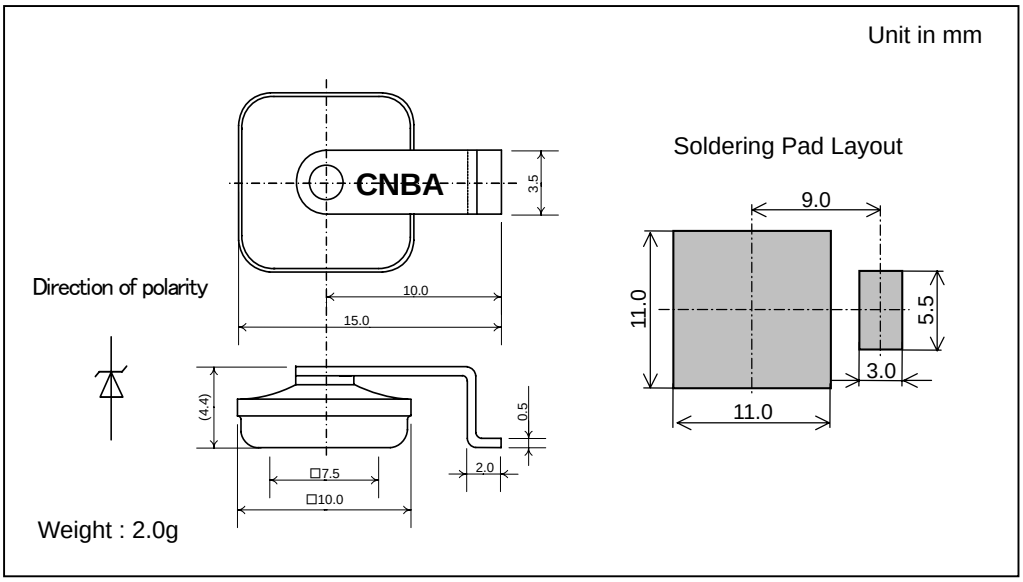
ZSH5MT48C

FEATURES

- High transient reverse power capability suitable for Load Dump Surge protecting for automobile electronic components etc.
- JEDEC DO-218 soldering pad Layout compatible.

OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS

Items	Symbols	Units	Ratings
Non-Repetitive Peak Reverse One-Cycle Dissipation	P_{RSM}	W	4,300(Rectangular pulse t=1ms Tj=25°C start)
Non-Repetitive Peak Reverse Surge Current	I_{RSM}	A	50(Exponential waveform. See Fig.1, Tj =25°C start)
DC Reverse Voltage	V_{DC}	V	39
Operating Junction Temperature	T_j	°C	-40 ~ +150
Storage Temperature	T_{stg}	°C	-40 ~ +150

CHARACTERISTICS(T_L=25°C)

Items	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Zener Voltage	Vz	V	43.2	48.0	52.8	Iz=10mA
Dynamic Impedance	Zz	Ω	-	-	50	Iz=10mA
Zener Voltage Temperature Coefficient	γ_z	%/°C	-	0.089	-	Iz=10mA
Peak Forward Voltage	V_{FM}	V	-	-	1.2	I_{FM}=6A
Peak Reverse Current	I_{RRM}	μA	-	-	10	V_R=39V

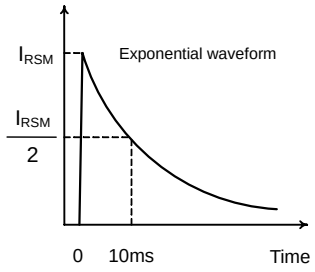
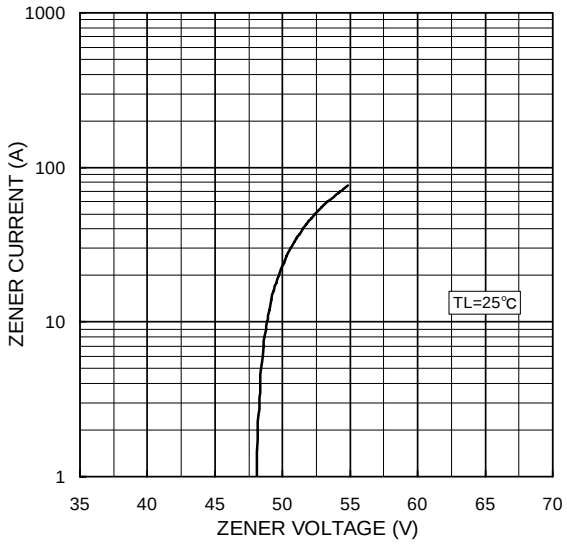


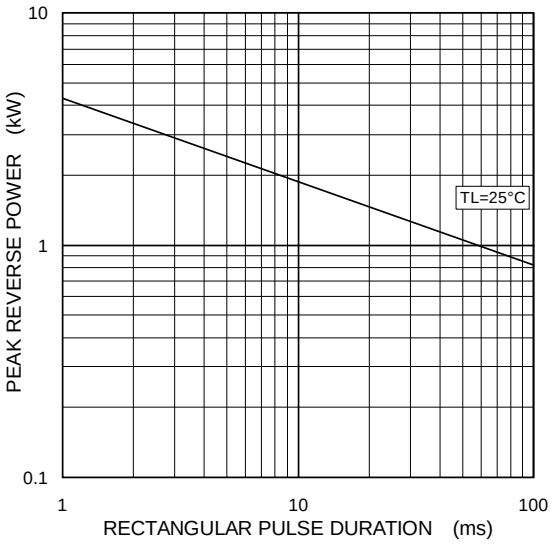
Figure 1. I_{RSM} waveform

ZSH5MT48C

Typical zener characteristics



Typical reverse power characteristics
(Rectangular pulse non-repetitive)



HITACHI POWER SEMICONDUCTORS

Notices

1. The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact Hitachi sales department for the latest version of this data sheets.
2. Please be sure to read "Precautions for Safe Use and Notices" in the individual brochure before use.
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 users' fail-safe precautions or other arrangement. Or consult Hitachi's sales department staff.
4. In no event shall Hitachi be liable for any damages that may result from an accident or any other cause during operation of the user's units according to this data sheets. Hitachi 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 data sheets.
5. In no event shall Hitachi be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
6. No license is granted by this data sheets under any patents or other rights of any third party or Hitachi, Ltd.
7. This data sheets may not be reproduced or duplicated, in any form, in whole or in part , without the expressed written permission of Hitachi, Ltd.
8. The products (technologies) described in this data sheets are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety not 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.

■ For inquiries relating to the products, please contact nearest overseas representatives which is located "Inquiry" portion on the top page of a home page.

Hitachi power semiconductor home page address http://www.hitachi.co.jp/products/power/pse/

HITACHI