SEMICONDUCTOR

# ABS1 THRU ABS10

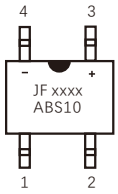
## SURFACE MOUNT
## GLASS PASSIVATED BRIDGE RECTIFIER

Reverse Voltage: 100 to 1000 Volts
Forward Current: 1.0 Amps

## FEATURES

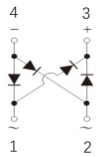
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junction
- Ideal for printed circuit board
- High temperature soldering guaranteed:260C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

## ABS




Pin Diagram

Marking
JF:Logo
XXXX:Data code
ABS10:Type




Internal Schematic

## MECHANICAL DATA

- Case: ABS molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750,method 2026
- Mounting Position: Any

## TYPICAL APPLICATIONS

Used in AC/DC bridge full wave rectification for SMPS, lighting ballaster, adapter, charger, home appliances, office equipment, and telecommunication applications.

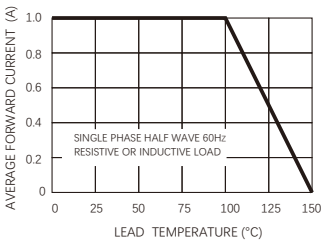
## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified. Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load,derate current by 20%.)

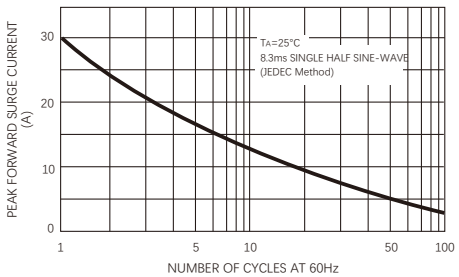
| Parameters | | Symbols | ABS1 | ABS2 | ABS4 | ABS6 | ABS8 | ABS10 | Units |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | | $V_{RMS}$ | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current | | $I_{(AV)}$ | 1.0 | | | | | | Amp |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | | $I_{FSM}$ | 35 | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at $I_F$= | 0.5A | $V_F$ | 0.95 | | | | | | Volts |
| | 1.0A | | 1.10 | | | | | | |
| Rating for fusing(1ms < t<8.3ms) | | $I^2t$ | 5.0 | | | | | | $A^2s$ |
| Maximum DC Reverse Current at rated DC blocking voltage | $T_A$=25°C | $I_R$ | 5 | | | | | | μA |
| | $T_A$=125°C | | 100 | | | | | | |
| Typical junction capacitance(Note1) | | $C_J$ | 25 | | | | | | PF |
| Typical thermal resistance(Note 2) | | $R_{\theta JA}$<br>$R_{\theta JL}$ | 62<br>25 | | | | | | °C/W |
| Operating junction and storage temperature range | | $T_J$ $T_{STG}$ | -55 to +150 | | | | | | °C |

Notes: 1.Measured at 1MHZ and applied reverse voltage of 4.0 Volts.
2.Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.56"*0.73" copper pad.

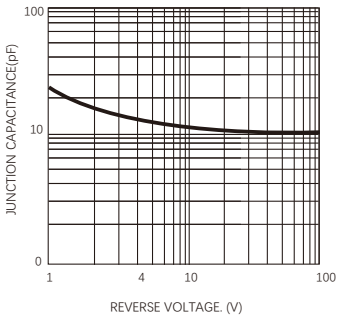
## FIG.1-TYPRCAL FORWARD CURRENT DERATING CURVE



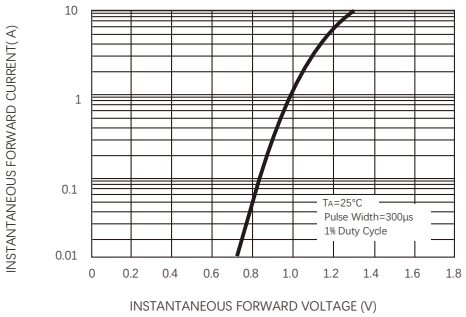

## FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



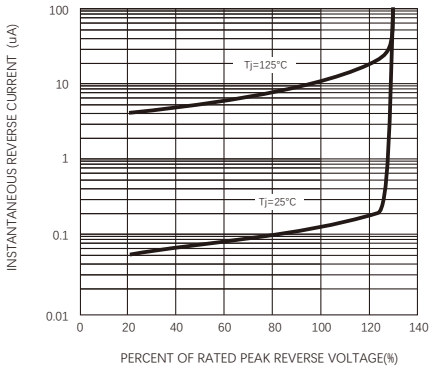

## FIG3-TYPICAL JUNCTION CAPACITANCE



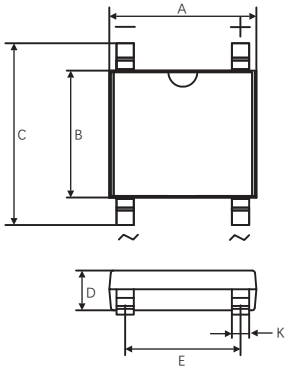

## FIG4-TYPICAL FORWARD CHARACTERISTICS

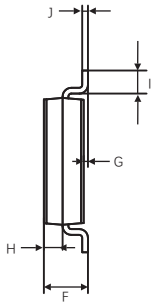



## FIG.5-TYPICAL REVERSE CHARACTERISTICS



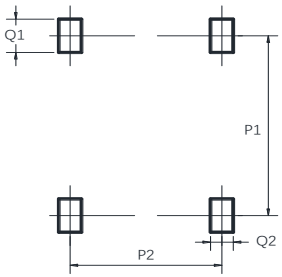
## ABS




| UNIT:mm | | |
|---|---|---|
| DIM | MIN | MAX |
| A | 4.8 | 5.4 |
| B | 4.2 | 4.6 |
| C | 6.0 | 6.8 |
| D | 1.22 | 1.50 |
| E | 3.8 | 4.4 |
| F | 1.2 | 1.5 |
| G | 0.05 | 0.2 |
| H | 0.37 | 0.47 |
| I | 0.4 | 0.8 |
| J | 0.15 | 0.25 |
| K | 0.5 | 0.85 |

## Suggested Pad Layout




| Dim | Min(mm) |
|---|---|
| P1 | 5.72 |
| P2 | 4.00 |
| Q1 | 1.00 |
| Q2 | 0.90 |

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