



# SFF20xxH-P3 Series

## Dual Ultrafast Plastic Rectifier

Reverse Voltage 50 to 600 V  
Forward Current 20 A

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Dual rectifier construction, positive center-tap
- Glass passivated chip junctions
- Superfast recovery times for high efficiency
- Low forward voltage, high current high current capability
- Low thermal resistance, low power loss
- High temperature soldering guaranteed: 250°C, 0.16" (4.06mm) from case for 10 seconds

### Mechanical Data

**Case:** JEDEC TO-3PML molded plastic body overpassivated chips

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

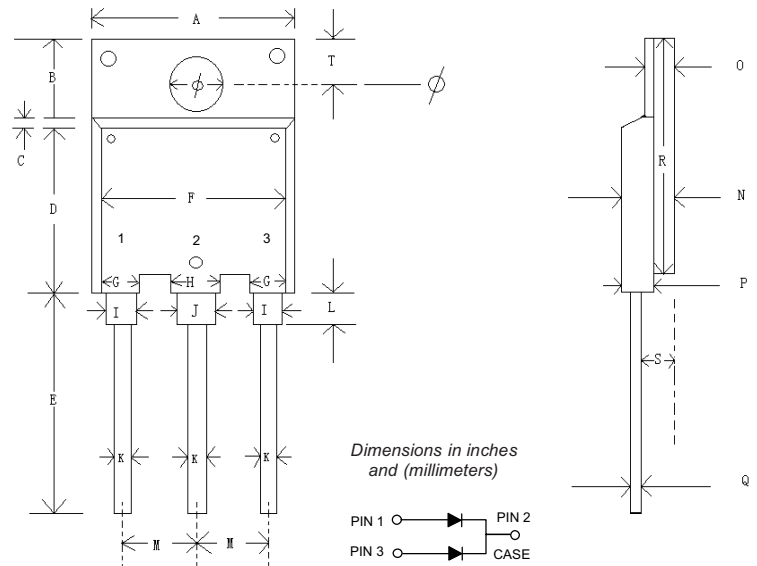
**Polarity:** As marked

**Mounting Position:** Any

**Mounting Torque:** 10 in. - lbs. max.

**Weight:** 0.22 oz., 6.3 g

### TO-3PML



### Maximum Ratings and Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise noted.

Parameter	Symbol	SFF 2005H	SFF 2010H	SFF 2015H	SFF 2020H	SFF 2030H	SFF 2040H	SFF 2050H	SFF 2060H	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	500	600	V
Transient Peak Reverse Voltage	$V_{RSM}$	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current at $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	20								A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load (JEDEC method) at $T_C = 100^\circ\text{C}$	$I_{FSM}$	140								A
Maximum thermal resistance <sup>(1)</sup>	$R_{\theta JC}$	2.0								°C/W
Operating storage and temperature range	$T_J, T_{STG}$	-55 to +150								°C/W

### Electrical Characteristics

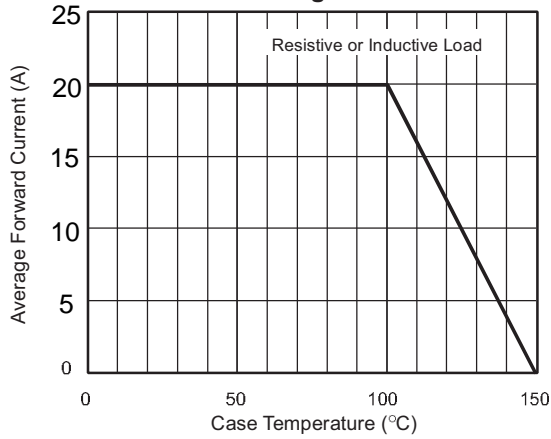
Parameter	Symbol	SFF 2005H	SFF 2010H	SFF 2015H	SFF 2020H	SFF 2030H	SFF 2040H	SFF 2050H	SFF 2060H	Unit	
Maximum instantaneous forward voltage per leg at 10 A	$V_F$	1.2			1.5		1.68			V	
Maximum DC reverse current at rated DC blocking voltage $T_C = 25^\circ\text{C}$ $T_J = 150^\circ\text{C}$	$I_R$	10				300					μA
Maximum reverse recovery time per leg at $I_F = 0.5\text{A}$ , $I_R = 1.0\text{A}$ , $I_{rr} = 0.25\text{A}$	$t_{rr}$	35								ns	
Typical junction capacitance per leg at 4.0V, 1MHz	$C_J$	175						40			pF

