



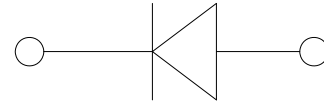
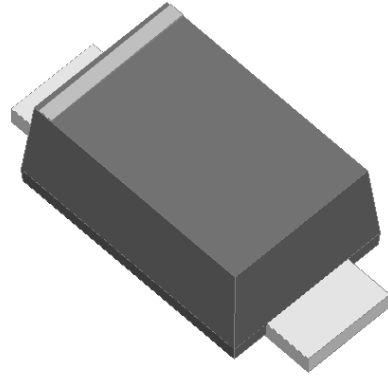
Express recovery diode
Reverse Voltage 50V-600v
Forward current-1A

Features

- Glass passivated chip
- High surge current capability
- Ideal for surface mounted applications
- Low power loss, high efficiency
- Plastic Case Material has UL Flammability

Mechanical Data

- Package: SMAF
- Terminals: Tin Plated leads, solderable per Mil-STD-750 Method 2026
- Polarity: As marked
- Molding compound meets UL 94 V-0 flammability rating, ROHS-compliant



Maximum Ratings (Ta=25°C Unless otherwise specified)

| Type Number | SYMBOL | ES1 | | | | | |
|---|------------------|-----------|-----|-----|-----|-----|------------------|
| | | AF | BF | DF | GF | JF | Umit |
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | V |
| Maximum Average Forward Rectified Current | $I_{O(AV)}$ | 1.0 | | | | | A |
| Peak Forward Surge Current 8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated | IFSM | 25.0 | | | | | A |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C | | 50.0 | | | | | A |
| Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode | i^2t | 2.6 | | | | | A ² S |
| Maximum Forward Voltage at 1.0A DC | V_{FM} | 0.95 | | 1.3 | 1.7 | V | |
| Maximum Reverse Current TA = 25°C | IR | 5.0 | | | | | uA |
| at Rated DC Blocking Voltage TA = 125°C | | 100.0 | | | | | |
| Maximum reverse recovery time | Trr | 35.0 | | | | | ns |
| Typical Thermal Resistance Between junction and | R_{QJa} | 65.0 | | | | | °C/W |
| Operating Junction Temperature Range | T _J | -55to+150 | | | | | °C |
| Storage Temperature Range | T _{STG} | -55to+150 | | | | | °C |



