

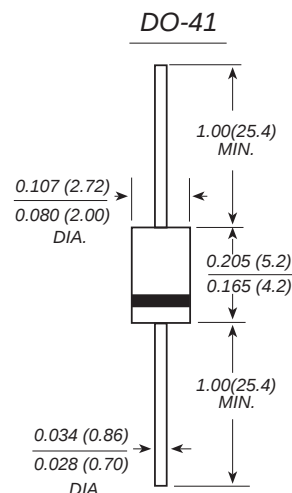
SUPER FAST RECTIFIER

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Super fast switching for high efficiency
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

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, 0.33 grams



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	SF11	SF12	SF13	SF14	SF15	SF16	SF18	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	VOLTS
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	VOLTS
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	VOLTS
Maximum average forward rectified current 0.375”(9.5mm) lead length at T _A =55°C	I _(AV)	1.0							Amps
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 1.0A	V _F	0.95				1.25		1.7	Volts
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =100°C	I _R	5.0 50.0							μA
Maximum reverse recovery time (NOTE 1)	t _{rr}	35							ns
Typical junction capacitance (NOTE 2)	C _J	15.0				10.0			pF
Typical thermal resistance (NOTE 3)	R _{θJA}	60.0							°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-65 to +150							°C

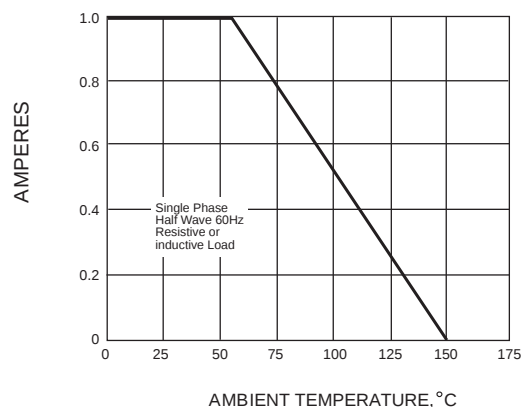
Note:

- 1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- 2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.
- 3.Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES SF11 THRU SF18

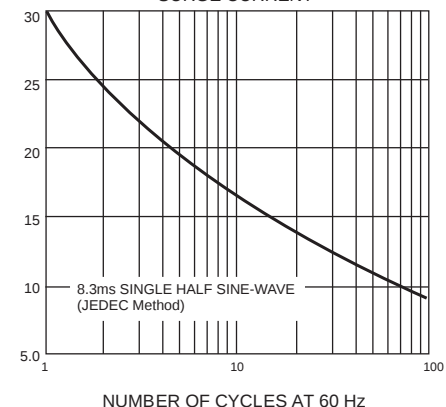
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



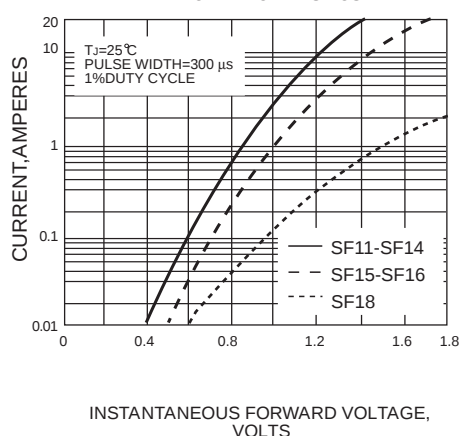
PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



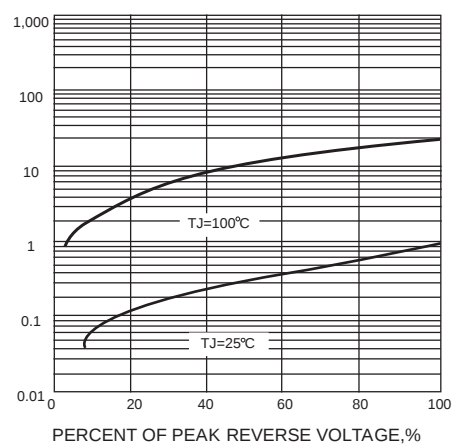
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



