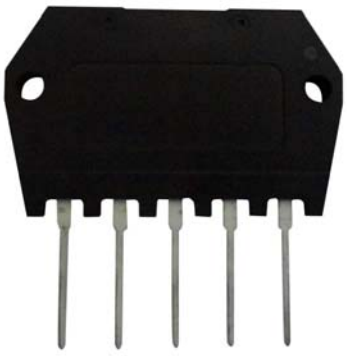
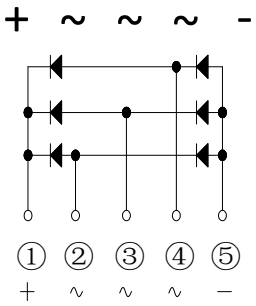
# Three Phase Bridge Rectifiers






## Features

- Glass passivated chip junction
- Thin single in-line package
- High surge current capability
- Solder dip 275 °C max. 7 s, per JESD 22-B106

## Typical Applications

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

## Mechanical Data

- **Package**: TSB-5
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** As marked on body

## ■Maximum Ratings ($T_a$=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | DF35NA80 | DF35NA100 | DF35NA120 | DF35NA160 |
|---|---|---|---|---|---|---|
| Device marking code | | | DF35NA80 | DF35NA100 | DF35NA120 | DF35NA160 |
| Maximum Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | 800 | 1000 | 1200 | 1600 |
| Maximum RMS Voltage | $V_{RMS}$ | V | 560 | 700 | 840 | 1120 |
| Maximum DC blocking Voltage | $V_{DC}$ | V | 800 | 1000 | 1200 | 1600 |
| Average Rectified Output Current @8.3ms, sine wave, R-load, With heatsink, $T_C$ =100℃ | $I_O$ | A | 35 | | | |
| Forward Surge Current (Non-repetitive) @8.3ms, Half-sine wave,1 cycle, Tj=25℃ | $I_{FSM}$ | A | 450 | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | 900 | | | |
| Current Squared Time @1ms≤t<8.3ms Tj=25℃， Rating of per diode | $I^2t$ | $A^2S$ | 841 | | | |
| Dielectric strength @terminals to case, AC 1 minute | $V_{dis}$ | KV | 2.5 | | | |
| Mounting torque @recommend torque：5kg·cm | Tor | kg·cm | 8 | | | |
| Storage Temperature | $T_{stg}$ | ℃ | -55 ~ +150 | | | |
| Junction Temperature | $T_j$ | ℃ | -55 ~ +150 | | | |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | DF35NA80 | DF35NA100 | DF35NA120 | DF35NA160 |
|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage drop per diode | $V_F$ | V | $I_{FM}$=17.5A | 1.1 | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode | $I_R$ | μA | $T_j$=25℃ | 5 | | | |
| | | | $T_j$=125℃ | 500 | | | |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 230 | | 240 | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | | SYMBOL | UNIT | DF35NA80 | DF35NA100 | DF35NA120 | DF35NA160 |
|---|---|---|---|---|---|---|---|
| Thermal Resistance | Between junction and case, With heatsink | $R_{\theta J-C}$ | ℃/W | 1.0 | | | |

Note: Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

## ■Ordering Information (Example)

| PREFERED P/N | UNIT WEIGHT(g) | MINIIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|
| DF35NA80 ~ DF35NA160 | Approximate 15.8 | 96 | 96 | 576 | Paper Box |

