

Customer's name

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EOL Notice for Varistor (ZNR Surge Absorbers) Applied Products

March 2026

**Panasonic Industry Co., Ltd.
Device Solutions Business Division
Ceramic BU / Sales Department**

Overview and Sales Status of ZNR Surge Absorber, Applied Products

We have long dedicated ourselves to the development, production, and sales of zinc-oxide varistors (ZNR surge absorbers, Derivative products), striving to create value for our customers. However, due to significant changes in market conditions, it has become difficult to continue the business. Therefore, we would like to inform you of our plan to discontinue production and sales.

1971 Development and mass production of Zinc-oxide varistors.
1976 → 1992 → 2013
Development of varistor ceramic materials
↳ Achieved higher surge capability and miniaturization

Developing applied products by leveraging fundamental technologies

Expecting to expand the business by offering customizable products

The market is not expanding

Producing a wide variety of products in small quantities, with many custom variants
Increasing number of irregular orders

Requires significant development and support resources
Difficult to standardize specifications and manufacturing

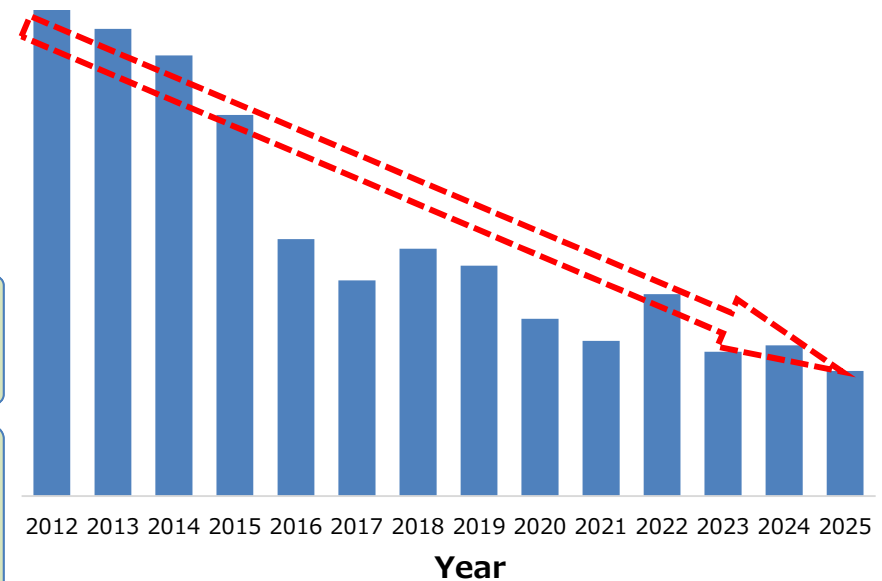
Growing risks related to long-term component availability (e.g., EOL of low-volume parts, material supplier bankruptcy)

High customizability makes it difficult to secure design resources and ensure long-term component supply.

Reduction in sales volume
Declining profitability and difficulty in sustaining the business

Resources, aging equipment, and supply chain maintenance

Sales History



Production and sales will be in EOL phase in March 2026 onward

EOL Notice for ZNR Surge Absorbers / Applied Products

Part numbers beginning with “ERZ” will be EOL
(with some exceptions)








| | |
|-------------|---|
| Product | ZNR Surge Absorbers , Derivative Products |
| Part Number | 1 : SC Type 2 : E Type 3 : CK Type 4 : P Type 5 : J Type 6 : G Type 7 : Surge Absorber Units 8 : For thyristor protection : E Type/J Type |
| Schedule | ①Deadline for notifying the total requested supply quantity (Total supply quantity from Oct.1, 2026, until the final shipment date): September 30, 2026 ②Final Order Acceptance Date : March 31, 2028 ③Final Shipment Date : March 30, 2029 |
| Remarks | All such custom version part numbers will follow the same EOL schedule |

*D-type: C series, M series, and SMD-type: SF series and CF series are already informed as EOL products.
If you are still using any of these products, they will be discontinued according to the above schedule.

We sincerely appreciate your understanding and cooperation.

EOL Notice for ZNR Surge Absorbers / Applied Products

【Product】 Varistor (ZNR Surge Absorbers) Derivative products

| | | Type / Series | | Part Numbers |
|---|--------------------------|---------------|---|----------------------------|
| 1 | SC Type | |  | ERZVS□□□□□□ |
| 2 | E Type | |  | ERZC□□EK□□□(Y) |
| 3 | CK Type | |  | ERZC□□CK□□□ |
| 4 | P Type | |  | ERZA□□PK□□□ |
| 5 | J Type | |  | ERZA□□JK□□□ |
| 6 | G Type | |  | ERZA□□GS□□□ ERZA□□GK□□□ |
| 7 | Surge absorber units | |  | ERZA□□□□□□ |
| 8 | For thyristor protection | E Type |  | ERZC□□EK□□□P |
| | | J Type | | ERZU□□JP□□□ |

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EOL Notice for Varistor (ZNR Surge Absorbers) D Type, SMD/VF Type

March 2026

**Panasonic Industry Co., Ltd.
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Ceramic BU / Sales Department**

Overview and Sales Status of ZNR Surge Absorber

We have long dedicated ourselves to the development, production, and sales of zinc-oxide varistors (ZNR surge absorbers), striving to create value for our customers. However, due to significant changes in market conditions, it has become difficult to continue the business. Therefore, we would like to inform you of our plan to discontinue production and sales.