**Notes:** (1) Thermal resistance from junction to case per leg mounted on heatsink

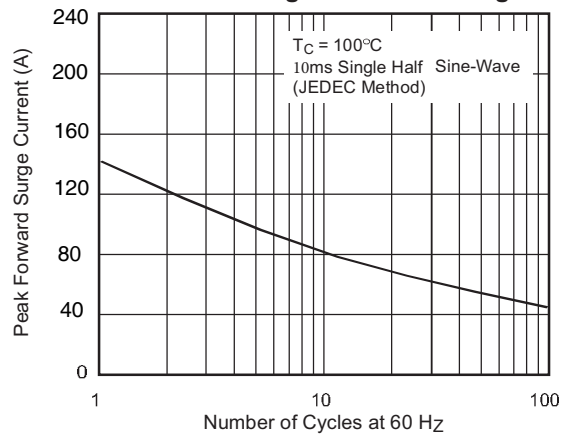


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

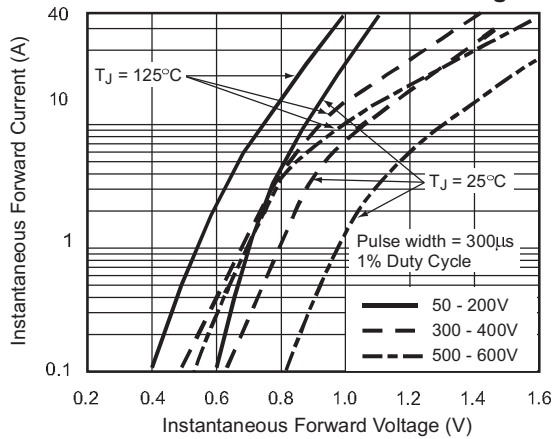
**Fig. 1 – Forward Current Derating Curve**



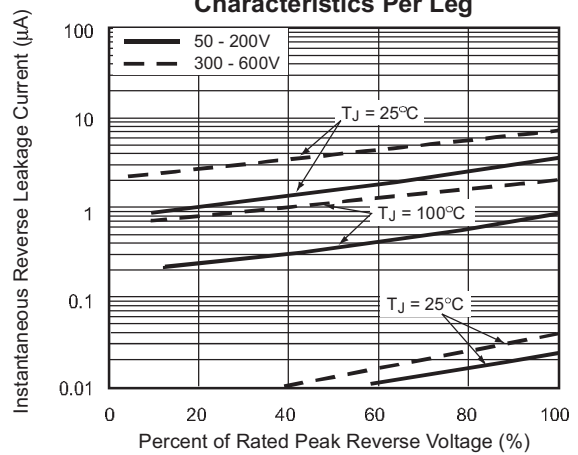
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



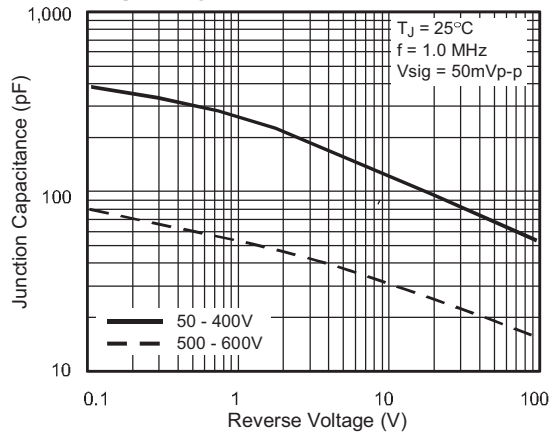
**Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Characteristics Per Leg**