## ■ Characteristics(Typical)

FIG1:Io-Tc Curve

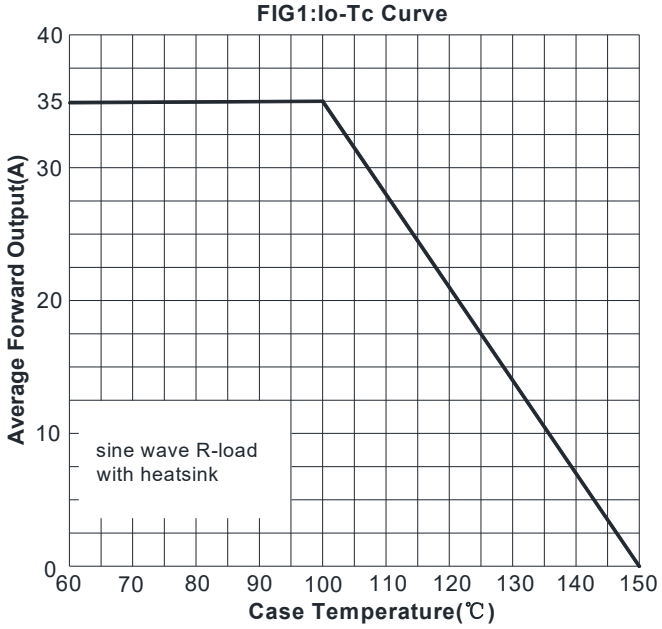



FIG2:Surge Forward Current Capability

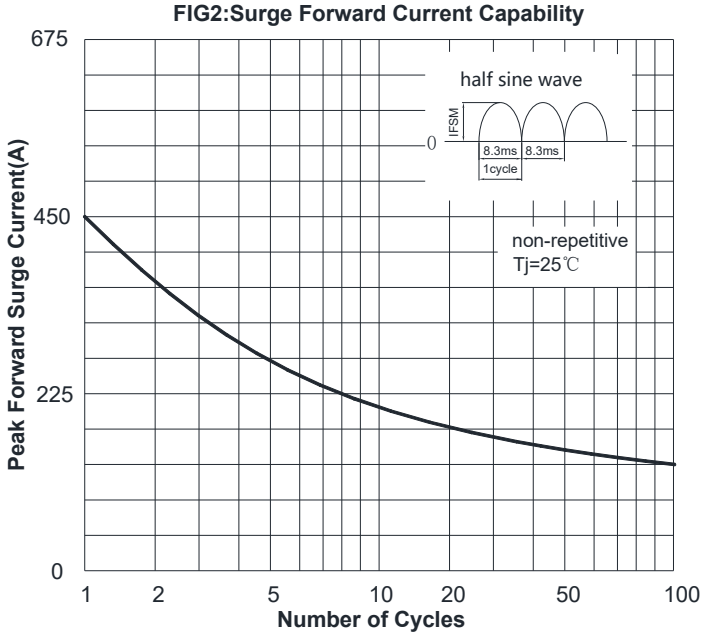


FIG3: Typical Forward Voltage

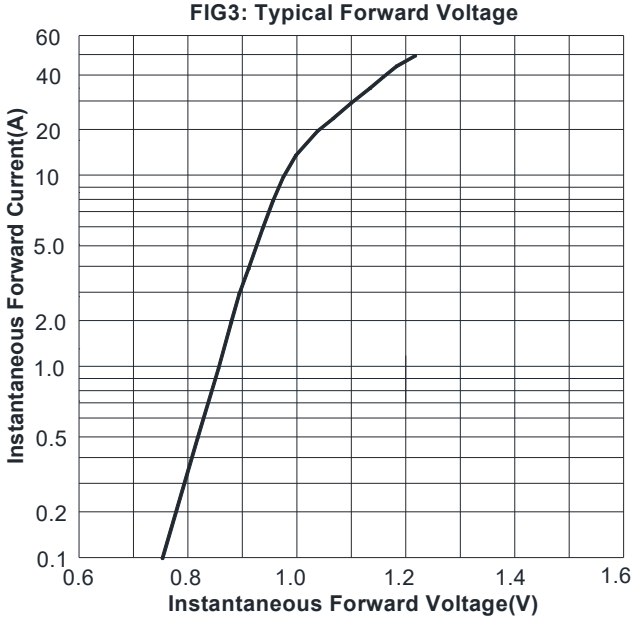
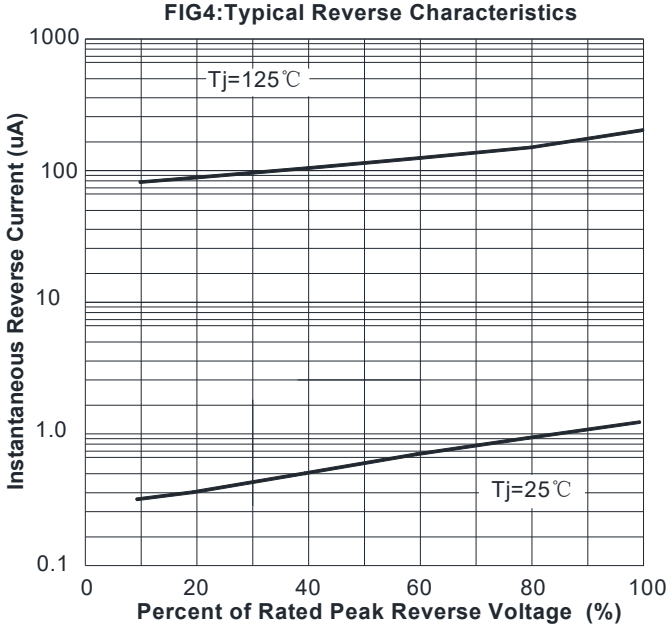
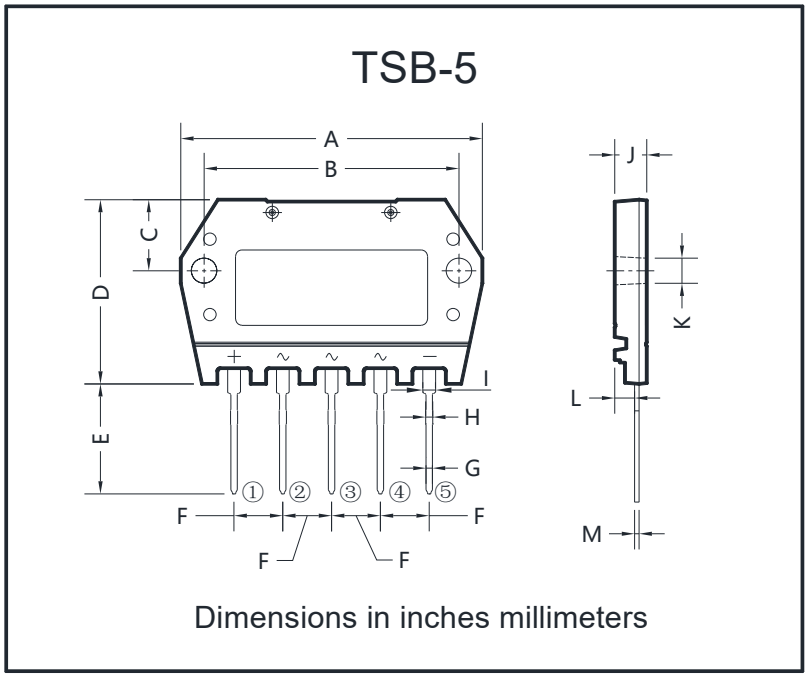



FIG4:Typical Reverse Characteristics




## ■ Outline Dimensions




| TSB-5 | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| A | 46.6 | 47.6 |
| B | 39.5 | 40.1 |
| C | 11.0 | 11.6 |
| D | 28.8 | 29.8 |
| E | 17.2 | 17.8 |
| F | 7.52 | 7.72 |
| G | 0.90 | 1.10 |
| H | 1.00 | 1.20 |
| I | 1.90 | 2.10 |
| J | 4.70 | 5.30 |
| K | 4.00 | 4.50 |
| L | 3.00 | 3.20 |
| M | 0.60 | 0.80 |

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