

## 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  $T_J = 25^\circ\text{C}$ , 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                           | $I_F$      | $T_C \leq 100^\circ\text{C}$                     | 165        | 165        | 165        | 165        | 165        | 165        | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25^\circ\text{C}$ , $t_p = 10 \text{ ms}$ | 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  $T_J = 25^\circ\text{C}$ , unless otherwise specified

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

### Thermal characteristics

|                                     |            |  |      |      |      |      |      |      |     |
|-------------------------------------|------------|--|------|------|------|------|------|------|-----|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | 0.35 | K/W |
|-------------------------------------|------------|--|------|------|------|------|------|------|-----|

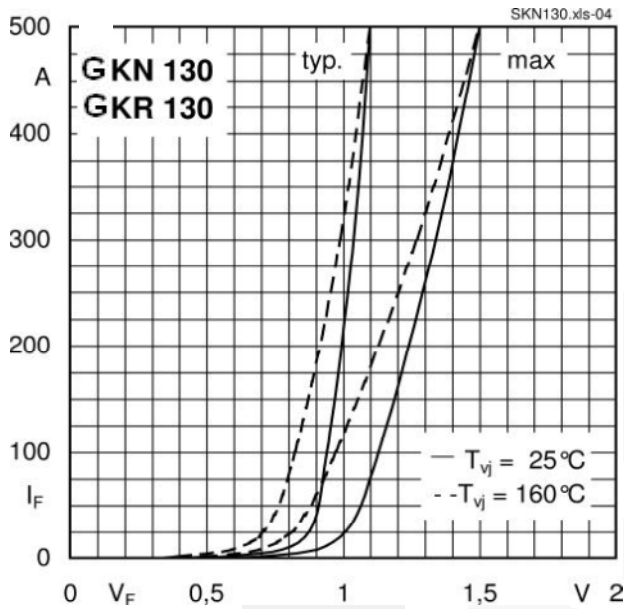


Fig 1: Forward Characteristics

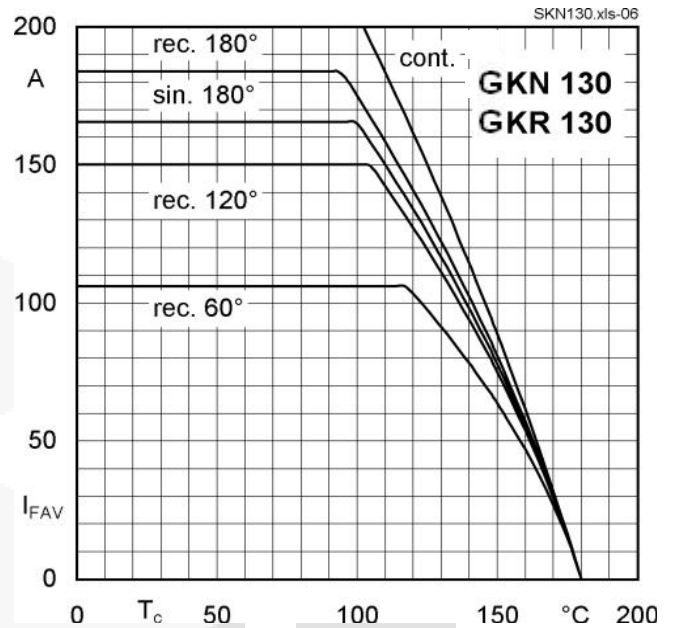


Fig 2: Forward Current vs Case Temp

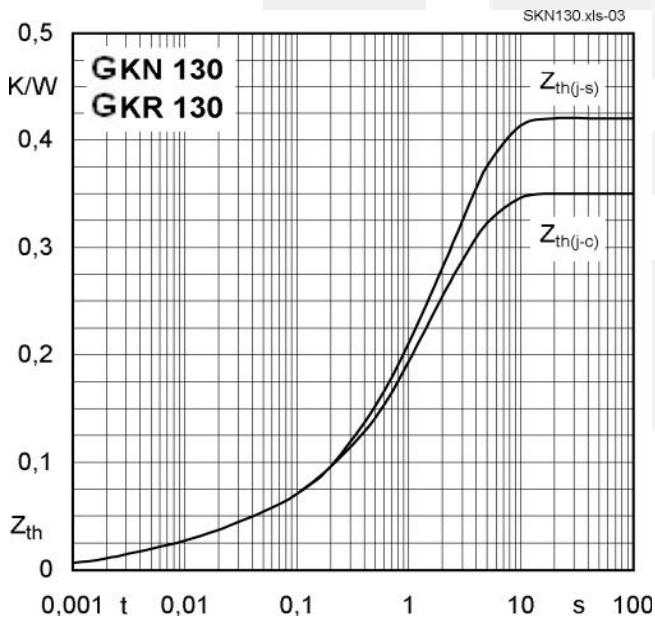


Fig 3: Transient Thermal Impedance vs Time

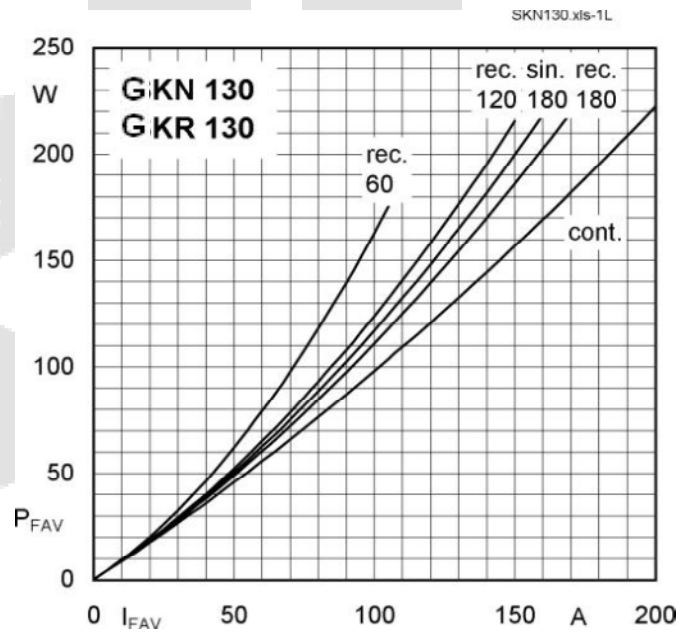
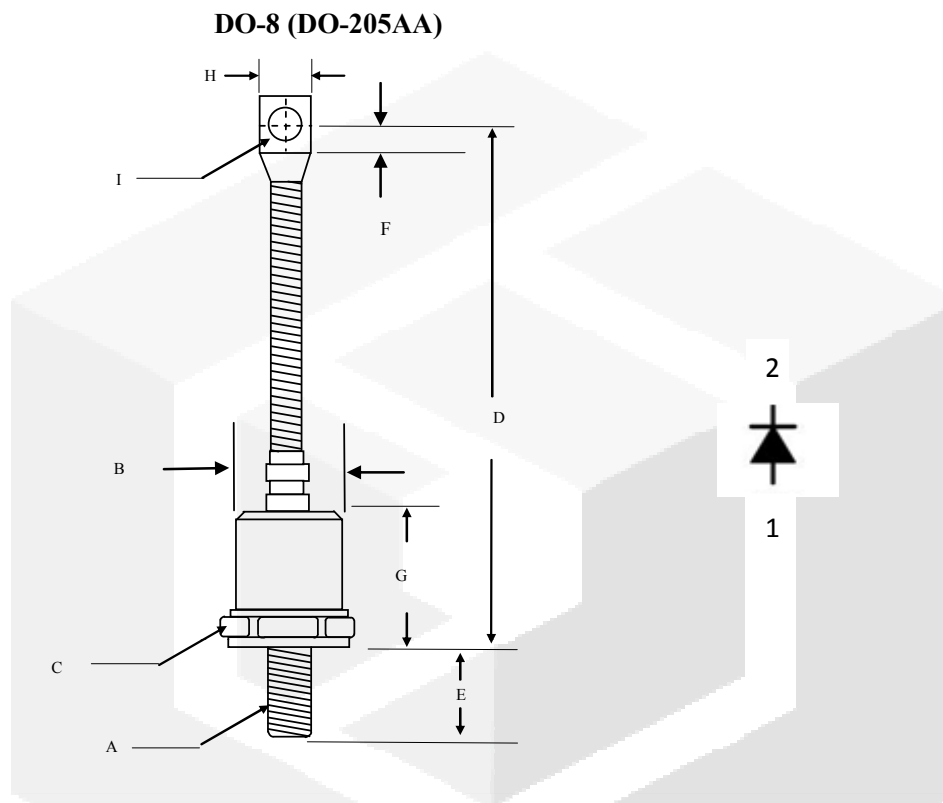


Fig 4: Power Dissipation vs Forward Current

## 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 | ----       | $\phi 0.930$ | ----        | $\phi 23.5$ |
| 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       |