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

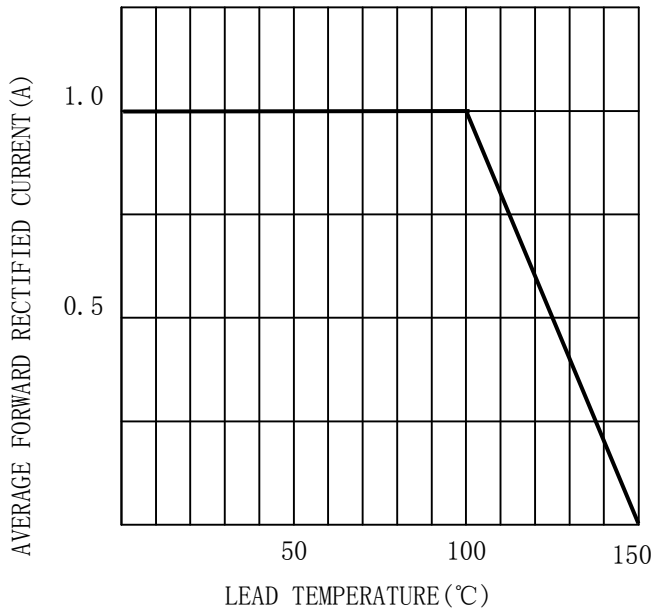


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

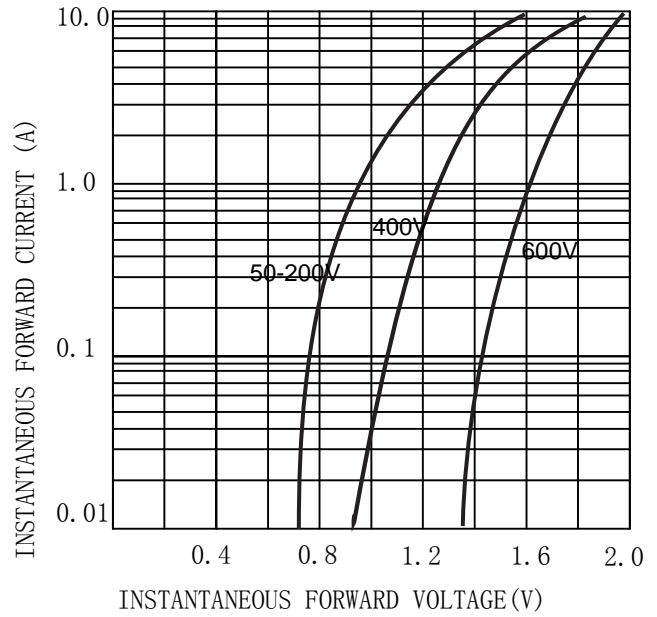


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

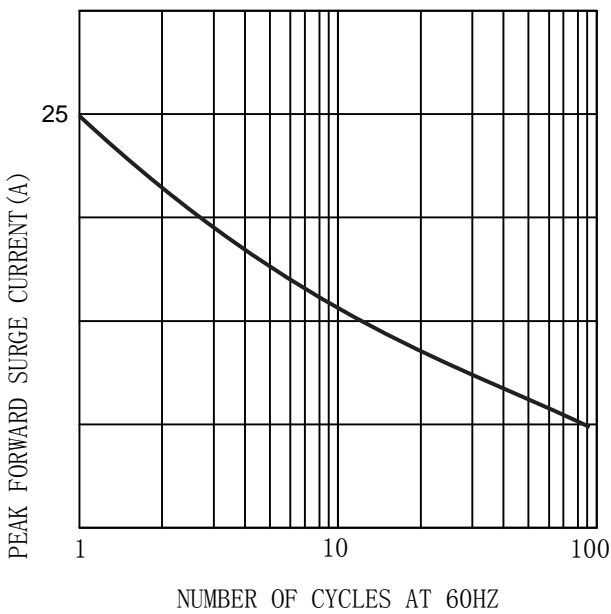
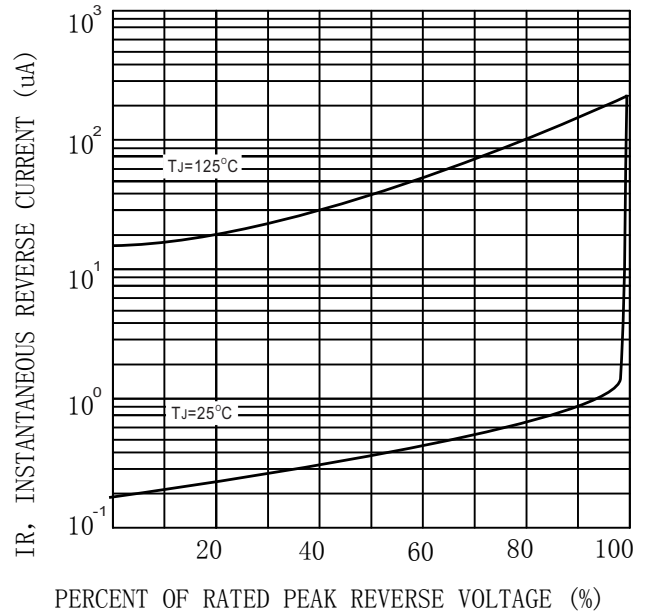



FIG. 4 TYPICAL REVERSE CHARACTERISTICS (per element)