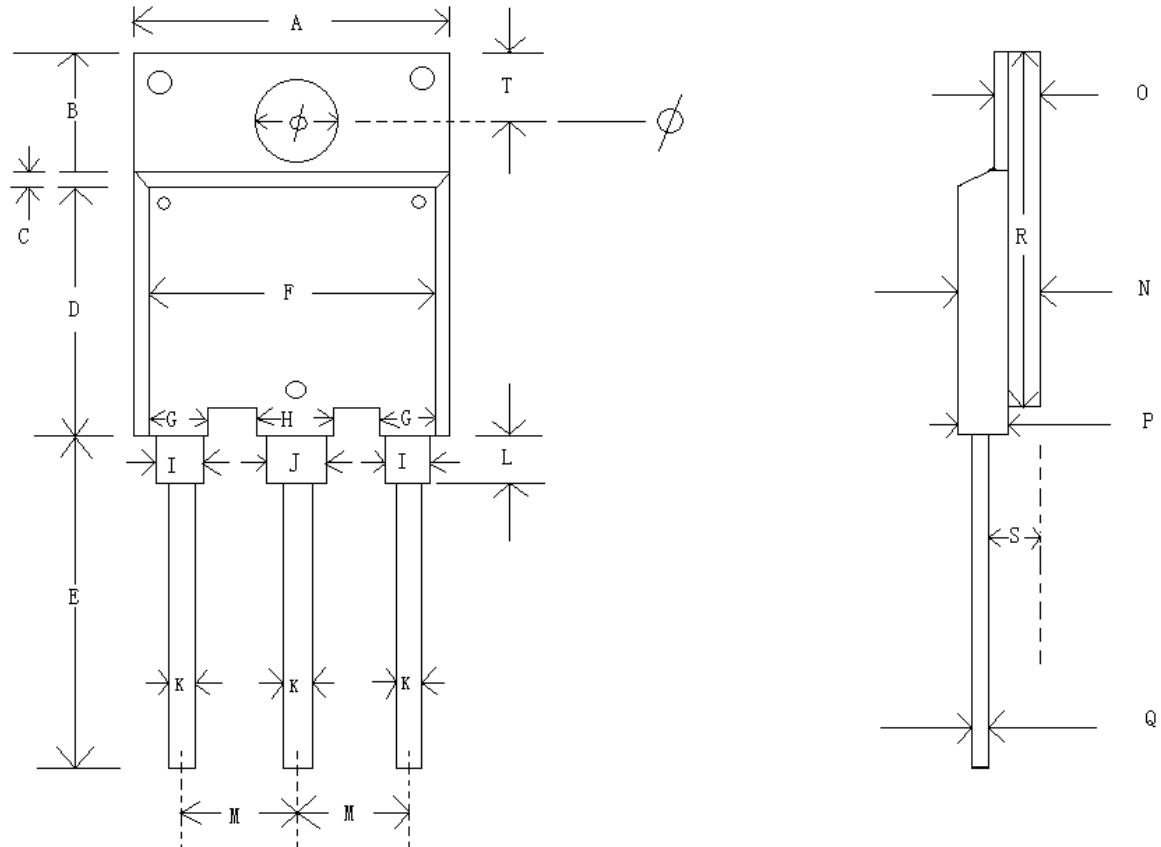


**Fig. 5 – Typical Junction Capacitance**





### Package Outline Dimensions



Unit: mm

Code	Min	Max	Code	Min	Max
A	15.2	16.2	B	7.2	8.2
C	0.6	1.0	D	12.5	13.5
E	18.3	20.3	F	14.2	15.2
G	3.1	4.1	H	3.3	4.3
I	1.9	2.4	J	2.75	3.25
K	0.75	1.25	L	3.0	5.0
M	5.25	5.55	N	4.9	5.9
O	2.45	3.45	P	2.9	3.9
Q	0.5	0.7	R	19.2	20.2
S	3.1	4.1	T	4.4	5.4
Ø	3.15	3.65			

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Rectifiers](#) category:*

*Click to view products by [DIYI](#) manufacturer:*

Other Similar products are found below :

[70HFR40](#) [FR105 R0](#) [RL252-TP](#) [1N5397](#) [1N4005-TR](#) [1N4007-BP](#) [UFS120Je3/TR13](#) [20ETS12S](#) [RRE02VS6SGTR](#) [MS306](#) [A1N5404G-G](#)  
[CRF02\(T5L,TEMQ\)](#) [ACGRB207-HF](#) [CLH07\(TE16L,Q\)](#) [CLH03\(TE16L,Q\)](#) [1N5395-TP](#) [UES1302](#) [ACGRC307-HF](#) [ACEFC304-HF](#) [DZ-](#)  
[1380](#) [85HFR60](#) [40HFR60](#) [70HF120](#) [85HFR80](#) [SCF7500](#) [SM100](#) [ACGRA4001-HF](#) [SKN70/08](#) [NTE5819](#) [NTE5827](#) [NTE5828](#) [NTE5911](#)  
[NTE5915](#) [NTE6104](#) [NTE6163](#) [NTE6164](#) [NTE6165](#) [NTE6364](#) [TSD3G](#) [SET130312](#) [NRVUS110VT3G](#) [UES1106](#) [UES1306](#)  
[NRVUS240VT3G](#) [D5FE60-5063](#) [R4000GPS-TP](#) [D4015L56TP](#) [UES1306HR2](#) [FX20K120](#) [D20XB60-7101](#)