

# FML-13S--FML-14S

Super Fast Rectifiers

**VOLTAGE RANGE: 300~400 V**

**CURRENT: 5.0 A**

**ITO-220AB**

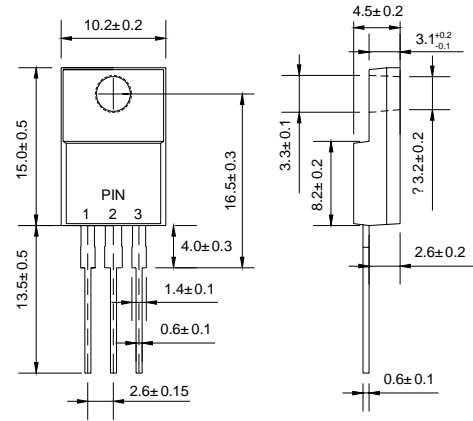


## Features

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ◇ Case: JEDEC ITO-220AB
- ◇ Polarity: As marked
- ◇ Weight: 0.06 ounce, 1.67 grams
- ◇ Mounting position: Any



Dimensions in millimeters

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

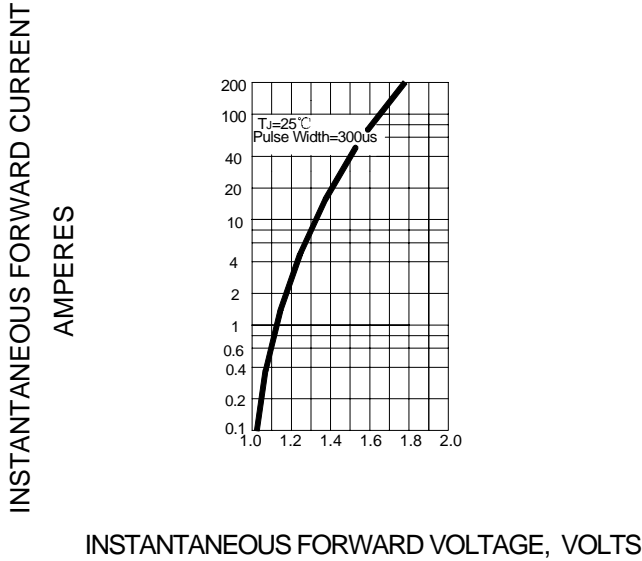
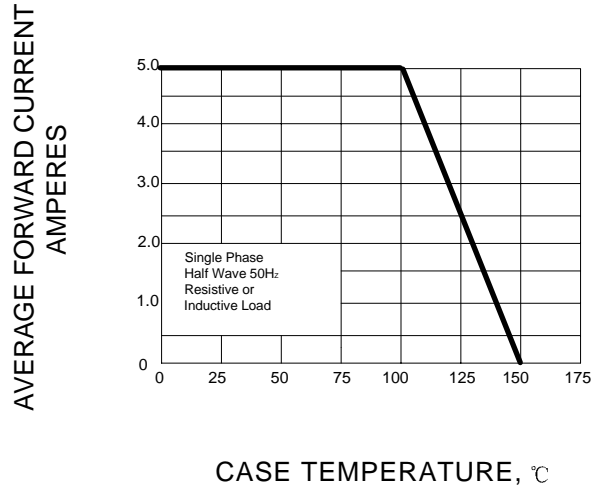
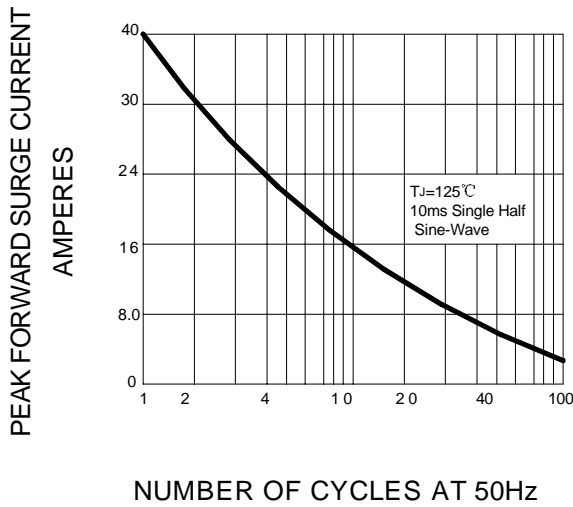
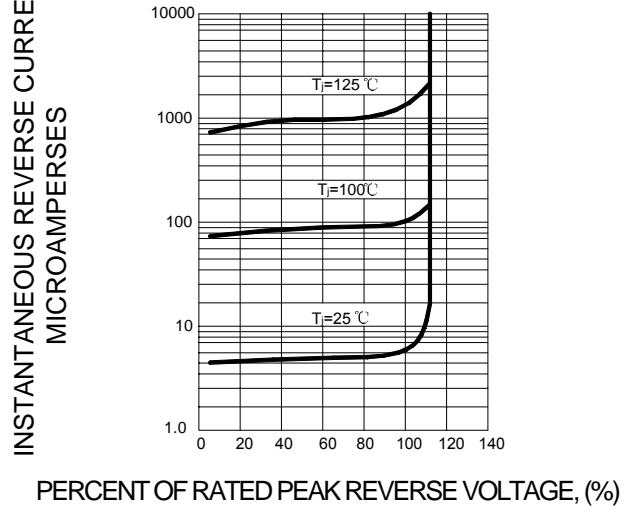
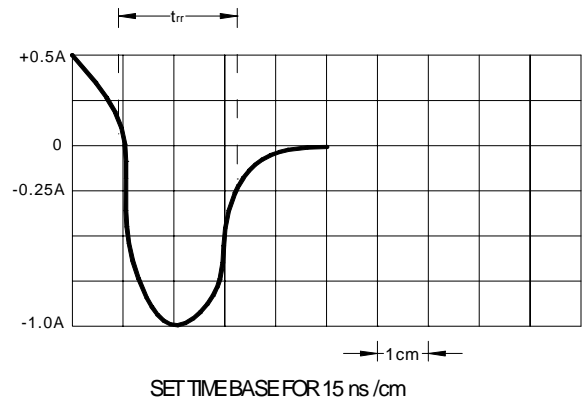
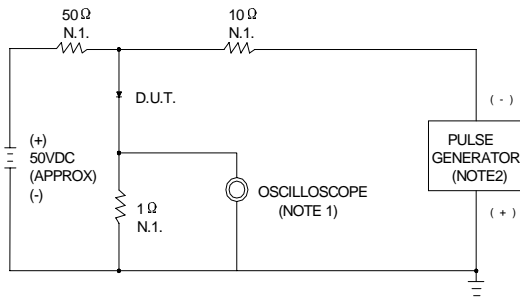
Single phase, half wave, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		FML- 13S	FML- 14S	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	300	400	V
Maximum RMS voltage	$V_{RMS}$	210	280	V
Maximum DC blocking voltage	$V_{DC}$	300	400	V
Maximum average forward rectified current @ $T_C=100^\circ C$	$I_{F(AV)}$	5.0		A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load	$I_{FSM}$	40		A
Maximum instantaneous forward voltage ( $I_F=2.5A$ )	$V_F$	1.3		V
Maximum reverse current @ $T_J=25^\circ C$ at rated DC blocking voltage @ $T_J=100^\circ C$	$I_R$	50 100		$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	35		ns
Typical thermal resistance (Note2)	$R_{\theta JC}$	4.0		$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ---- + 150		$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- + 150		$^\circ C$

NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

2. Thermal resistance junction to case.

## Ratings AND Characteristic Curves

**FIG.1 – TYPICAL FORWARD CHARACTERISTIC**

**FIG.2- FORWARD DERATING CURVE**

**FIG.3- PEAK FORWARD SURGE CURRENT**

**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

**FIG.5 – REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**


NOTES: 1. RISE TIME = 7ns MAX. INPUT IMPEDANCE = 1M $\Omega$ , 22pF  
 2. RISE TIME = 10ns MAX. SOURCE IMPEDANCE = 50 $\Omega$