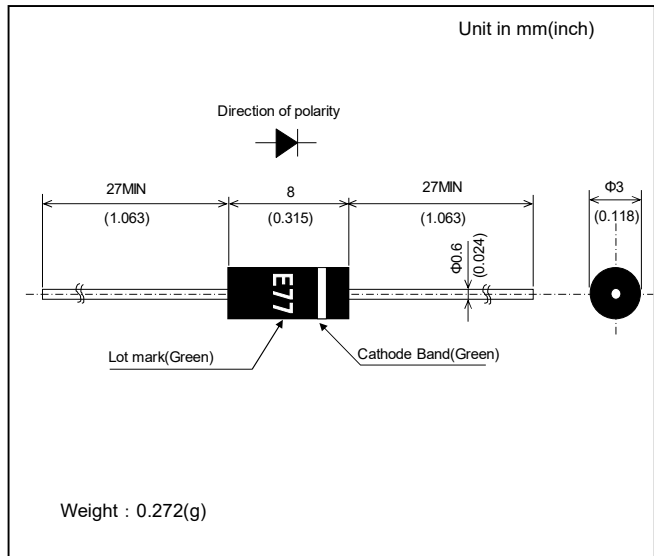


# DHM30A40E

## 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 $\mu$ s Half-width)
Operating junction temperature	$T_j$	$^{\circ}$ C	+150
Storage temperature range	$T_{stg}$	$^{\circ}$ C	-40 ~ +150

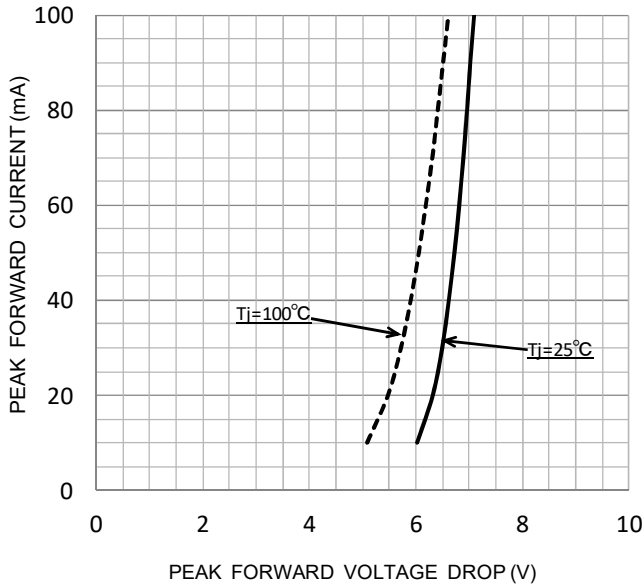
## CHARACTERISTICS ( $T_C=25^{\circ}$ C unless otherwise specified)

Item	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Peak Reverse Current*	$I_{RRM}$	$\mu$ 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	$I_R = 100\ \mu\text{A}$

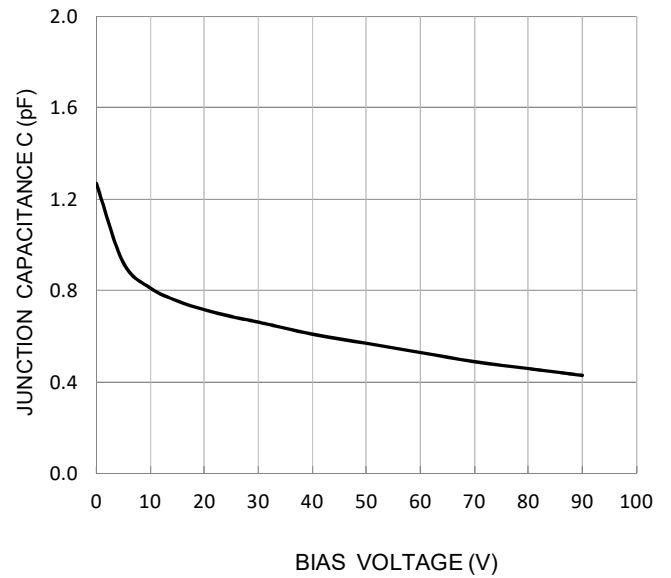
Notes \*Diode tested in adequate thermal dielectric medium.

