

## Silicon Standard Recovery Diode

$V_{RRM} = 400\text{ V} - 1800\text{ V}$

$I_F = 165\text{ A}$

### Features

- High Surge Capability
- Types up to 1800 V  $V_{RRM}$
- Equivalent to SKN130 Series
- Not ESD Sensitive

DO-8 Package



### Maximum ratings, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified (GKR has leads reversed)

| Parameter  | Symbol     | Conditions  | GKN130/04  | GKN130/08  | GKN130/12  | GKN130/14  | GKN130/16  | GKN130/18  | Unit             |
|--|------------|---|------------|------------|------------|------------|------------|------------|------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |   | 400        | 800        | 1200       | 1400       | 1600       | 1800       | V                |
| DC blocking voltage                                  | $V_{DC}$   |   | 400        | 800        | 1200       | 1400       | 1600       | 1800       | V                |
| Continuous forward current                           | $I_F$      | $T_C \leq 100\text{ }^\circ\text{C}$                    | 165        | 165        | 165        | 165        | 165        | 165        | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$ , $t_p = 10\text{ ms}$ | 2500       | 2500       | 2500       | 2500       | 2500       | 2500       | A                |
| Operating temperature                                | $T_j$      |   | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |
| Storage temperature                                  | $T_{stg}$  |   | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | -55 to 150 | $^\circ\text{C}$ |

### Electrical characteristics, at $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified

| Parameter             | Symbol | Conditions   | GKN130/04 | GKN130/08 | GKN130/12 | GKN130/14 | GKN130/16 | GKN130/18 | Unit |
|-----------------------|--------|--|-----------|-----------|-----------|-----------|-----------|-----------|------|
| Diode forward voltage | $V_F$  | $I_F = 60\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$ | 1.5       | 1.5       | 1.5       | 1.5       | 1.5       | 1.5       | V    |
| Reverse current       | $I_R$  | $V_R = V_{RRM}$ , $T_j = 180\text{ }^\circ\text{C}$    | 22        | 22        | 22        | 22        | 22        | 22        | mA   |

### Thermal characteristics

| Parameter                           | Symbol     | Conditions | GKN130/04 | GKN130/08 | GKN130/12 | GKN130/14 | GKN130/16 | GKN130/18 | Unit |
|-------------------------------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------|
| Thermal resistance, junction - case | $R_{thJC}$ |            | 0.35      | 0.35      | 0.35      | 0.35      | 0.35      | 0.35      | K/W  |

