# GSDSK32A Series

## Surface Mount Schottky Barrier Rectifiers

### Product Description

Reverse Voltage 20V to 200V
Forward Current 3.0A

### Features

- Ultra-high-speed switching.
- High current capacity
- Low profile package
- High surge capacity
- Low power loss, high efficiency
- Halogen-free parts.

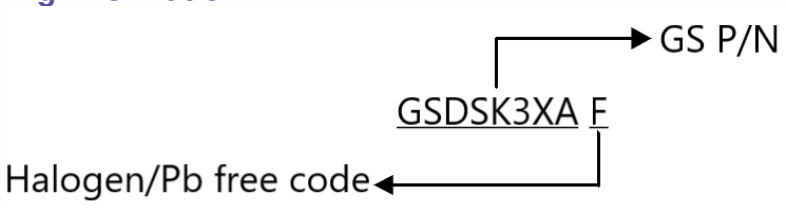
### Mechanical Data

- Case : Molded plastic, SMAF
- Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed
- Polarity : Indicated by cathode band
- Mounting Position : Any

### Packages

SMAF

### Ordering Information




| Part Number | Package | Quantity Reel |
|---|---|---|
| GSDSK3XAF | SMAF | 10000 PCS |

## Marking Information

| P/N | Part Marking | Package |
|---|---|---|
| GSDSK32AF | S32 | SMAF |
| GSDSK33AF | S33 | SMAF |
| GSDSK34AF | S34 | SMAF |
| GSDSK35AF | S35 | SMAF |
| GSDSK36AF | S36 | SMAF |
| GSDSK38AF | S38 | SMAF |
| GSDSK310AF | S310 | SMAF |
| GSDSK315AF | S315 | SMAF |
| GSDSK320AF | S320 | SMAF |

## Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60HZ, resistive or inductive load.
For capacitive load, derate current by 20%.

| Symbol | Conditions | | GSDSK32AF | GSDSK33AF | GSDSK34AF | Unit |
|---|---|---|---|---|---|---|
| $V_{RRM}$ | Maximum Repetitive Peak Reverse Voltage | | 20 | 30 | 40 | V |
| $V_{RMS}$ | Maximum RMS Voltage | | 14 | 21 | 28 | V |
| $V_{DC}$ | Maximum DC Blocking Voltage | | 20 | 30 | 40 | V |
| $V_F$ | Maximum Instantaneous $I_F$=3.0A | | 0.50 | | | V |
| $I_F$ | Maximum Average Forward Rectified Current | | 3.0 | | | A |
| $I_{FSM}$ | Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load | | 80 | | | A |
| $I_R$ | Maximum DC Reverse Current At Rated DC Blocking Voltage | $T_A$= 25°C | 0.5 | | | mA |
| | | $T_A$= 100°C | 20 | | | |
| $R_{\theta JA}$ | Typical Thermal Resistance | | 60 | | | °C/W |
| $R_{\theta JC}$ | | | 30 | | | °C/W |
| $C_J$ | Junction Capacitance | | 380 | | | pF |
| $T_J$ | Operating Junction Temperature Range | | -55 to +125 | | | °C |
| $T_{STG}$ | Storage Temperature Range | | -65 to +150 | | | °C |

## Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60HZ, resistive or inductive load.
For capacitive load, derate current by 20%.

| Symbol | Conditions | GSDSK35AF | GSDSK36AF | GSDSK38AF | Unit |
|---|---|---|---|---|---|
| $V_{RRM}$ | Maximum Repetitive Peak Reverse Voltage | 50 | 60 | 80 | V |
| $V_{RMS}$ | Maximum RMS Voltage | 35 | 42 | 56 | V |
| $V_{DC}$ | Maximum DC Blocking Voltage | 50 | 60 | 80 | V |
| $V_F$ | Maximum Instantaneous $I_F$=3.0A | 0.75 | | 0.85 | V |
| **Symbol** | **Conditions** | **GSDSK310AF** | **GSDSK315AF** | **GSDSK320AF** | **Unit** |
| $V_{RRM}$ | Maximum Repetitive Peak Reverse Voltage | 100 | 150 | 200 | V |
| $V_{RMS}$ | Maximum RMS Voltage | 71 | 105 | 140 | V |
| $V_{DC}$ | Maximum DC Blocking Voltage | 100 | 150 | 200 | V |
| $V_F$ | Maximum Instantaneous $I_F$=3.0A | 0.85 | 0.95 | | V |
| $I_F$ | Maximum Average Forward Rectified Current | 3.0 | | | A |
| $I_{FSM}$ | Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load | 80 | | | A |
| $I_R$ | Maximum DC Reverse Current At Rated DC Blocking Voltage, $T_A$= 25°C | 0.5 | | | mA |
| | $T_A$= 100°C | 20 | | | |
| $R_{\theta JA}$ | Typical Thermal Resistance | 60 | | | °C/W |
| $R_{\theta JC}$ | | 30 | | | °C/W |
| $C_J$ | Junction Capacitance | 380 | | | pF |
| $T_J$ | Operating Junction Temperature Range | -55 to +150 | | | °C |
| $T_{STG}$ | Storage Temperature Range | -65 to +150 | | | °C |

