# Fast recovery Rectifier Diodes (Silicon Epitaxial Planar)

## RF 🗆 🗆 3 series

#### Applications

High frequency rectification

#### Features

- 1) Very fast recovery
- 2) Low V<sub>F</sub>
- 3) Low switching loss
- 4) Standard package TO-220FN, CPD

#### •External dimensions (Unit : mm)





30A

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#### **TO-220FN** Center tap type cathode common, Dual elements

Ultra low VF type FRD Fast recovery type FRD 200V 200V Single Dual Single \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_

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#### **CPD** Center tap type cathode common, Dual elements

|      |        | Ultra low V | F type FRD | Fast recovery type FRD |        |  |
|------|--------|-------------|------------|------------------------|--------|--|
|      | $\sum$ | 20          | 0V         | 200V                   |        |  |
|      | 10     | Dual        | Single     | Dual                   | Single |  |
| 19 V | ЗA     | 1           | ٠          | I                      | •      |  |
| 0    | 5A     | -           | •          | -                      |        |  |
|      | 6A     | •           | -          | •                      | -      |  |
|      | 10A    | -           | -          | -                      | -      |  |

### Diodes

#### ●Absolute maximum ratings (Ta=25°C)

| Paramotor                                | Symbol | Limits      |                   |                   |                   |                   |                   |             |      |
|--|--------|-------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------|------|
| Falailletei                              |        | RF073M2S    | RF103L2S          | RF303B2S          | RF503B2S          | RF603B2D          | RF603T2D          | RF1003T2D   | Unit |
| Reverse voltage (repetitive peak)        | Vrm    | 200         | 200               | 200               | 200               | 200               | 200               | 200         | V    |
| Reverse voltage (DC)                     | Vr     | 200         | 200               | 200               | 200               | 200               | 200               | 200         | V    |
| Average rectified forward current        | lo     | 0.7 *1      | 1.0 <sup>*1</sup> | 3.0 <sup>*1</sup> | 5.0 <sup>*1</sup> | 6.0 <sup>*1</sup> | 6.0 <sup>*1</sup> | 10.0 *1     | А    |
| Forward peak surge current (60Hz ·1cyc.) | IFSM   | 15          | 20                | 60                | 60                | 60                | 80                | 80          | А    |
| Junction temperature                     | Tj     | 150         | 150               | 150               | 150               | 150               | 150               | 150         | C    |
| Storage temperature                      | Tstg   | -55 to +150 | -55 to +150       | -55 to +150       | -55 to +150       | -55 to +150       | -55 to +150       | -55 to +150 | Ĵ    |
| * Mounting on glass epoxi board          |        |             |                   |                   |                   |                   |                   |             |      |

### •Electrical characteristics (Ta=25°C)

| Part No. IO | 10   | VD   | VF     |        | IR   |      | trr   |      | Configurate | Dealeana       |             |
|-------------|------|------|--------|--------|------|------|-------|------|-------------|----------------|-------------|
|             | VK   | Max. | Typ.   | IF     | Max. | Typ. | Max.  | Typ. | Configurate | гаскаде        |             |
| RF073M2S    | 0.7A | 200V | 0.890V | 0.830V | 0.7A | 10μΑ | 1.2µA | 20ns | 9ns         | Single         | PMDU        |
| RF103L2S    | 1A   | 200V | 0.920V | 0.860V | 1A   | 10μΑ | 1.2µA | 20ns | 9ns         | Single         | PMDS        |
| RF303B2S    | ЗA   | 200V | 0.980V | 0.920V | 3A   | 20μΑ | 2.0µA | 20ns | 11ns        | Single         | CPD(D-pack) |
| RF503B2S    | 5A   | 200V | 0.980V | 0.920V | 5A   | 40μΑ | 4.0μΑ | 25ns | 12ns        | Single         | CPD(D-pack) |
| RF603B2D    | 6A   | 200V | 0.980V | 0.920V | 3A   | 20μΑ | 2.0μΑ | 20ns | 11ns        | Cathode common | CPD(D-pack) |
| RF603T2D    | 6A   | 200V | 0.980V | 0.920V | 3A   | 20μΑ | 2.0μΑ | 20ns | 11ns        | Cathode common | TO-220FN    |
| RF1003T2D   | 10A  | 200V | 0.980V | 0.920V | 5A   | 40μΑ | 4.0μΑ | 25ns | 12ns        | Cathode common | TO-220FN    |

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