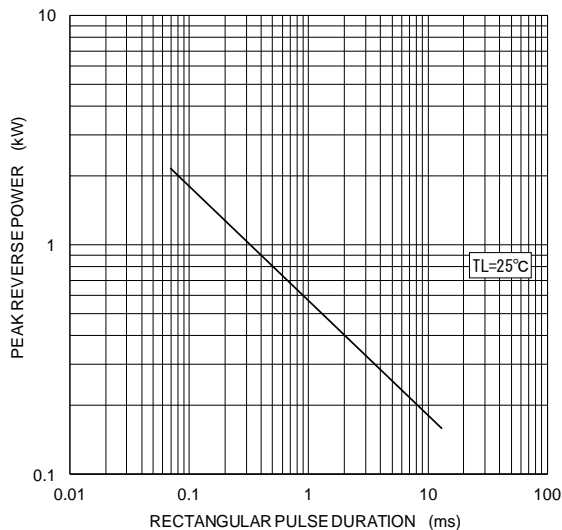
Typical zener characteristics ( $V_z$ : 12 – 51V )



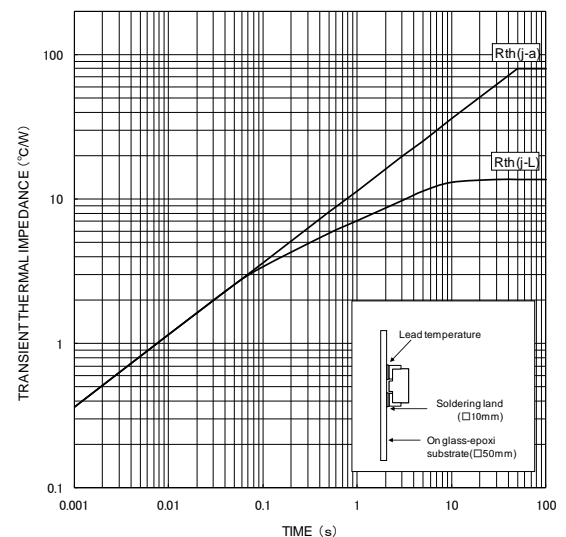
Typical zener characteristics ( $V_z$ : 68 – 82V )



Typical reverse power characteristics  
(Rectangular pulse non-repetitive)

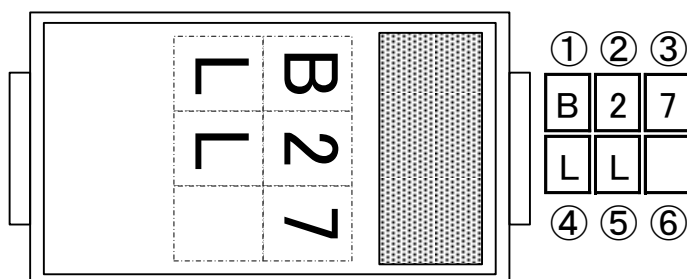


Transient thermal impedance



# DAM3MB

## 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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URL : <https://www.minebea-psd.com/en>

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