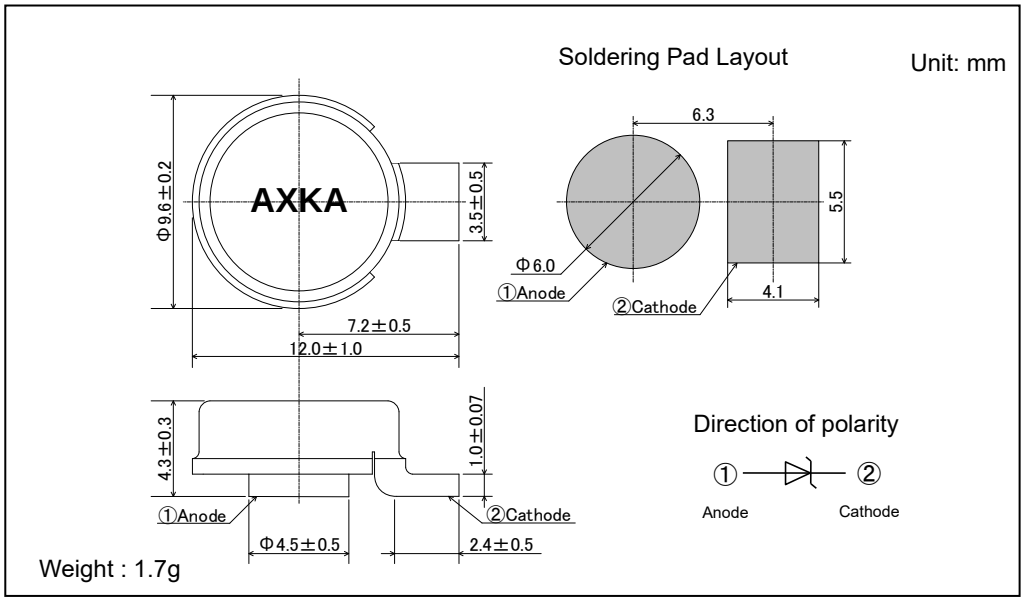
ZSH5ME27

FEATURES

- 5W class
- High surge capability for Load Dump Surge
- Meets ISO7637-2,ISO16750-2 surge specification
  (Varied by test condition)
- Available for automotive use
- AEC-Q101 qualified
- RoHS compliant
- MSL equivalent to level 1
- Type of packaging: 1200pcs/tape and reel

OUTLINE DRAWING



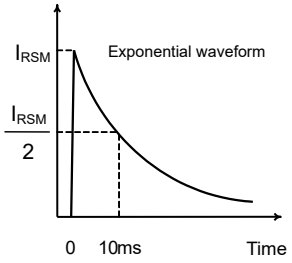


Figure 1. I_{RSM} waveform

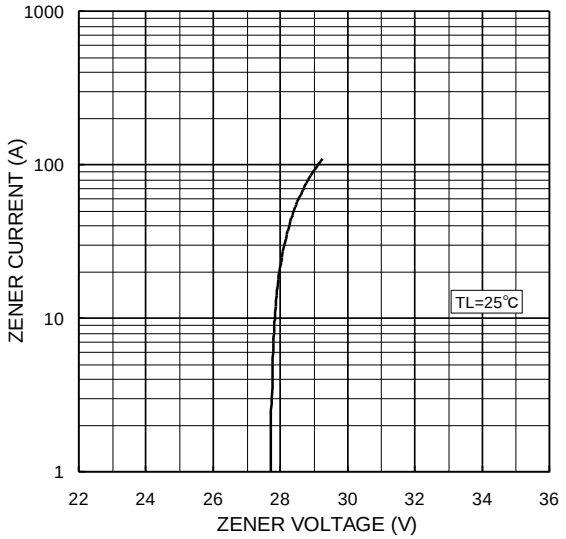
ABSOLUTE MAXIMUM RATINGS

Items	Symbols	Units	Ratings
Non-Repetitive Peak Reverse One-Cycle Dissipation	P_{RSM}	W	3,400(Rectangular pulse t=1ms Tj=25°C start)
Non-Repetitive Peak Reverse Surge Current	I_{RSM}	A	70(Exponential waveform. See Fig.1, T_j=25°C start)
DC Reverse Voltage	V_{DC}	V	22
Operating Junction Temperature	T_j	°C	-40 ~ +150
Storage Temperature	T_{stg}	°C	-40 ~ +150

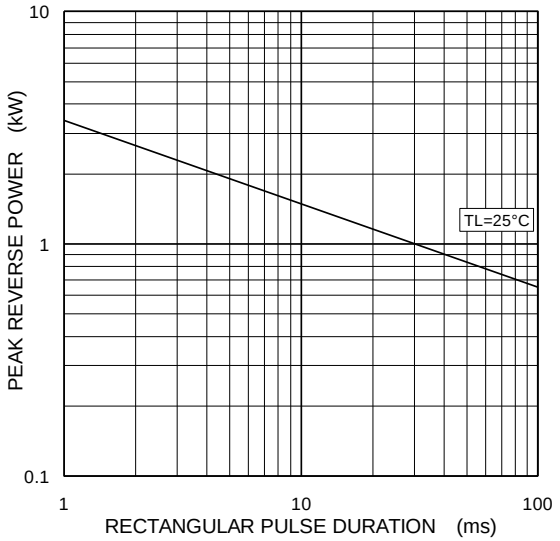
CHARACTERISTICS(T_L=25°C)

Items	Symbols	Units	Min.	Typ.	Max.	Test Conditions
Zener Voltage	Vz	V	24.0	27.0	30.0	Iz=10mA
Dynamic Impedance	Zz	Ω	-	-	50	Iz=10mA
Zener Voltage Temperature Coefficient	γ_z	%/°C	-	0.081	-	Iz=10mA
Peak Forward Voltage	V_{FM}	V	-	-	1.2	I_{FM}=6A
Peak Reverse Current	I_{RRM}	μA	-	-	10	V_R=22V

Typical zener characteristics

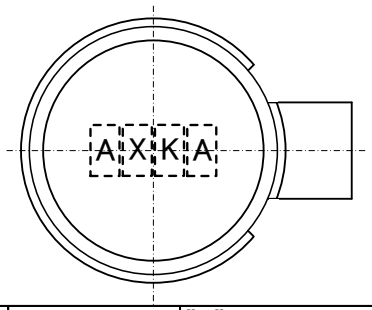


Typical reverse power characteristics
(Rectangular pulse non-repetitive)



ZSH5ME27

Part number description



A	X	K	A
①	②	③	④

①	Type mark	"A" : ZSH5ME27
②	Year	Year of manufacture (the last digit)
③	Month	Month of manufacture
④	Lot	Lot management code

Mark		A	B	C	D	E	K	L	M	N	X	Y	Z
②	Year of manufacture (the last digit)	1	2	3	4	5	6	7	8	9	0	–	–
③	Month of manufacture	1	2	3	4	5	6	7	8	9	10	11	12

④ Lot management code	Alphanumeric

e.g. AXKA Type: ZSH5ME27
Manufacturing date: Jun. 2020
Lot: A

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)

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http://www.hitachi-power-semiconductor-device.co.jp/en/

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