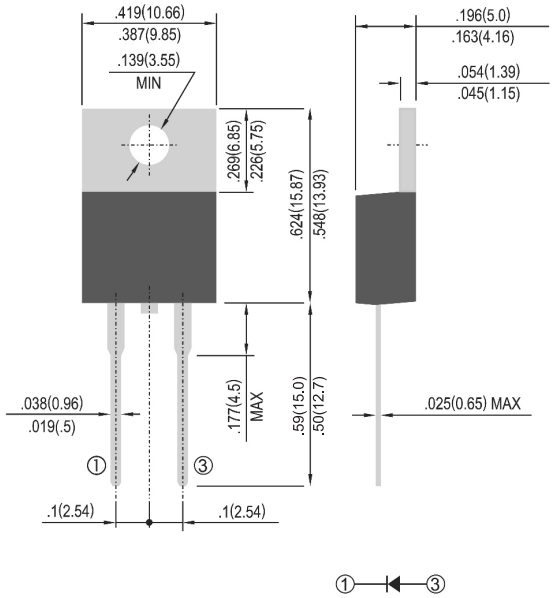
YEA SHIN TECHNOLOGY CO., LTD

PFD15S06S

Hyperfast Recovery Rectifier
Planar FRED
Voltage - 600 Volts Current - 15.0 Amperes

TO-220AC Unit:inch(mm)



Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- High speed switching

Mechanical Data

- Case: TO-220AC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish) Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.90 grams (approximate)

Maximum Ratings (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	PFD15S06S	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RMS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current	I_F	15	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200	A
Maximum Instantaneous Forward Voltage I_F=3A @ 25°C I_F=15A @ 25°C	V_F	 1.3 Typ. 2.3 Max.	V
Maximum DC Reverse Current @ T_A=25°C at Rated DC Blocking Voltage @ T_A=125°C	I_R	2 50	uA
Typical Junction Capacitance(NOTE1)	C_j	70	pF
Maximum Reverse Recovery Time(NOTE2)	Trr	22 Typ. 35 Max.	ns
Typical Thermal Resistance	$R_{\theta JC}$	3	°C/W
Operating Temperature Range	T_J	-55 to +175	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

NOTES:

