## SUPERFAST RECOVERY RECTIFIERS

REVERSE VOLTAGE - **50** to **600** Volts
FORWARD CURRENT - **5.0** Amperes

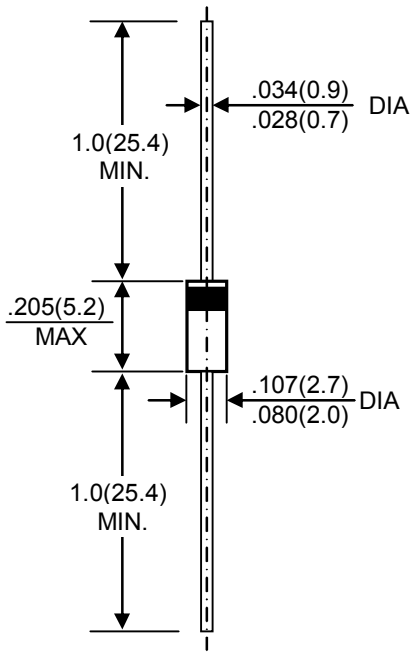
### FEATURES

- Super fast switching time for high efficiency
- Low forward voltage drop and high current capabiltiy
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic
- Polarity: Color band denotes cathode
- Weight: 0.012 ounces , 0.34 grams
- Mounting position: Any

**DO- 41**




Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave ,60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

| CHARACTERISTICS | SYMBOL | SF11 | SF12 | SF13 | SF14 | SF15 | SF16 | SF18 | UNIT |
|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Rectified Current @$T_A$ =55 ℃ | $I_{(AV)}$ | 1.0 | | | | | | | A |
| Peak Forward Surage Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Peak Forward Voltage at 1.0A DC | $V_F$ | 0.95 | | | | 1.25 | | 1.3 | V |
| Maximum DC Reverse Current @$T_J$=25℃ at Rated DC Blocking Voltage @$T_J$=100℃ | $I_R$ | 5.0<br>100 | | | | | | | μA |
| Maximum Reverse Recovery Time(Note 1) | Trr | 35 | | | | 40 | | 50 | nS |
| Typical Junction Capacitance (Note2) | $C_J$ | 30 | | | | 25 | | | pF |
| Typical Thermal Resistance (Note3) | $R_{\theta JA}$ | 40 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to +125 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

NOTES:1.Measured with IF=0.5A,IR=1A,IRR=0.25A.

2.Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to ambient.

FIG. 1 – FORWARD CURRENT DERATING CURVE

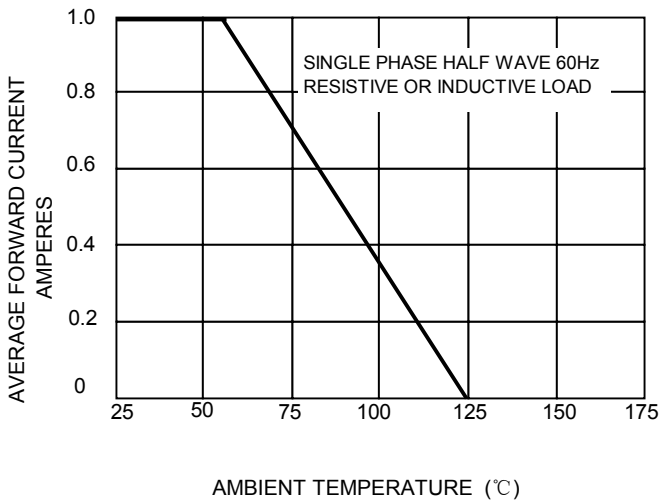



FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

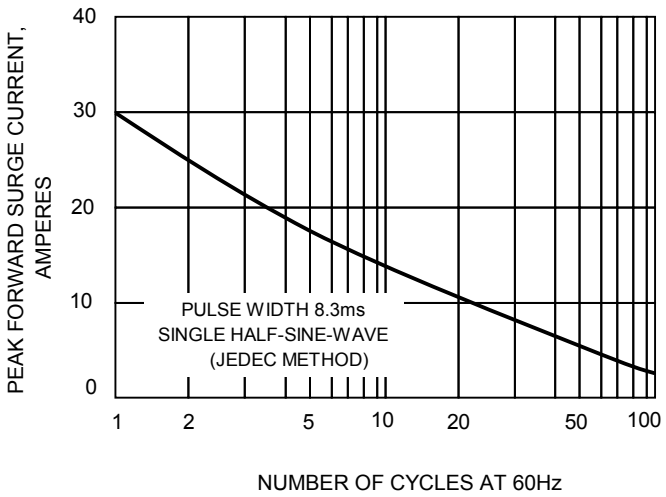



FIG.3 – TYPICAL JUNCTION CAPACITANCE

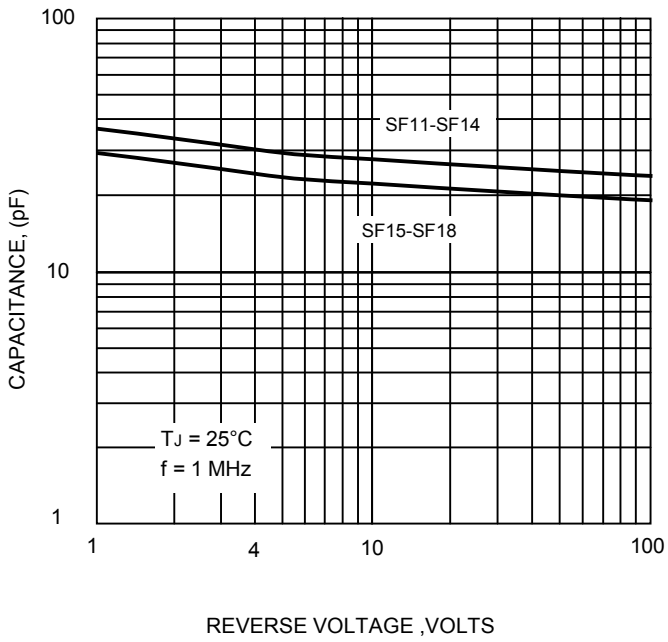



FIG.4-TYPICAL FORWARD CHARACTERISTICS