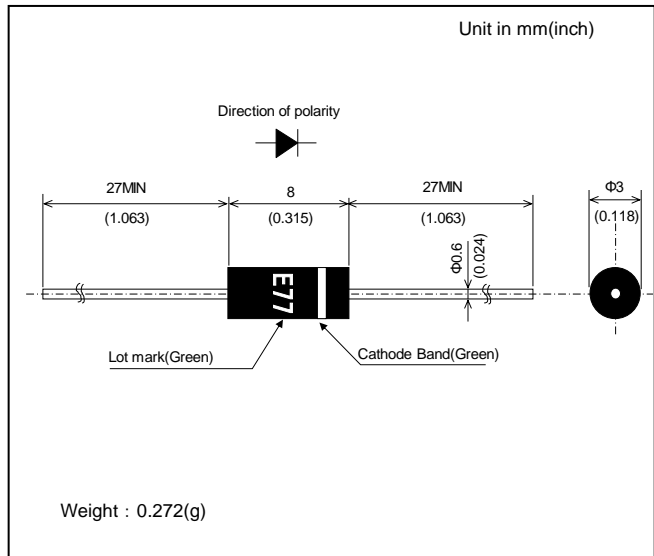


DHM30A40E

FEATURES

- For Distributor Less Ignition System.
- High voltage pulse control for ignition coil.
- Diffused-junction.
- Excellent high temperature output characteristics (Small leakage current at high temperature And excellent reverse characteristics)
- AEC-Q101qualified
- RoHS compliant
- Molding compound equivalent to UL 94 V-0
- Type of packaging 5000pcs/reel
- Lead free type (Use lead-free solder for chip connection)

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Item	Type		DHM30A40E
Repetitive peak reverse voltage	V_{RRM}	kV	4
Average forward current	$I_{F(AV)}$	mA	30 (50Hz conduction)
Non-Repetitive peak forward current	I_{FSM}	A	3 (10ms conduction)
Peak Surge Reverse Current	I_{RSM}	mA	30 (Triangle wave 100 μ s Half-width)
Operating junction temperature	T_j	$^{\circ}$ C	+150
Storage temperature range	T_{stg}	$^{\circ}$ C	-40 ~ +150

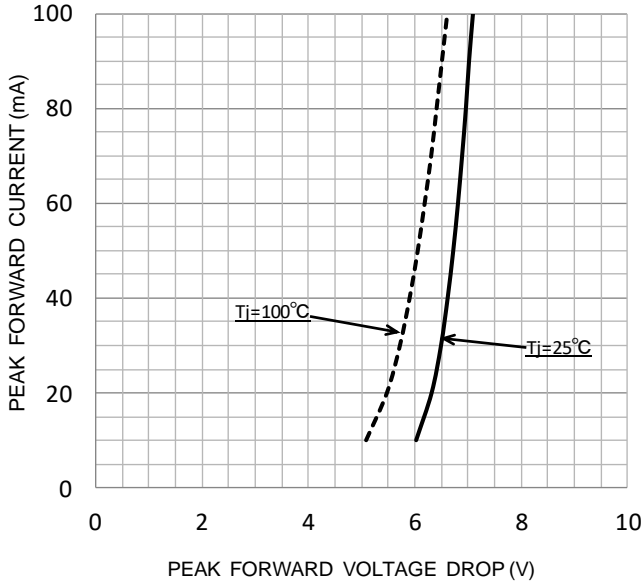
CHARACTERISTICS ($T_C=25^{\circ}$ C unless otherwise specified)

Item	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current*	I_{RRM}	μ A	—	—	5	$V_R = V_{RRM}$
Peak Forward Voltage	V_{FM}	V	—	—	10	$I_{FM} = 10\text{mA}$
Reverse Breakdown Voltage	V_Z	kV	4.4	—	10	$I_R=100\mu\text{A}$

