

## 2 RECTIFIER DIODES

### ■ LOW AND MEDIUM POWER FOR GENERAL USE

| Type No.                     | Max. ratings                                        |                                               |                                           |                                       | Electrical characteristics |                          | Package outline    |
|------------------------------|-----------------------------------------------------|-----------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------|--------------------------|--------------------|
|                              | Repetitive peak reverse voltage<br>$V_{RRM}$<br>(V) | Average forward current<br>$I_{F(AV)}$<br>(A) | Surge forward current<br>$I_{FSM}$<br>(A) | Junction temperature<br>$T_J$<br>(°C) | Forward voltage drop       |                          |                    |
|                              |                                                     |                                               |                                           |                                       | $I_F$<br>(A)               | (max)<br>$V_{FM}$<br>(V) |                    |
| SR1FM-2, 4, 8                | * 1 100 to 400                                      | 1.0 ( $T_a = 40^{\circ}\text{C}$ )            | 50                                        | 150                                   | 3                          | 1.2                      | Lead mounting type |
| SR1G-4, 8, 12, 16            | 200 to 800                                          | 1.3 ( $T_L = 90^{\circ}\text{C}$ )            | 42                                        | 175                                   | 1.3                        | 1.1                      | Lead mounting type |
| SR10A-8S, 12S, 16S, 20S, 24S | 400 to 1200                                         | 12 ( $T_C = 119^{\circ}\text{C}$ )            | 220                                       | 150                                   | 35                         | 1.45                     | Stud-type M5       |
| SR10A-8R, 12R, 16R, 20R, 24R | 400 to 1200                                         | 12 ( $T_C = 119^{\circ}\text{C}$ )            | 220                                       | 150                                   | 35                         | 1.45                     | Stud-type M5       |
| SR30D-8S, 16S, 24S           | 400 to 1200                                         | 40 ( $T_C = 122^{\circ}\text{C}$ )            | 900                                       | 150                                   | 120                        | 1.35                     | Stud-type M6       |
| SR30D-8R, 16R, 24R           | 400 to 1200                                         | 40 ( $T_C = 104^{\circ}\text{C}$ )            | 800                                       | 130                                   | 120                        | 1.40                     | Stud-type M6       |

