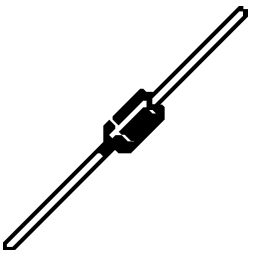
Data Sheet

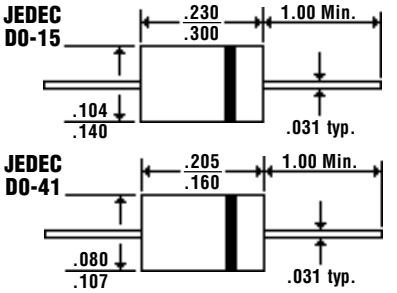
# HIGH VOLTAGE, FAST RECOVERY MINIATURE PLASTIC RECTIFIERS

FR02 & FR05 Series

## Description



## Mechanical Dimensions




### Features

- DESIGNED FOR PHOTO FLASH APPLICATIONS
- LOW COST
- BEVELED ROUND CHIP, AVALANCHE OPERATION
- MEETS UL SPECIFICATION 94V-0

| Electrical Characteristics @ 25°C. | FR02 & FR05 Series | | | | Units |
|---|---|---|---|---|---|
| **Maximum Ratings** | FR02 (25-30) | FR02 (35-40) | FR02 (45-60) | FR05 | |
| Average Forward Rectified Current...$I_0$ @ $T_A$ = 55°C | 0.2 | 0.2 | 0.2 | 0.5 | Amps |
| Non-Repetitive Peak Forward Surge Current...$I_{FSM}$ @ Rated Load Conditions, 8.3 mS, ½ Sine Wave | 30 | | | | Amps |
| Forward Voltage...$V_F$ | | | | | Volts |
| @ $I_F$ = 0.2 Amps (FR02) | 6.0 | 8.0 | 12.0 | | |
| @ $I_F$ = 0.5 Amps (FR05) | | | | 2.0 | |
| DC Reverse Current...$I_R$ | 5.0 | | | | µAmps |
| Typical Reverse Recovery Time...$T_{RR}$ | 500 | | | | nS |
| Typical Junction Capacitance...$C_J$ | 6.0 | 6.0 | 4.0 | 9.0 | pF |
| Operating Temperature Range...$T_J$ | -65 to 125 | | | | °C |
| Storage Temperature Range...$T_{STRG}$ | -65 to 150 | | | | °C |

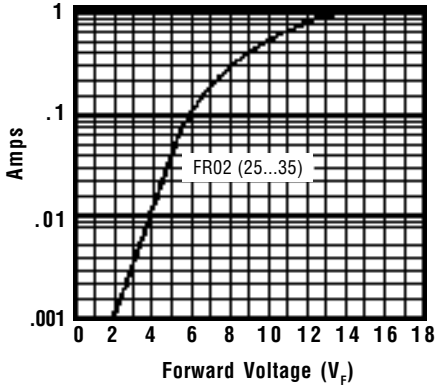
Maximum Peak Inverse Voltage...

| Type | Package | $V_{RM}$ | |
|---|---|---|---|
| FR05-10 | DO-41 | 1000 | Volts |
| FR05.15 | DO-41 | 1500 | Volts |
| FR05-16 | DO-41 | 1600 | Volts |
| FR05-18 | DO-41 | 1800 | Volts |
| FR05-20 | DO-41 | 2000 | Volts |
| FR02-25 | DO-41 | 2500 | Volts |
| FR02-30 | DO-41 | 3000 | Volts |
| FR02-35 | DO-15 | 3500 | Volts |
| FR02-40 | DO-15 | 4000 | Volts |
| FR02-45 | DO-15 | 4500 | Volts |
| FR02-50 | DO-15 | 5000 | Volts |
| FR02-60 | DO-15 | 6000 | Volts |

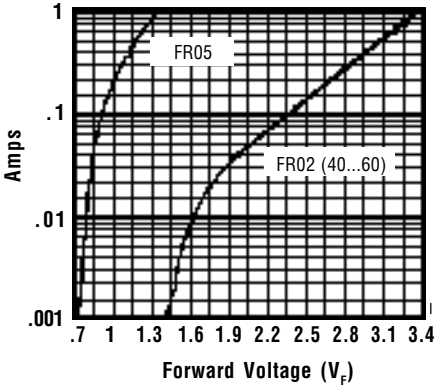
# HIGH VOLTAGE, FAST RECOVERY MINIATURE PLASTIC RECTIFIERS



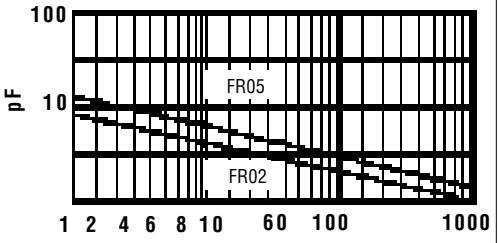
**Typical Forward Characteristics**



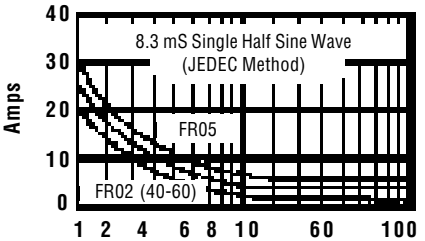

**Typical Forward Characteristics**



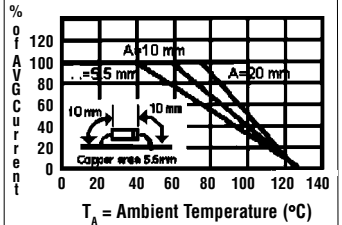

**Typical Junction Capacitance**



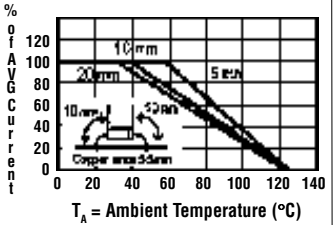

**Maximum Surge Current**



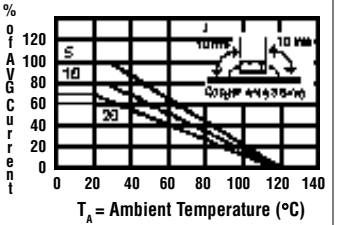

**Maximum Current Rating**
**Effect of Copper Area**
**Resistive/Inductive Load**




**Maximum Current Rating**
**Effect of Lead Lengths**
**Resistive/Inductive Load**




**Maximum Current Rating**
**Capacitive Load**




Ratings at 25 Deg. C ambient temperature unless otherwise specified.

Single Phase Half Wave, 60 HZ Resistive or Inductive Load.

For Capacitive Load, Derate Current by 20%.