CE

CHENYI ELECTRONICS

# SF101 THRU SF106

## SUPER FAST RECTIFIER

**Reverse Voltage - 50 to 400 Volts**

**Forward Current - 1.0Ampere**

## FEATURES

. Low forward voltage drop

. High current capability

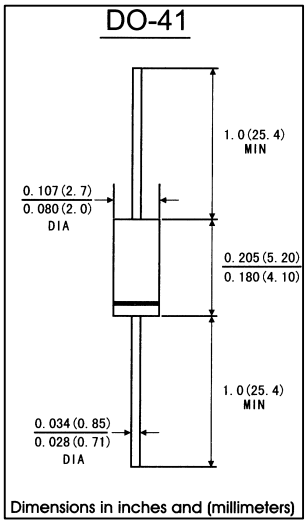
. High reliability

. High surge current capability

. Super fast recovery time

. Good for use in switching mode circuits

. Plastic package has Underwriters Laboratory Flammability Classification 94V-0




## MECHANICAL DATA

. **Case:** JEDEC DO-41 molded plastic body

. **Terminals:** plated axial leads, solderable per MIL-STD-750, method 2026

. **Polarity:** Color band denotes cathode end

. **Mounting Position:** Any

. **Weight**: 0.012 ounce, 0.34 gram

## 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%)

| | Symbols | SF 101 | SF 102 | SF 103 | SF 104 | SF 105 | SF 106 | Units |
|---|---|---|---|---|---|---|---|---|
| Maximum recurrent peak reverse voltage | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | Volts |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 105 | 140 | 210 | 280 | Volts |
| Maximum D.C blocking voltage | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | Volts |
| Maximum average forward rectified current 0.375"(9.5mm)lead length @ at $T_A$=55℃ | $I_{(AV)}$ | 1.0 | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 30.0 | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0 A | $V_F$ | 0.95 | | | | 1.25 | | Volts |
| Maximum DC Reverse Current At Rated DC Blocking Voltage $T_A$=25℃ | $I_R$ | 5.0 | | | | | | μA |
| Maximum DC Reverse Current At Rated DC Blocking Voltage $T_A$=100℃ | $I_R$ | 50 | | | | | | μA |
| Maximum reverse recovery time(Note 1) | Trr | 35 | | | | | | ns |
| Typical junction Capacitance(Note 2) | $C_J$ | 50 | | | | 25 | | pF |
| Operating junction and storage temperature range | $T_J$ TSTG | -65 to +125 -65 to +150 | | | | | | ℃ |

**Notes:** 1.Test conditions:$I_F$=0.5A,$I_R$=1.0A,Irr=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts

CE

CHENYI ELECTRONICS

# SF101 THRU SF106

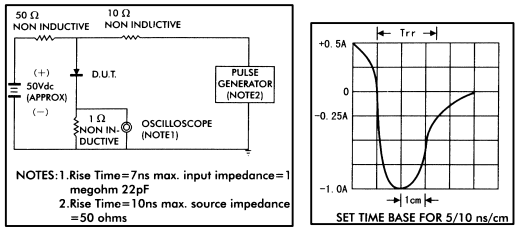
## SUPER FAST RECTIFIER

**Reverse Voltage - 50 to 400 Volts**

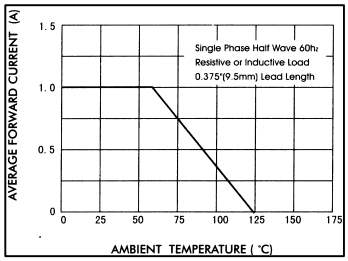
**Forward Current - 1.0Amperes**

## RATINGS AND CHARACTERISTIC CURVES SF101 THRU SF106

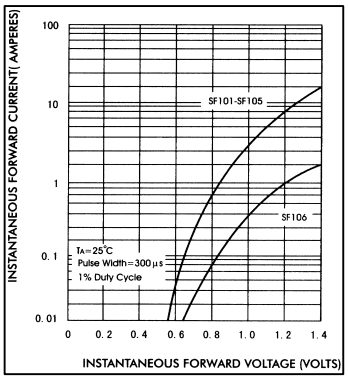
### FLG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



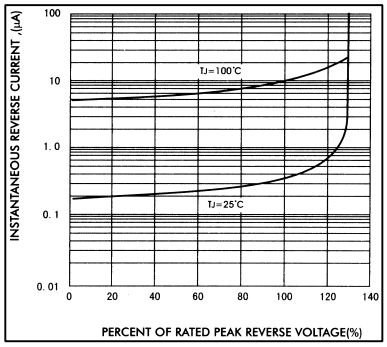

### FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE



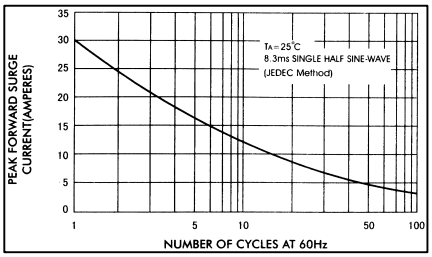

### FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS




### FIG.4-TYPICAL REVERSE CHARACTERISTICS




### FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT




### FIG.6-TYPICAL JUNCTION CAPACITANCE