\* 1 For general use

### ■ HIGH POWER FOR GENERAL USE

| Type No.       | Max. ratings                                        |                                             |                                           |                                       | Electrical characteristics |                          | Package outline |
|----------------|-----------------------------------------------------|---------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------|--------------------------|-----------------|
|                | Repetitive peak reverse voltage<br>$V_{RRM}$<br>(V) | Average forward current<br>$I_F(AV)$<br>(A) | Surge forward current<br>$I_{FSM}$<br>(A) | Junction temperature<br>$T_J$<br>(°C) | Forward voltage drop       |                          |                 |
|                |                                                     |                                             |                                           |                                       | $I_F$<br>(A)               | (max)<br>$V_{FM}$<br>(V) |                 |
| SR60L-10S (R)  | 500                                                 | 60 ( $T_C = 110^{\circ}\text{C}$ )          | 800                                       | 150                                   | 200                        | 1.20                     | Flat-base type  |
| SR100L-10S (R) | 500                                                 | 100 ( $T_C = 110^{\circ}\text{C}$ )         | 1600                                      | 150                                   | 310                        | 1.15                     | Flat-base type  |
| SR130L-10S (R) | 500                                                 | 130 ( $T_C = 106^{\circ}\text{C}$ )         | 2000                                      | 150                                   | 390                        | 1.15                     | Flat-base type  |
| SR150L-10S (R) | 500                                                 | 150 ( $T_C = 108^{\circ}\text{C}$ )         | 2400                                      | 150                                   | 470                        | 1.15                     | Flat-base type  |
| SR170L-10S (R) | 500                                                 | 170 ( $T_C = 112^{\circ}\text{C}$ )         | 3200                                      | 150                                   | 550                        | 1.15                     | Flat-base type  |
| SR200L-10S (R) | 500                                                 | 200 ( $T_C = 109^{\circ}\text{C}$ )         | 3600                                      | 150                                   | 600                        | 1.10                     | Flat-base type  |
| SR250L-10S (R) | 500                                                 | 250 ( $T_C = 105^{\circ}\text{C}$ )         | 4500                                      | 150                                   | 800                        | 1.10                     | Flat-base type  |
| FD1000A-56     | 2800                                                | 800 ( $T_f = 101^{\circ}\text{C}$ )         | 14000                                     | 150                                   | 2500                       | 1.65                     | Flat-type       |
| FD1000D-56     | 2800                                                | 800 ( $T_f = 101^{\circ}\text{C}$ )         | 14000                                     | 150                                   | 2500                       | 1.65                     | Flat-type       |
| FD1600A-60     | 3000                                                | 1600 ( $T_f = 91^{\circ}\text{C}$ )         | 35000                                     | 150                                   | 5000                       | 1.60                     | Flat-type       |
| FD1600CP-10    | 500                                                 | 1600 ( $T_f = 104^{\circ}\text{C}$ )        | 20000                                     | 200                                   | 5000                       | 1.50                     | Flat-type       |
| FD1600CV-80    | 4000                                                | 1600 ( $T_f = 108^{\circ}\text{C}$ )        | 32000                                     | 150                                   | 5000                       | 1.70                     | Flat-type       |
| FD3500AH-56    | 2800                                                | 3500 ( $T_f = 101^{\circ}\text{C}$ )        | 70000                                     | 150                                   | 11000                      | 1.50                     | Flat-type       |
| FD3500BP-12    | 600                                                 | 3500 ( $T_f = 91^{\circ}\text{C}$ )         | 55000                                     | 175                                   | 11000                      | 1.50                     | Flat-type       |

### ■ HIGH SPEED SWITCHING USE

| Type No.     | Max. ratings                                        |                                             |                                           |                                       | Electrical characteristics |                          |                                 | Package outline | Remarks                          |
|--------------|-----------------------------------------------------|---------------------------------------------|-------------------------------------------|---------------------------------------|----------------------------|--------------------------|---------------------------------|-----------------|----------------------------------|
|              | Repetitive peak reverse voltage<br>$V_{RRM}$<br>(V) | Average forward current<br>$I_F(AV)$<br>(A) | Surge forward current<br>$I_{FSM}$<br>(A) | Junction temperature<br>$T_J$<br>(°C) | Forward voltage drop       |                          | Reverse recovery load           |                 |                                  |
|              |                                                     |                                             |                                           |                                       | $I_F$<br>(A)               | (max)<br>$V_{FM}$<br>(V) | (max)<br>$Q_{rr}$<br>( $\mu$ C) |                 |                                  |
| FD1000FH-56  | 2800                                                | 1000 ( $T_f=79^{\circ}\text{C}$ )           | 25000                                     | 125                                   | 2500                       | 1.9                      | 1000                            | Flat-type       |                                  |
| FD1000FV-90  | 4500                                                | 800 ( $T_f=88^{\circ}\text{C}$ )            | 20000                                     | 125                                   | 2500                       | 3.0                      | 1500                            | Flat-type       |                                  |
| FD1000FX-90  | 4500                                                | 800 ( $T_f=77^{\circ}\text{C}$ )            | 20000                                     | 125                                   | 2500                       | 3.5                      | 2000                            | Flat-type       | $V_{R(DC)}=3\text{kV}$<br>(Note) |
| FD1500AV-90  | 4500                                                | 1500 ( $T_f=65^{\circ}\text{C}$ )           | 24000                                     | 125                                   | 3400                       | 3.0                      | 2000                            | Flat-type       |                                  |
| FD2000DU-120 | ★ 6000                                              | 1700 ( $T_f=65^{\circ}\text{C}$ )           | 40000                                     | 125                                   | 6300                       | 5.0                      | 1500                            | Flat-type       |                                  |

Note : Indicates the DC voltage at which a failure rate of 100 Fit is guaranteed.