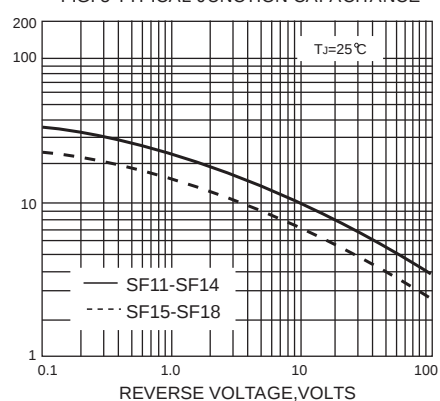
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

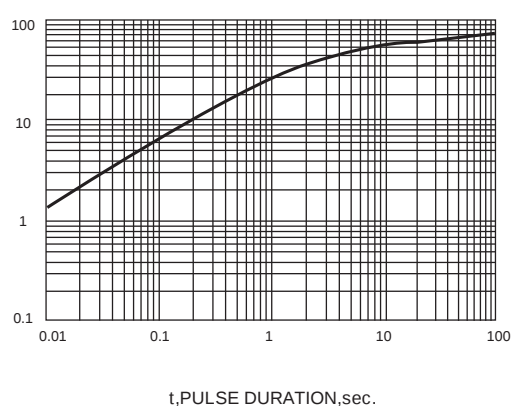
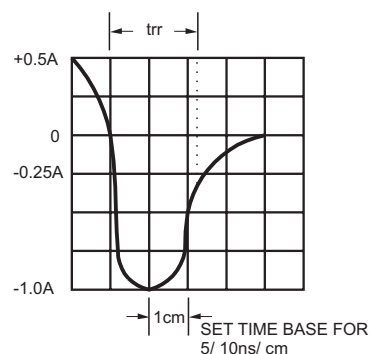
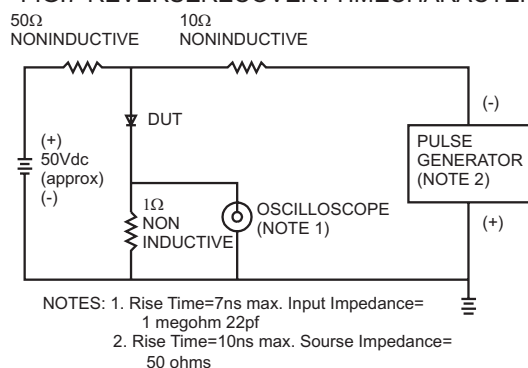
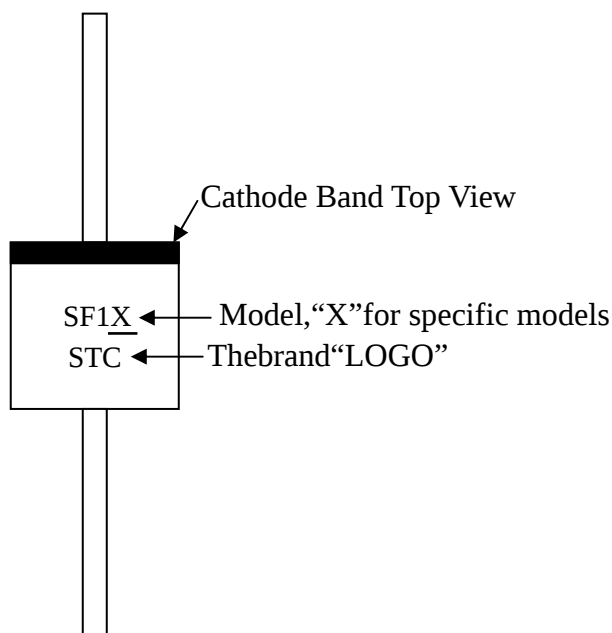


FIG. 7-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM





NOTES:

■ HONGXIN reserves the right to make changes to this document and its products and specifications at any time without notice.

■ Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

■ HONGXIN makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does HONGXIN assume any liability for application assistance or customer product design.

■ HONGXIN does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

■ No license is granted by implication or otherwise under any intellectual property rights of HONGXIN.

■ HONGXIN products are not authorized for use as critical components in life support devices or systems without express written approval by HONGXIN.

CONTACT INFORMATION:

DONGGUAN HONGXIN ELECTRONIC CO., LTD

TEL: 0769-83722095/83722096/38832588

FAX: 0769-83722090/38832587

E-Mail: hongxin@hongxin-dg.com.cn

<http://www.hongxin-dg.com.cn>

Address: No.1, Gongye Road, Shangchengang, Gekeng Village, Hengli Town, Dongguan City, China.