1971 Developed and production of zinc-oxide varistors

1976 → 1992 → 2013
C,M series V series E series

Developed ceramic material for varistor
↳ Improvement high performance and small size

Launched product first in the market

- The market focus shifted from performance to cost
- New overseas manufacturers came up

Declining market share due to severe competition.
Product improvement including materials has stagnated.

Increasing commoditization of products.
Difficulty maintaining development resources, leading to reduced creating value

Reduction in sales volume
Declining profitability and difficulty in sustaining the business

Production and sales will be in EOL phase in March 2026 onward

Progress of Interchangeability from V Series to E Series

| Voltage | V series | E series |
|-----------|----------|----------|
| 200~1100V | φ20 | → φ14 |
| 18~150V | φ20 | → N/A |
| 18~150V | φ 5,7 | → N/A |

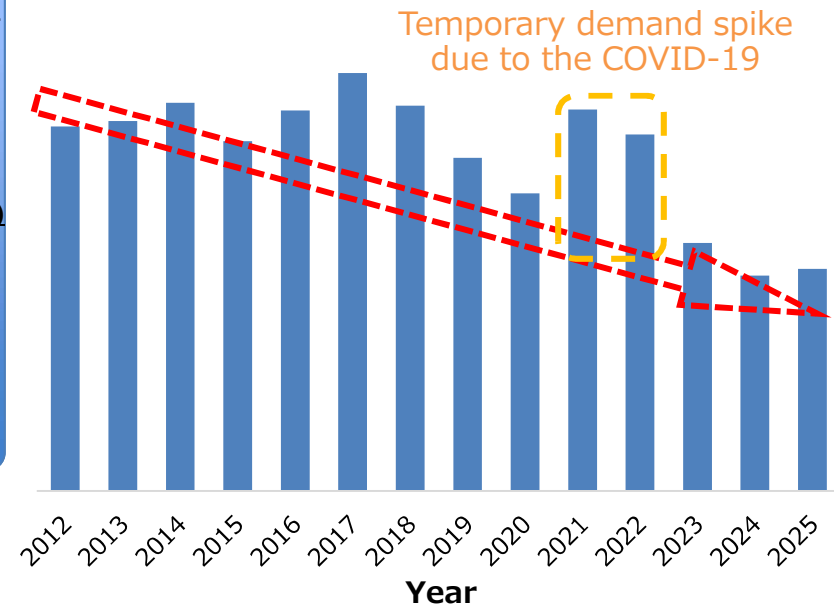
E Series enables complete interchangeability for low-voltage / small-size products.

Performance Capability (Surge 510V)

| | 10kA (spec) | 11kA | 12kA |
|-------------|----------------|------|------|
| Panasonic | Pass | Pass | Pass |
| Competitors | Pass | Pass | NG |

Customers need cost more than performance
→ No strong market requirement

Sales History



EOL Notice for ZNR Surge Absorbers / D Type and SMD Type

Part numbers beginning with “ERZ” will be EOL
(with some exceptions)

| | |
|-------------|---|
| Product | ZNR Surge Absorbers ※ SMD-type HF series is excluded |
| Part Number | 1 : D type (E series, E-S1 series, V series, C series*, M series*) 2 : SMD type (VF series, SF series*, CF series*) |
| Schedule | ①Deadline for notifying the total requested supply quantity (Total supply quantity from Oct.1, 2026, until the final shipment date): September 30, 2026 ②Final Order Acceptance Date : March 31, 2028 ③Final Shipment Date : March 30, 2029 |
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EOL Notice for ZNR Surge Absorbers / D Type and SMD Type

【Product】 Varistor (ZNR Surge Absorbers) D type

| Type / Series | | Part Number |
|---------------|-------------|--|
| D type | E series |  ERZE□□□□□□□□ |
| | E-S1 series | |
| | V series | |
| SMD type | VF series | ERZVF□□□□□ |

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| |
|--------------|
| Parts |
| ERZE11A331 |
| ERZE11A391 |
| ERZE14A102 |
| ERZE14A271 |
| ERZV05D470 |
| ERZV07D391 |
| ERZV07D820 |
| ERZV10D471CS |
| ERZV10D621 |
| ERZV10D821 |
| ERZV14D182CS |
| ERZV14D221 |
| ERZV14D241 |
| ERZV14D330 |
| ERZV14D331 |
| ERZV14D390 |
| ERZV14D431 |
| ERZV14D511 |
| ERZV20D751 |
| ERZV20D820 |
| ERZVGED471 |
| ERZVF2M121 |
| ERZVF2M820 |
| ERZA20PS371 |
| ERZV05D470 |
| ERZV10D470 |
| ERZV14D271 |
| ERZV14D471 |
| ERZVA5D220 |
| ERZVF2M820 |