

# YG832C04R

(40V / 12A TO-220F15)

## SCHOTTKY BARRIER DIODE

### Features

- Low  $V_F$
- Super high speed switching.
- High reliability by planer design.

### Applications

- High speed power switching.

### Maximum Ratings and Characteristics

- Absolute Maximum Ratings

| Item                                  | Symbol    | Conditions                                  | Rating      | Unit        |
|---------------------------------------|-----------|---------------------------------------------|-------------|-------------|
| Repetitive peak reverse voltage       | $V_{RRM}$ |                                             | 40          | V           |
| Repetitive peak surge reverse voltage | $V_{RSM}$ | $t_w=500ns$ , duty=1/40                     | 40          | V           |
| Isolating voltage                     | $V_{iso}$ | Terminals to Case, AC, 1min.                | 1500        | V           |
| Average output current                | $I_o$     | duty=1/2, $T_c=112^{\circ}C$<br>Square wave | 12*         | A           |
| Suege current                         | $I_{FSM}$ | Sine wave 10ms                              | 120         | A           |
| Operating junction temperature        | $T_j$     |                                             | +150        | $^{\circ}C$ |
| Storage temperature                   | $T_{stg}$ |                                             | -40 to +150 | $^{\circ}C$ |

\* Out put current of centertap full wave connection.

- Electrical Characteristics ( $T_a=25^{\circ}C$  Unless otherwise specified )

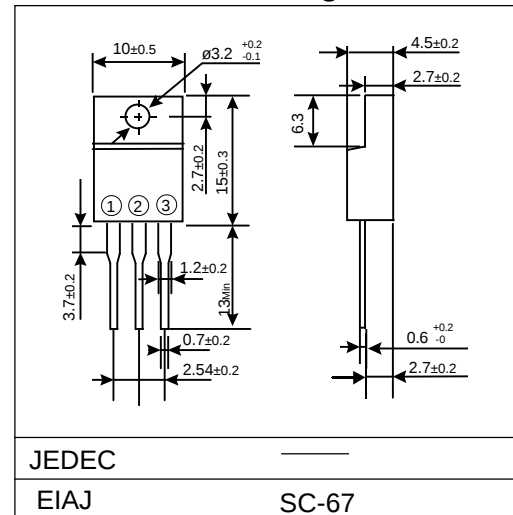
| Item                    | Symbol        | Conditions       | Max. | Unit          |
|-------------------------|---------------|------------------|------|---------------|
| Forward voltage drop ** | $V_F$         | $I_F=4.0A$       | 0.53 | V             |
| Reverse current **      | $I_R$         | $V_R=V_{RRM}$    | 3.0  | mA            |
| Thermal resistance      | $R_{th(j-c)}$ | Junction to case | 3.5  | $^{\circ}C/W$ |

- Mechanical Characteristics

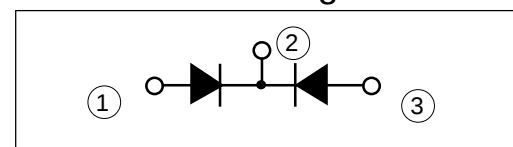
\*\* Rating per element

|                 |                    |            |       |
|-----------------|--------------------|------------|-------|
| Mounting torque | Recommended torque | 0.3 to 0.5 | N · m |
| Weight          |                    | 2.3        | g     |