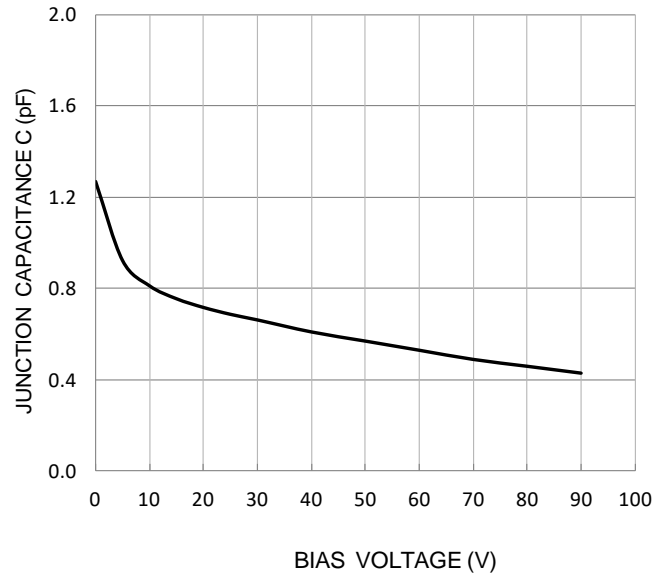
Notes *Diode tested in adequate thermal dielectric medium.

DHM30A40E

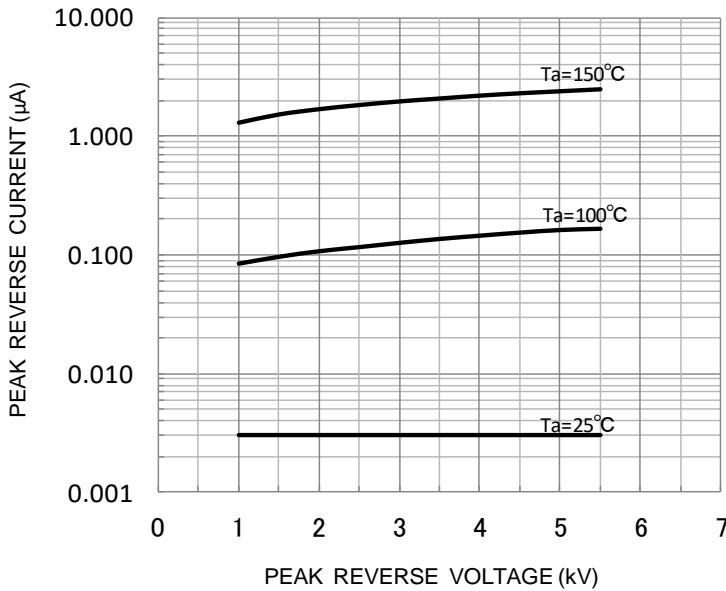
Typical Forward characteristic



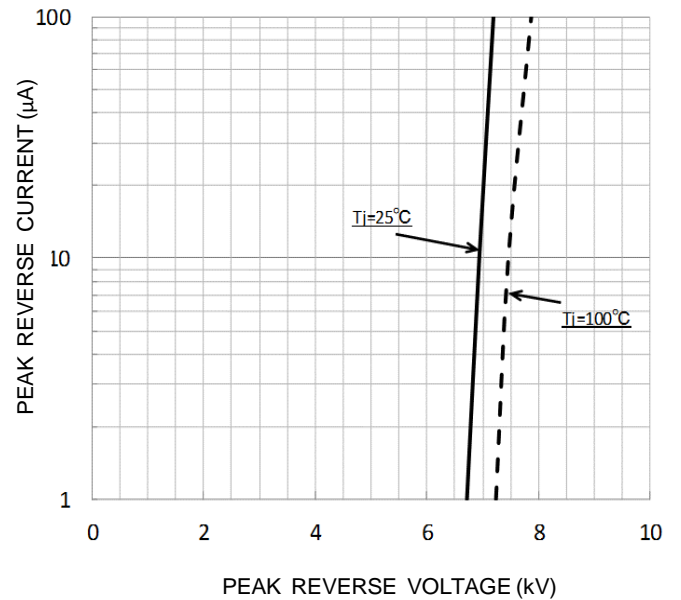
Typical Junction Capacitance



Typical Reverse Current characteristic
(I_r : $0.001\mu\text{A} \sim 10\mu\text{A}$)

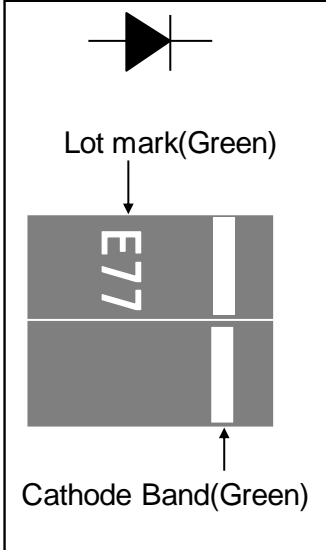


Typical Reverse Current characteristic
(I_r : $1\mu\text{A} \sim 100\mu\text{A}$)