1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

2.Measured with I_F=0.5A, I_R=1A, I_{RR}=0.25A

DEVICE CHARACTERISTICS

PFD15S06S

FIG. 1-Typical Forward Current Derating Curve

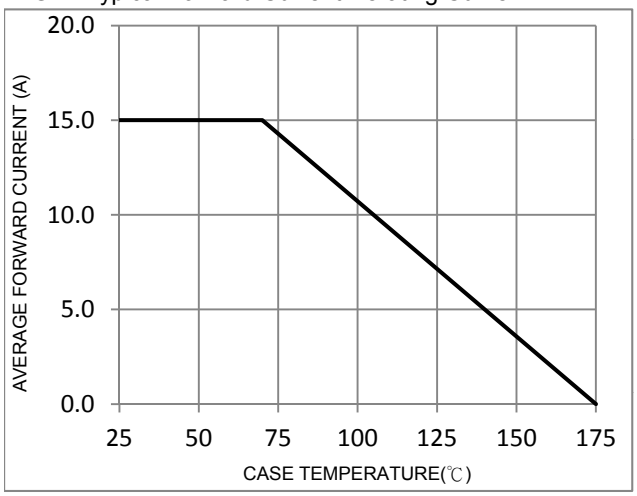


FIG. 2-Typical Forward Characteristics

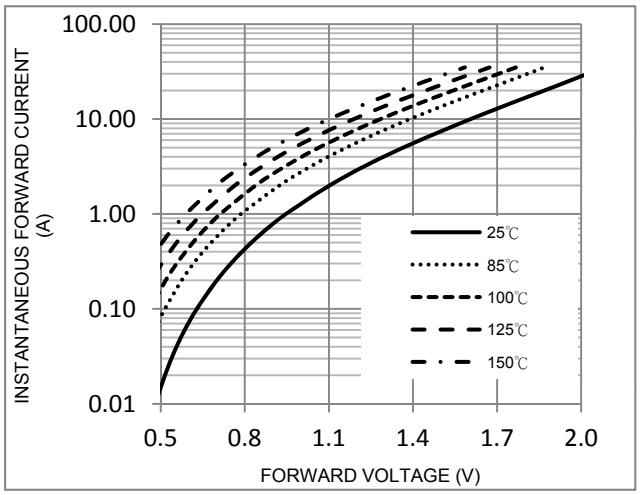


FIG. 3-Maximum Non-Repetitive Forward Surge Current

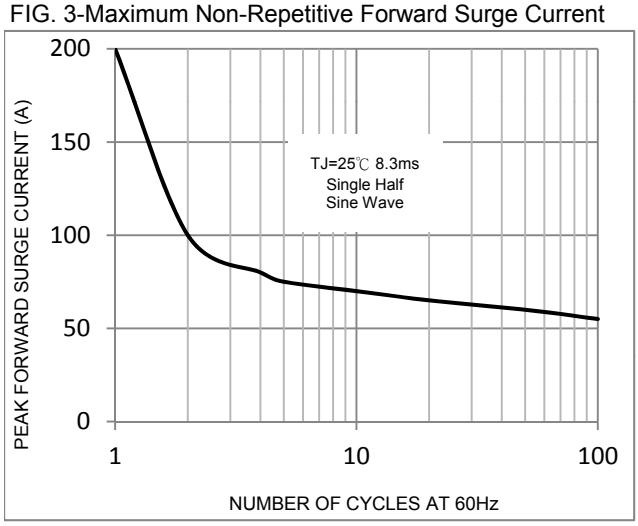


FIG. 4-Typical Reverse Characteristics

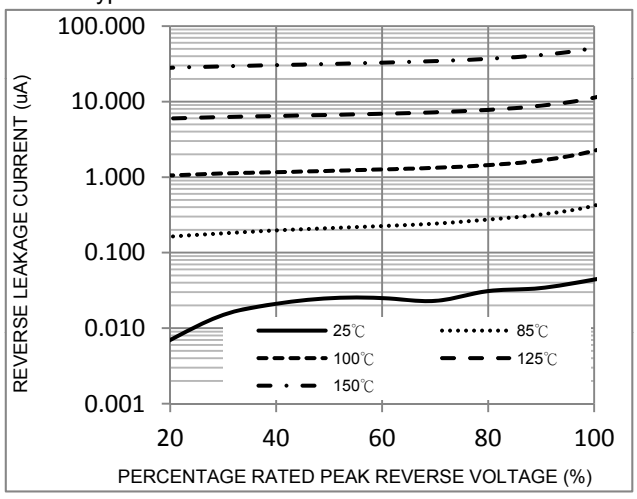


FIG. 5-Typical Junction Capacitance

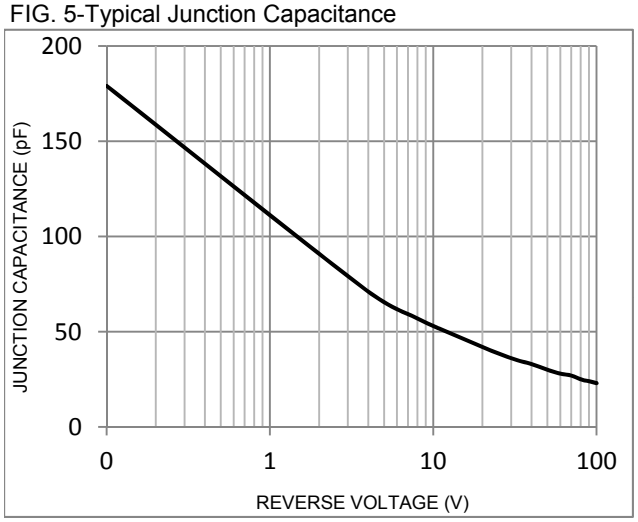
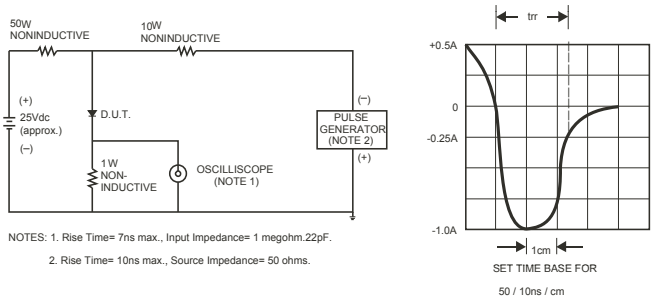


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.