### Outline Drawings

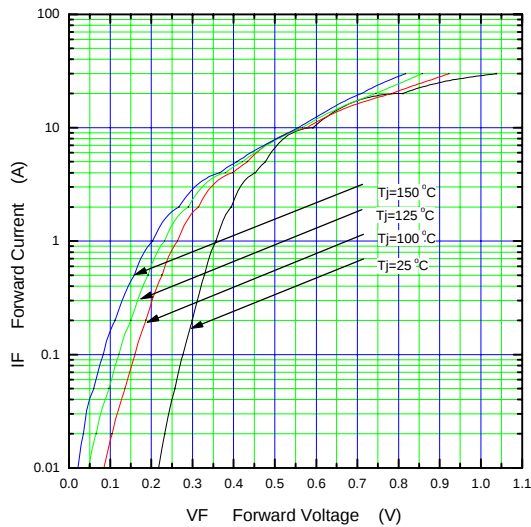


### Connection Diagram

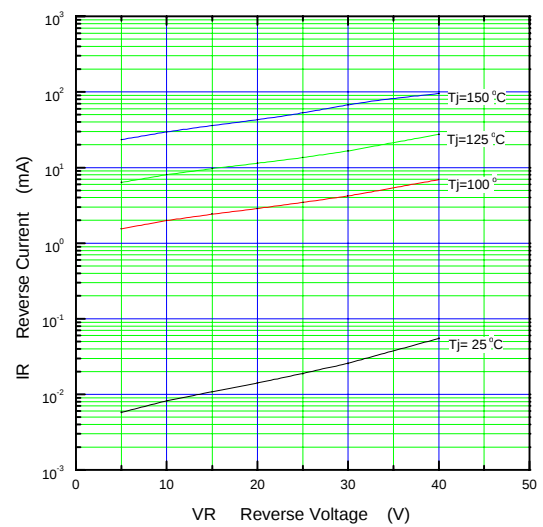


## Characteristics

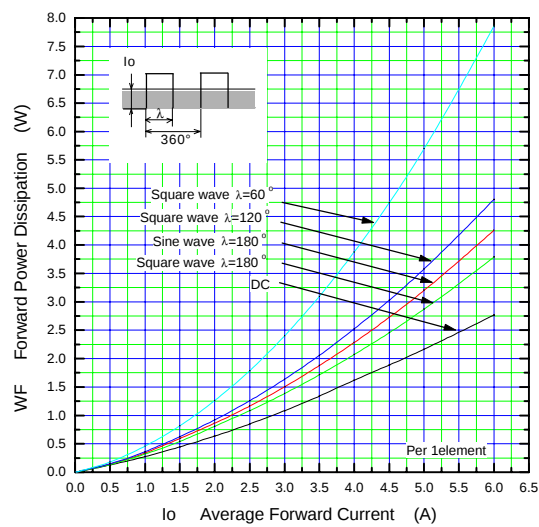
Forward Characteristic (typ.)



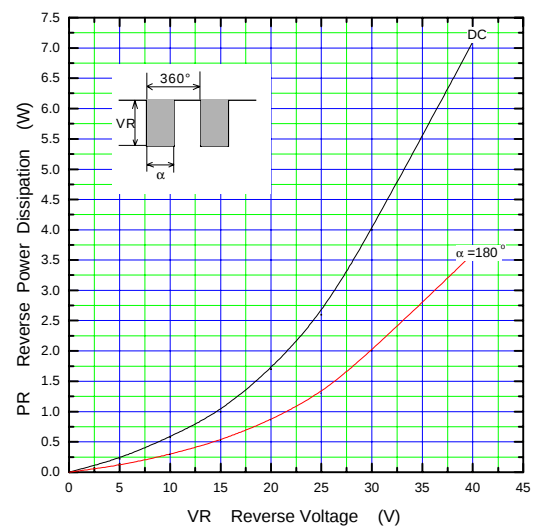
Reverse Characteristic (typ.)



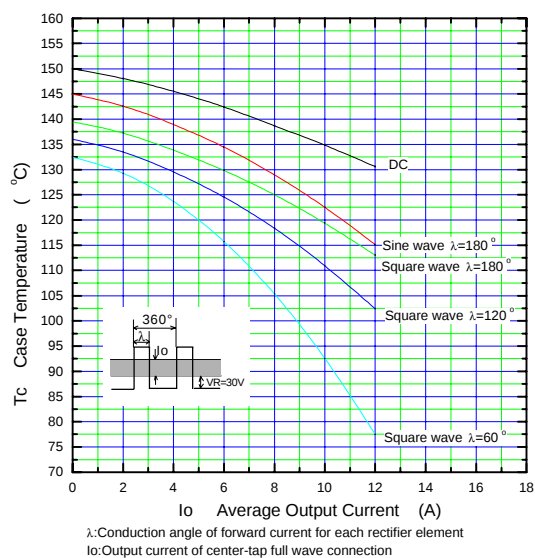
Forward Power Dissipation



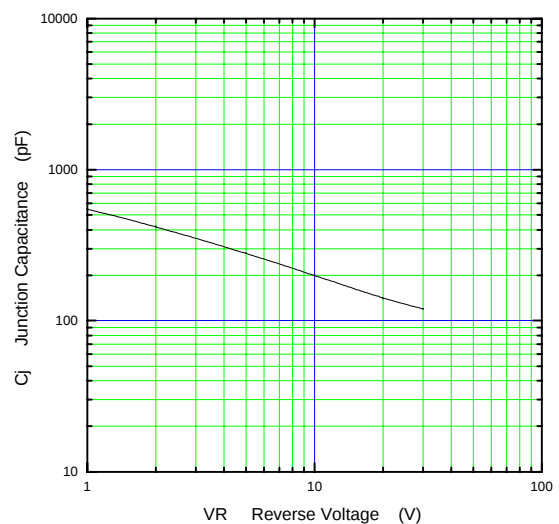
Reverse Power Dissipation



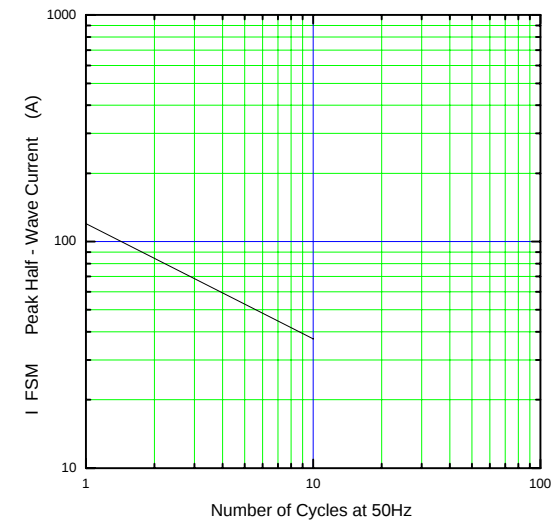
Current Derating ( $I_o$ - $T_c$ )



Junction Capacitance Characteristic (typ.)



Surge Capability



Transient Thermal Impedance

