

## Fast & Soft Recovery Diode

### DBA200UA60

$I_{F(AV)} = 2 \times 100A$ ,  $V_{RRM} = 600V$ ,  $t_{rr} = 150ns$

SanRex Fast & Soft Recovery Diode Module **DBA200UA60** is designed for applications requiring fast switching and soft recovery wave shape to reduce or eliminate the need for snubber components in the circuit. The modules are isolated for easy mounting with other components or a common heatsink.

### Features

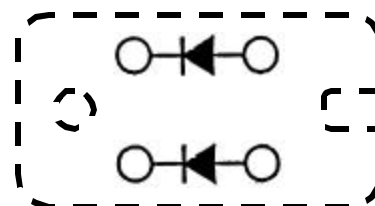
- \* Very Fast Reverse Recovery Time
- \* Soft Recovery Characteristics
- \* Low Forward Voltage Drop
- \* Compact isolated SOT-227 package

### Typical Applications

- \* Welding and Plasma Cutting Machines
- \* DC chopper
- \* Rectifier in Switch Mode Power Supplies (SMPS)
- \* Uninterruptible Power Supplies (UPS)
- \* Free Wheeling Diode in converters and motor control circuits



Isolated SOT-227 Package



Internal schematic diagram

### < Maximum Ratings >

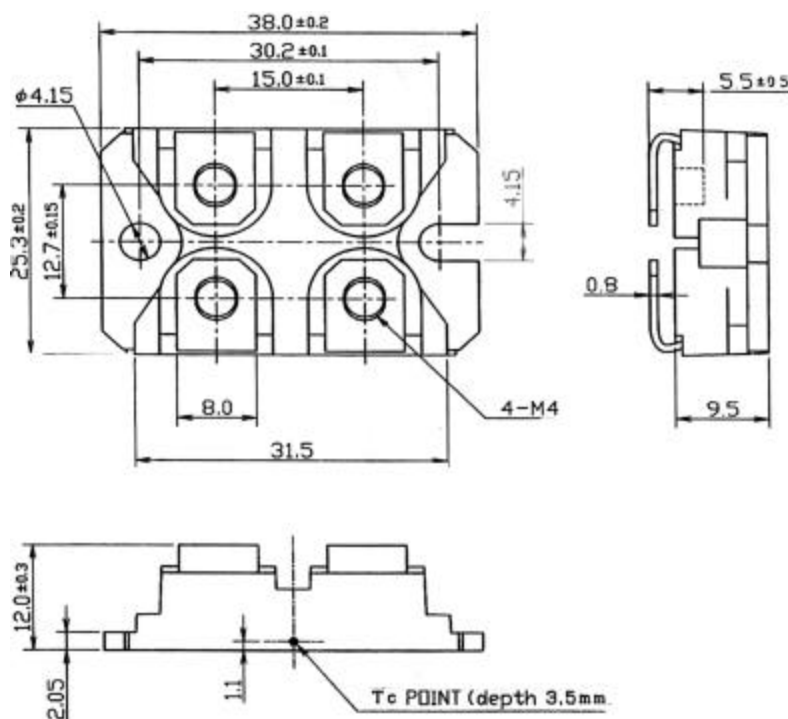
$T_j = 25^\circ C$  (unless otherwise noted) per diode

| Symbol      | Item                            |             | Conditions                                            | Ratings     | Unit             |
|-------------|---------------------------------|-------------|-------------------------------------------------------|-------------|------------------|
| $V_{RRM}$   | Repetitive Peak Reverse Voltage |             |                                                       | 600         | V                |
| $V_{R(DC)}$ | Reverse D.C. Voltage            |             |                                                       | 480         | V                |
| $I_{F(AV)}$ | Average Forward Current         |             | D.C., $T_c = 89^\circ C$                              | 100         | A                |
| $I_{FSM}$   | Surge Forward Current           |             | $\frac{1}{2}$ cycle, 60Hz, Peak value, non-repetitive | 700         | A                |
| $I^2 t$     | $I^2 t$ (for fusing)            |             | Value for one cycle surge current                     | 2100        | A <sup>2</sup> s |
| $T_j$       | Junction Temperature            |             |                                                       | -40 to +150 | $^\circ C$       |
| $T_{stg}$   | Storage Temperature             |             |                                                       | -40 to +125 | $^\circ C$       |
| $V_{ISO}$   | Isolation Voltage (R.M.S.)      |             | A.C. 1 minute                                         | 2500        | V                |
|             | Mounting Torque                 | Mounting M4 | Recommended 1.0-1.4                                   | 1.5         | N·m              |
|             |                                 | Terminal M4 | Recommended 1.0-1.4                                   | 1.5         |                  |
|             | Mass                            |             | Typical Value                                         | 30          | g                |

< Electrical Characteristics >

$T_j = 25^\circ\text{C}$  (unless otherwise noted) per diode

| Symbol        | Item                            | Conditions                                                            | Ratings |      |      | Unit               |
|---------------|---------------------------------|-----------------------------------------------------------------------|---------|------|------|--------------------|
|               |                                 |                                                                       | Min.    | Typ. | Max. |                    |
| $I_{RRM}$     | Repetitive Peak Reverse Current | $V_R = V_{RRM}$ , $T_j = 150^\circ\text{C}$                           |         |      | 100  | mA                 |
| $V_{FM}$      | Forward Voltage Drop            | $I_F = 100\text{A}$ , Inst. measurement                               |         | 1.20 | 1.35 | V                  |
| $t_{rr}$      | Reverse Recovery Time           | $I_F = 100\text{A}$ , $V_R = 300\text{V}$ , $-di/dt = 200\text{A/FS}$ |         | 150  | 250  | n s                |
| $R_{th(j-c)}$ | Thermal Resistance              | Junction to case                                                      |         |      | 0.45 | $^\circ\text{C/W}$ |



\* Dimensions in millimeters