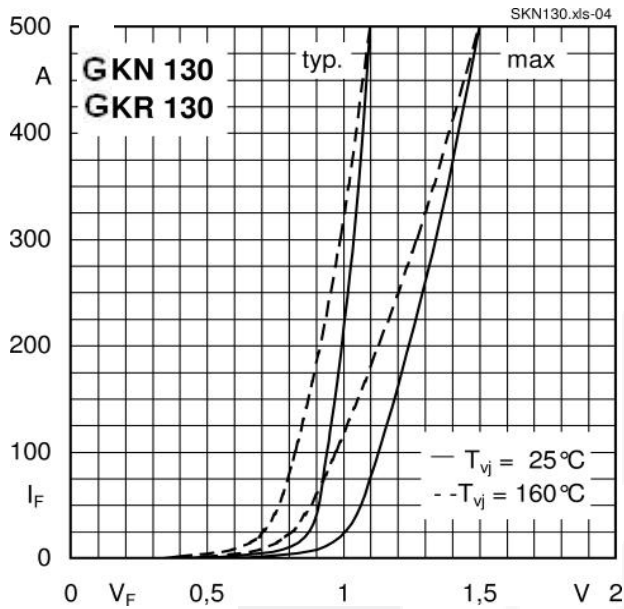


Fig 1: Forward Characteristics

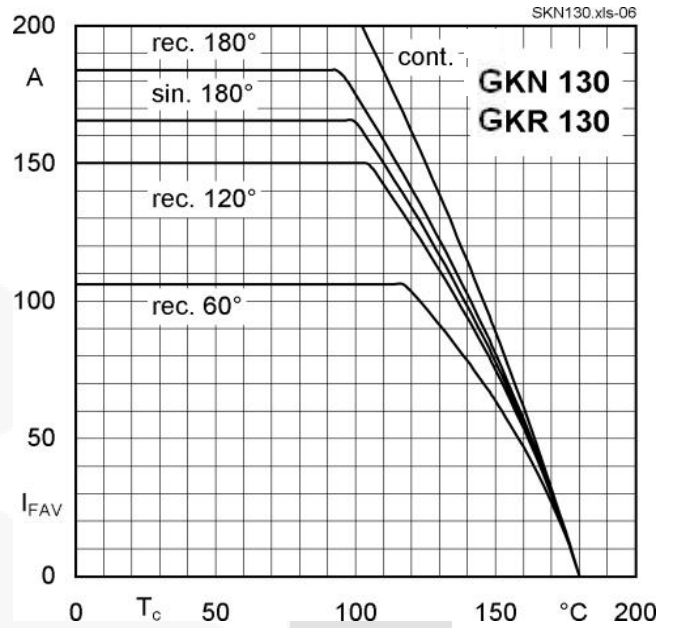


Fig 2: Forward Current vs Case Temp

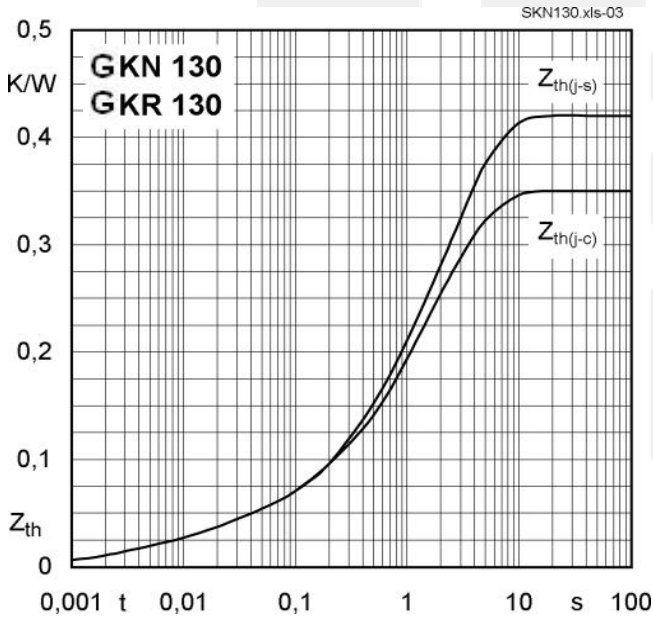


Fig 3: Transient Thermal Impedance vs Time

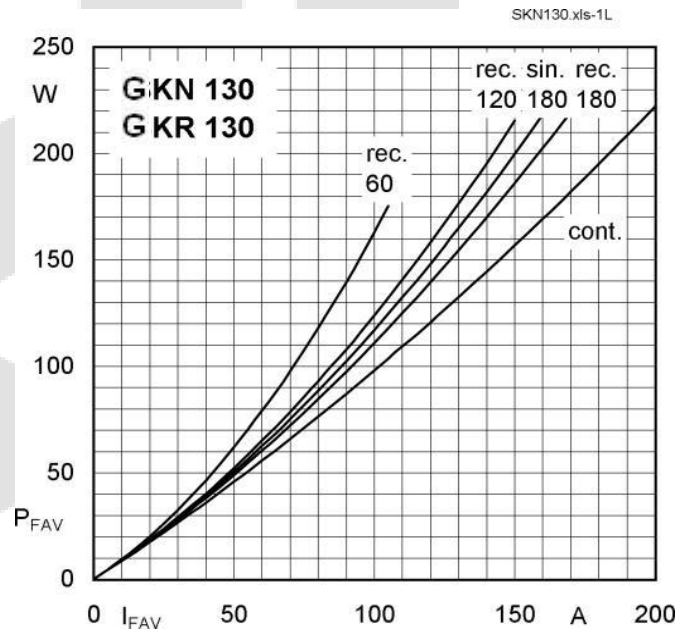
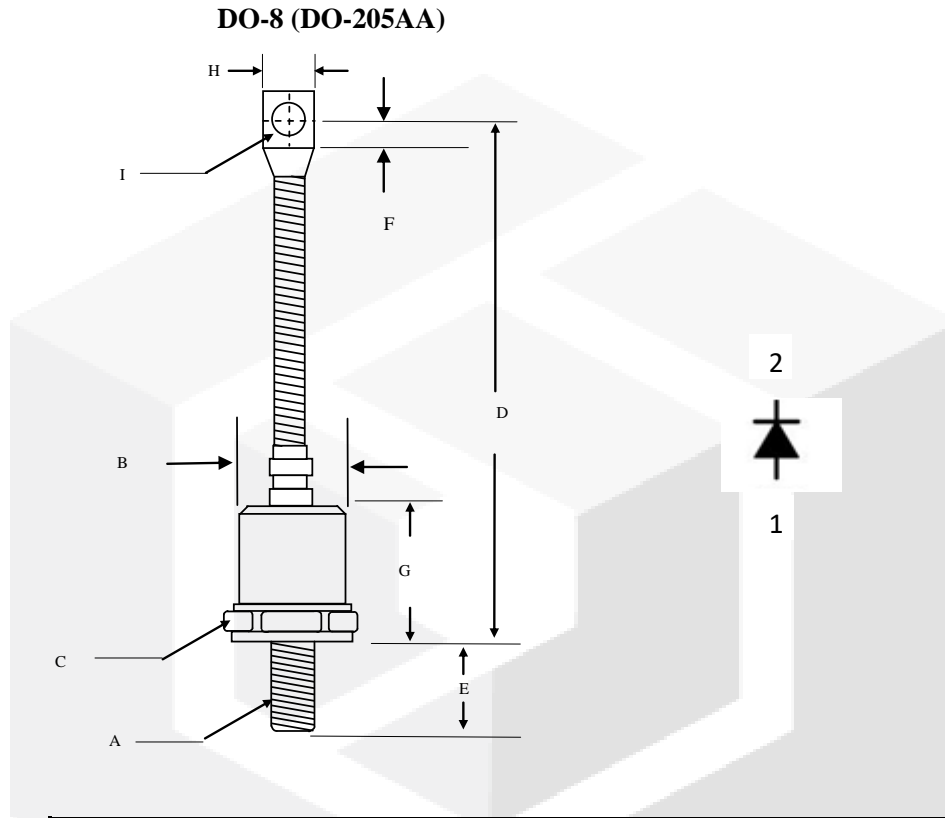


Fig 4: Power Dissipation vs Forward Current

**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.



|   | Inches     |        | Millimeters |        |
|---|------------|--------|-------------|--------|
|   | Min        | Max    | Min         | Max    |
| A | 3/8-24 UNF |        |             |        |
| B | ----       | φ0.930 | ----        | φ23.5  |
| C | 1.050      | 1.060  | 26.67       | 26.92  |
| D | 4.300      | 4.700  | 109.22      | 119.38 |
| E | ----       | 0.690  | ----        | 17.00  |
| F | 0.260      | ----   | 6.50        | ----   |
| G | ----       | 0.940  | ----        | 24.00  |
| H | ----       | 0.600  | ----        | 15.23  |
| I | 0.276      | 0.286  | 7.010       | 7.260  |