DHM30A40E

Part number description



Lot mark(Green)

Cathode Band(Green)

Lot mark

Mark of lead free

Month

Last digit of the year

Month	1	2	3	4	5	6	7	8	9	10	11	12
Mark	1	2	3	4	5	6	7	8	9	0	N	D

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 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 MPSD’s sales department staff.
- (4) (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 MPSD’s sales department for the latest version of this Datasheet and specifications.
3. In no event shall MPSD be liable for any damage that may result from an accident or any other cause during operation of the user’s units according to this Datasheet. MPSD assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in this Datasheet.
4. In no event shall MPSD be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5. No license is granted by this Datasheet under any patents or other rights of any third party or of MPSD.
6. This Datasheet may not be reproduced or duplicated, in any form, in whole or in part, without the expressed written permission of MPSD.
7. The products (technologies) described in this Datasheet are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.

Refer to the following website for the latest information. Consult MPSD’s sales department staff if you have any questions.

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

【Usage】

- (1) MPSD warrants that the MPSD products have the specified performance according to the respective specifications at the time of its sale. Testing and other quality control techniques of the MPSD products by MPSD are utilized to the extent MPSD needs to meet the specifications described in this document. Not every device of the MPSD products is specifically tested on all parameters, except those mandated by relevant laws and/or regulations.
- (2) Following any claim regarding the failure of a product to meet the performance described in this document made within one month of product delivery, all the products in relevant lot(s) shall be re-tested and re-delivered. The MPSD products delivered more than one month before such a claim shall not be counted for such response.
- (3) MPSD assumes no obligation nor makes any promise of compensation for any fault which should be found in a customer's goods incorporating the products in the market. If a product failure occurs for reasons obviously attributable to MPSD and a claim is made within six months of product delivery, MPSD shall offer free replacement or payment of compensation. The maximum compensation shall be the amount paid for the products, and MPSD shall not assume responsibility for any other compensation.
- (4) MPSD reserves the right to make changes in this document and to discontinue mass production of the relevant products without notice. Customers are advised to confirm specification of the product of inquiry before purchasing of the products that the customer desired. Customers are further advised to confirm before purchasing of such above products that the product of inquiry is the latest version and that the relevant product is in mass production status if the purchasing of the products by the customer is suspended for one year or more.
- (5) When you dispose of MPSD products and/or packing materials, comply with the laws and regulations of each country and/or local government. Conduct careful preliminary studies about environmental laws applying to your products such as RoHS, REACH. MPSD shall not assume responsibility for compensation due to contravention of laws and/or regulations.
- (6) MPSD shall not be held liable in any way for damages and infringement of patent rights, copyright or other intellectual property rights arising from or related to the use of the information, products, and circuits in this document.
- (7) No license is granted by this document of any patents, copyright or other intellectual property rights of any third party or of MPSD.
- (8) This document may not be reprinted, reproduced or duplicated, in any form, in whole or in part without the express written permission of MPSD.
- (9) You shall not use the MPSD products (technologies) described in this document and any other products (technologies) manufactured or developed by using them (hereinafter called "END Products") or supply the MPSD products (technologies) and END Products for the purpose of disturbing international peace and safety, including (i) the design, development, production, stockpiling or any use of weapons of mass destruction such as nuclear, chemical or biological weapons or missiles, (ii) the other military activities, or (iii) any use supporting these activities. You shall not sell, export, dispose of, license, rent, transfer, disclose or otherwise provide the MPSD products (technologies) and END Products to any third party whether directly or indirectly with knowledge or reason to know that the third party or any other party will engage in the activities described above.

When exporting, re-export transshipping or otherwise transferring the MPSD products (technologies) and END Products, all necessary procedures are to be taken in accordance with Foreign Exchange and Foreign Trade Act (Foreign Exchange Act) of Japan, Export Administration Regulations (EAR) of US, and any other applicable export control laws and regulations promulgated and administered by the governments of the countries asserting jurisdictions over the parties or transaction.