MARKING INFORMATION



 = Logo

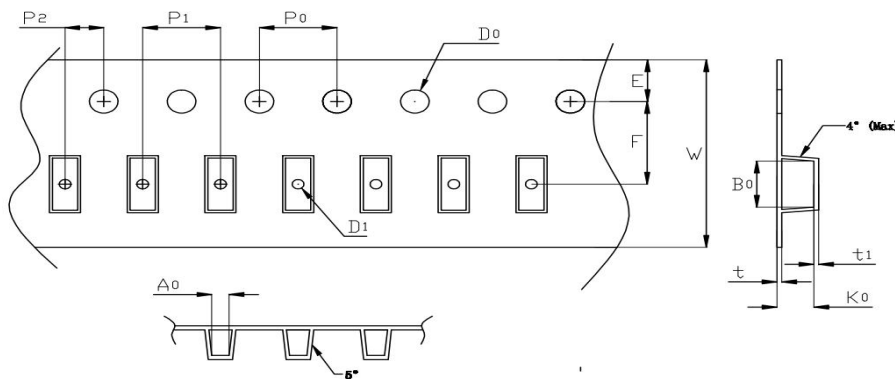
**** = Date Code Marking

ES1* = Marking Code

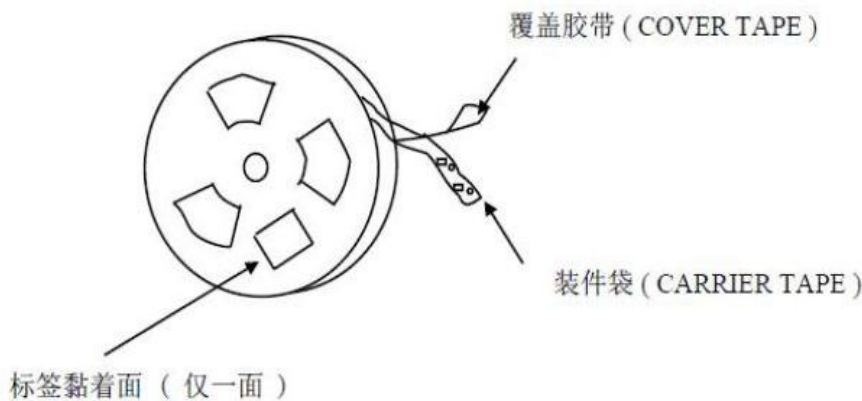
Print according to customer request

PACKING REQUIRMENTS

- Carrier tape packing



| Specifications | Carrier tape type | Ao | Bo | Ko | Po | W | t | Explain |
|----------------|-------------------|------------|-----------|------------|------------|------------|------------|---------|
| SMAF | Anti-static | 2.83± 0.10 | 4.9± 0.10 | 1.45± 0.05 | 4.00± 0.10 | 12.0± 0.10 | 0.23± 0.05 | |

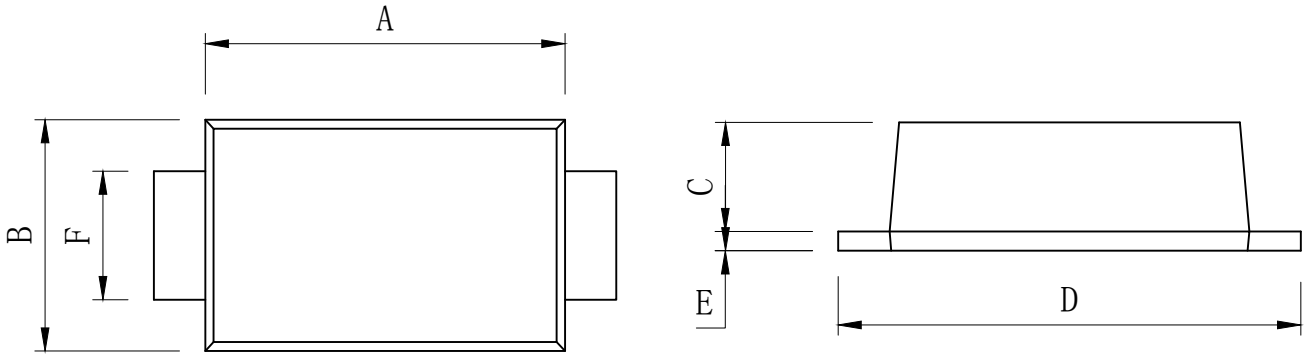


| DEVICE TYPE | Tape width | 13"Reel | | | 7"Reel | | |
|-------------|------------|-----------------|--------------|-----------------|-----------------|--------------|-----------------|
| | | Q'TY/REEL (pcs) | BOX/CAR TOON | Q'TY/REEL (pcs) | Q'TY/REEL (pcs) | BOX/CAR TOON | Q'TY/REEL (pcs) |
| SMAF | 12mm | 10000 | 20 | 200000 | 3000 | 64 | 192000 |



Outline Dimensions

SMAF



| SMAF | | | | |
|------|---------|------|-----|-----|
| DIM | INC HES | | MM | |
| | MIN | MAX | MIN | MAX |
| A | 0.13 | 0.15 | 3.2 | 3.8 |
| B | 0.09 | 0.11 | 2.3 | 2.7 |
| C | 0.03 | 0.05 | 0.8 | 1.2 |
| D | 0.16 | 0.20 | 4 | 5 |
| E | / | 0.01 | / | 0.3 |
| F | 0.04 | 0.08 | 1 | 2 |



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