

Hyperfast Recovery Rectifier Planar FRED



TO-220AC

Primary Characteristics		
I_F	10	A
V_{RRM}	600	V
I_{FSM}	100	A
V_F	2.5	V
$T_J \text{ max}$	175	°C

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)

Ordering Information			
Part No.	Remark	Package	Packing
PFD10S06SC	General	TO-220AC	50 & 2000 / Tube & Box
PFD10S06SC-H	Halogen Free		

Maximum Ratings (TA=25°C unless otherwise noted)			
PARAMETER	SYMBOL	PFD10S06SC	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	10	A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage IF=2A @ 25°C IF=10A @ 25°C	V_F	1.5 Typ. 2.5 Max.	V
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=125°C	I_R	2 50	uA
Typical Junction Capacitance(NOTE1)	C_j	25	pF
Maximum Reverse Recovery Time(NOTE2)	T_{rr}	18 Typ. 25 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
Marking Code		PFD10S06SC	

NOTES:

- 1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC
- 2.Measured with IF=0.5A, IR=1A, IRR=0.25A

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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

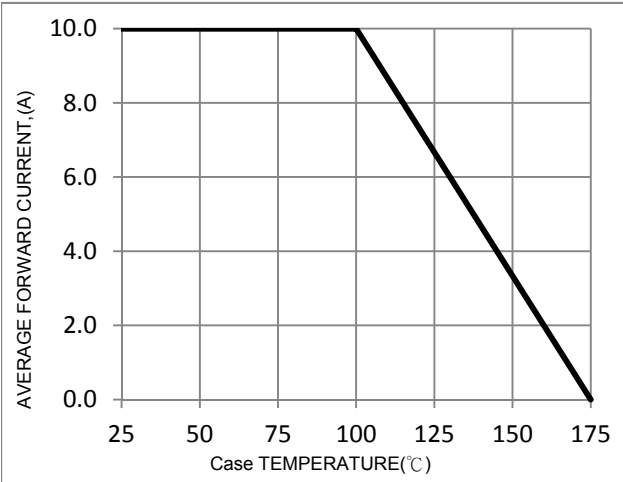


FIG. 2-Typical Forward Characteristics

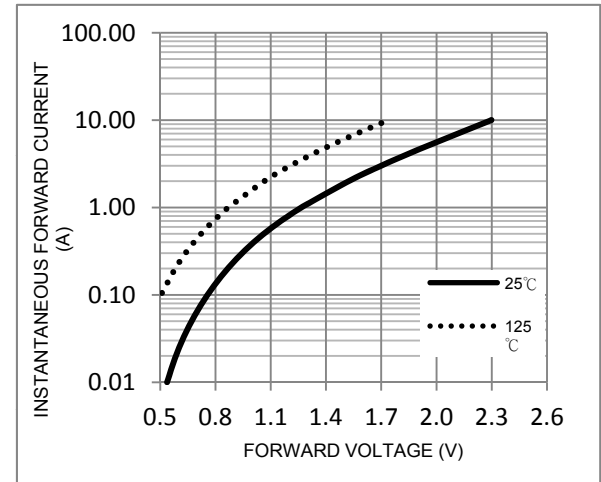


FIG. 3-Maximum Non-Repetitive Forward Surge Current

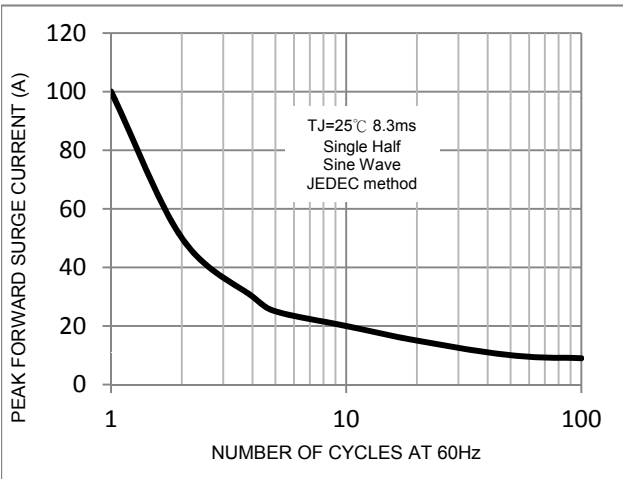


FIG. 4-Typical Reverse Characteristics

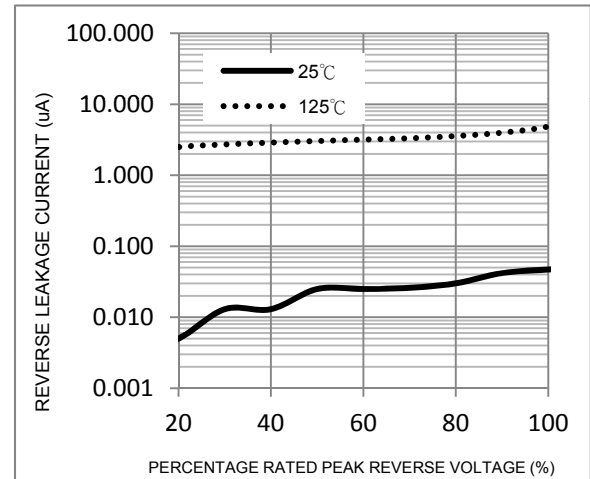


FIG. 5-Typical Junction Capacitance

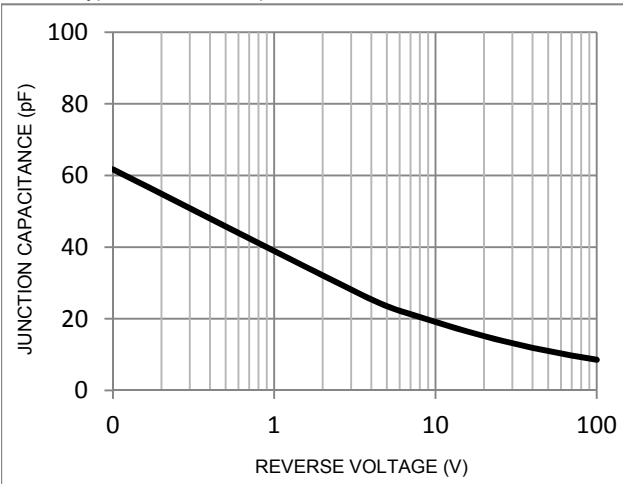
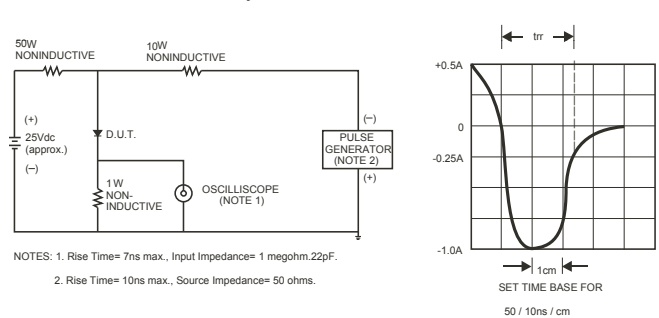
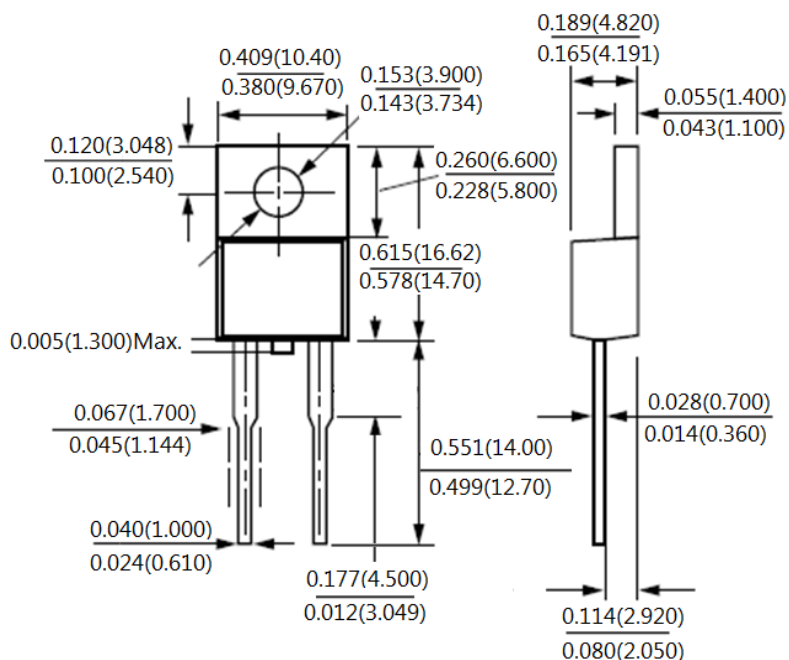


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit



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Package Outline Dimensions



TO-220AC

Dimensions in inches and (millimeters)

Marking Information