## Typical Characteristics

FIG.1 FORWARD CURRENT DERATING CURVE

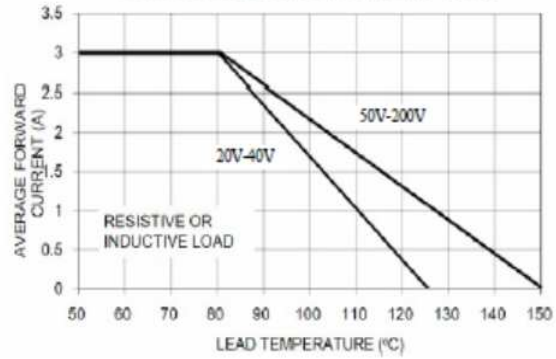



FIG. 2 MAXIMUM FORWARD SURGE CURRENT

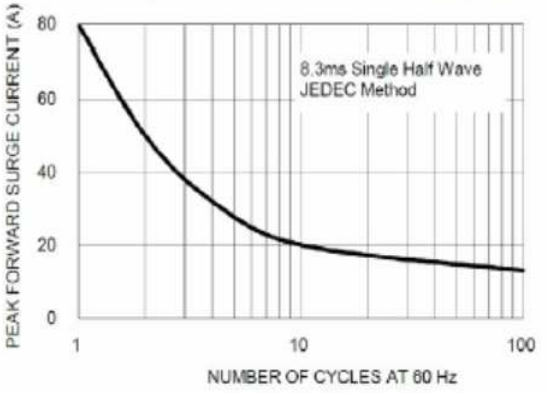



FIG. 3- TYPICAL FORWARD CHARACTERISTICS

