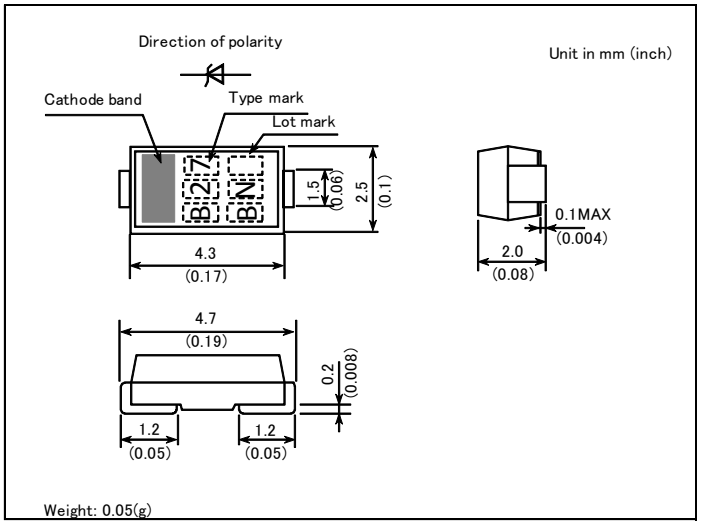
DAM1MB

FEATURES

- High transient reverse power capability suitable for protecting automobile electronic components etc.
- AEC-Q101 qualified
- RoHS compliant (Included RoHS exemption substance)

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

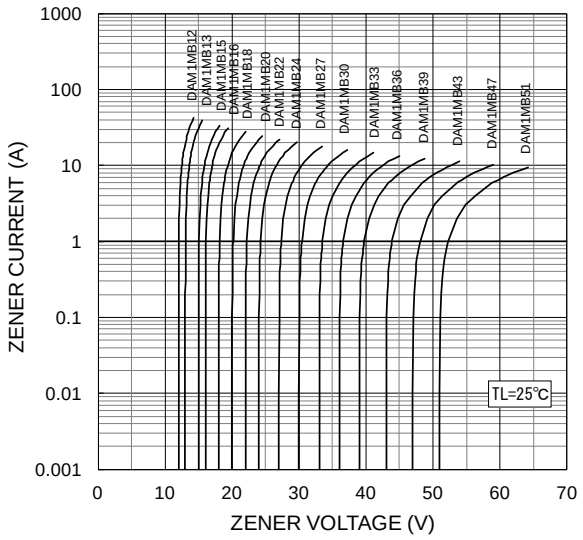
Items	Symbols	Units	Ratings
Non-Repetitive Peak Reverse One-Cycle Dissipation	P_{RSM}	W	400（10/1000μs waveform,T_j=25℃ start)
			600（Rectangular pulse t=0.1ms T_j=25℃ start)
Surge(Non-Repetitive) Forward Current	I_{FSM}	A	40 (8.3ms single half sine-wave, T_j=40℃ start)
Operating Junction Temperature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

CHARACTERISTICS(T_L=25°C)

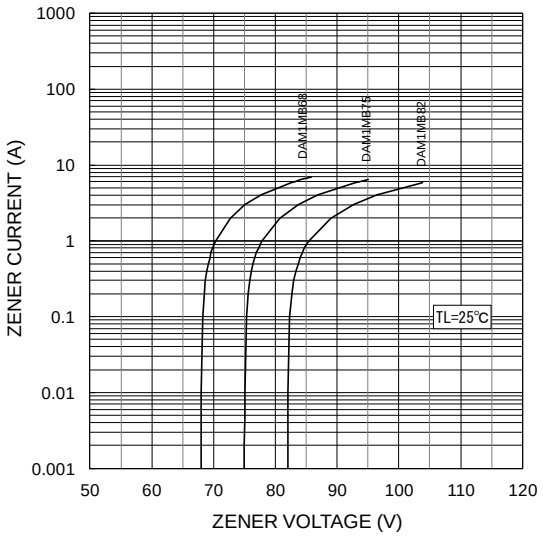
Type	Stand-off Voltage V_{RM} (V)	Characteristics				Maximum Peak Pulse Surge Current I_{PPM} (A)	Maximum Clamping Voltage at I_{PPM} V_C (V)
		Zener Voltage Vz (V)		Test Current Iz (mA)	Maximum Reverse Leakage at V_{RM} I_{RRM} (μA)		
		Minimum	Maximum				
DAM1MB12	9.7	11.4	12.7	1	5	23.1	17.3
DAM1MB13	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
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

DAM1MB

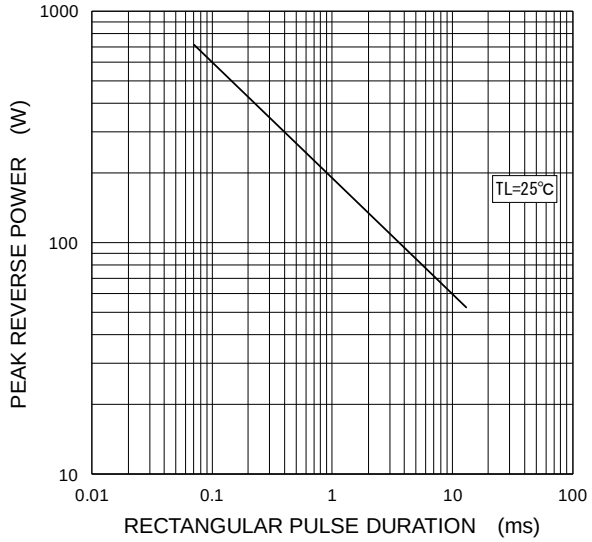
Typical zener characteristics (Vz : 12 – 51V)



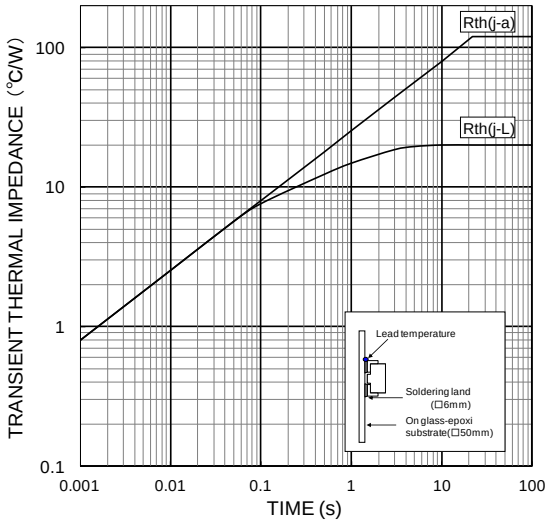
Typical zener characteristics (Vz : 68 – 82V)



Typical reverse power characteristics
(Rectangular pulse non-repetitive)



Transient thermal impedance



Precautions for Safe Use and Notices

If semiconductor devices are handled 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 exceed 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 Hitachi'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)

NOTICES

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 Hitachi's sales department for the latest version of this Datasheet and specifications.
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