# DHM30A40E

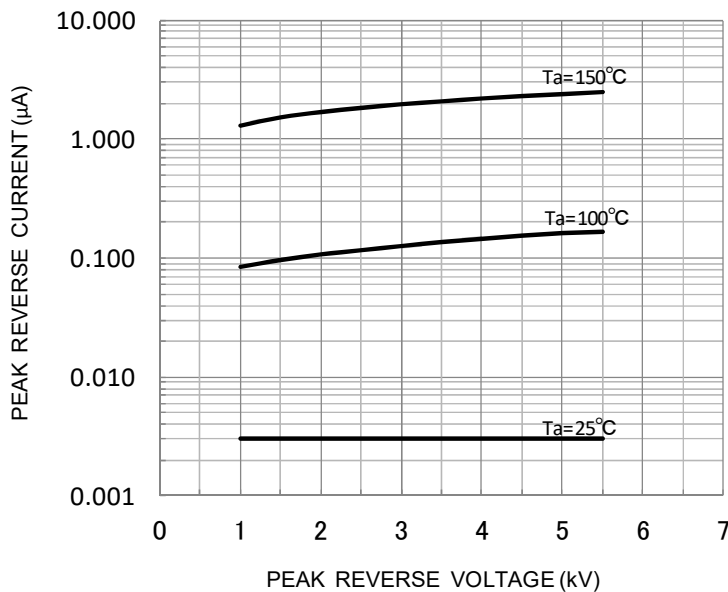
Typical Forward characteristic



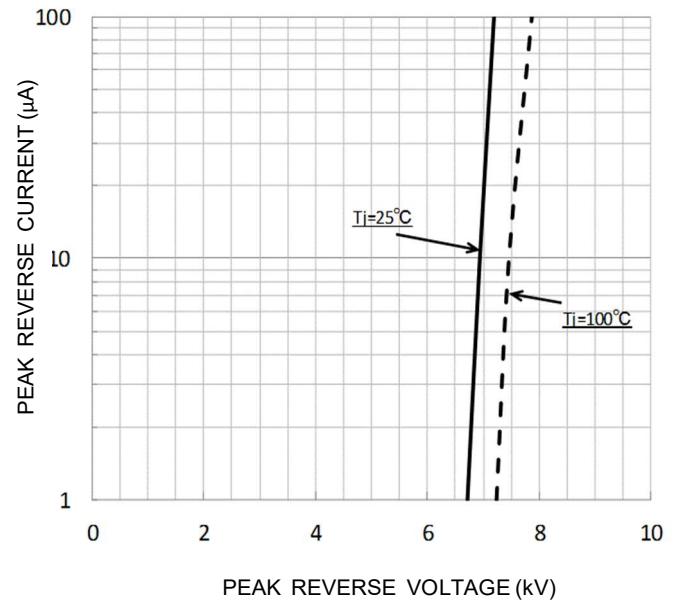
Typical Junction Capacitance



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

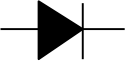


Typical Reverse Current characteristic  
( $I_r$ :  $1\mu\text{A} \sim 100\mu\text{A}$ )

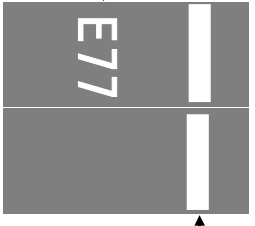


# DHM30A40E

## Part number description



Lot mark(Green)



Cathode Band(Green)

Lot mark

**E 7 7**

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

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## Precautions for Safe Use and Notices

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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 Hitachi'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)

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## NOTICES

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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 Hitachi's sales department for the latest version of this Datasheet and specifications.
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<http://www.hitachi-power-semiconductor-device.co.jp/en/>

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