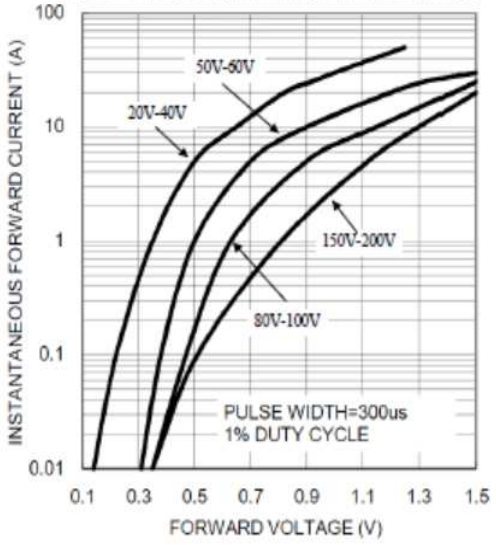
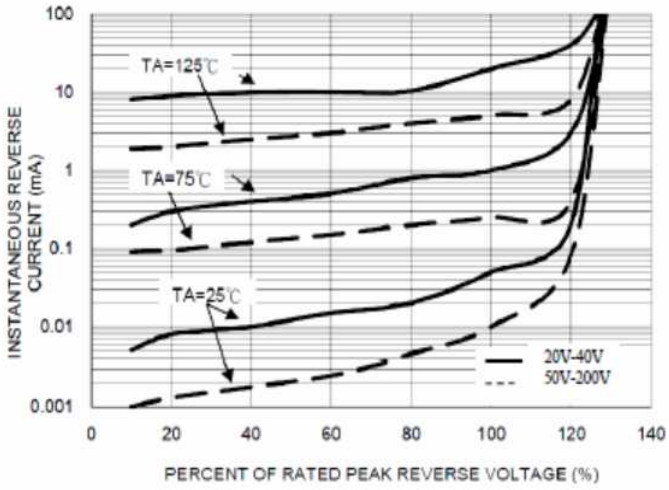
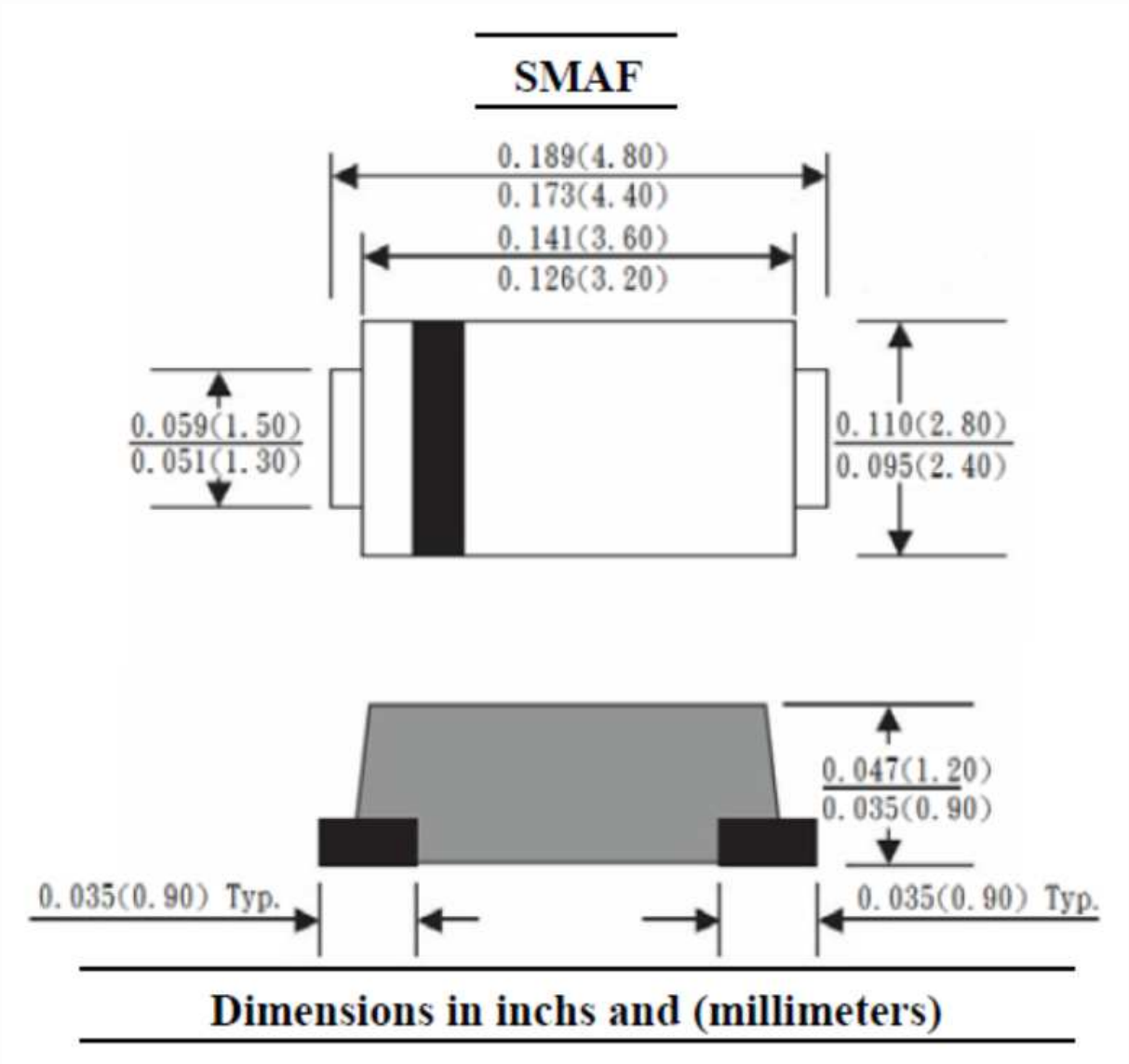



FIG. 4 TYPICAL REVERSE CHARACTERISTICS



## Package Dimension



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