

# UGSP05F

## Ultra fast Plastic Rectifiers

VOLTAGE: 300V

CURRENT:5.0A

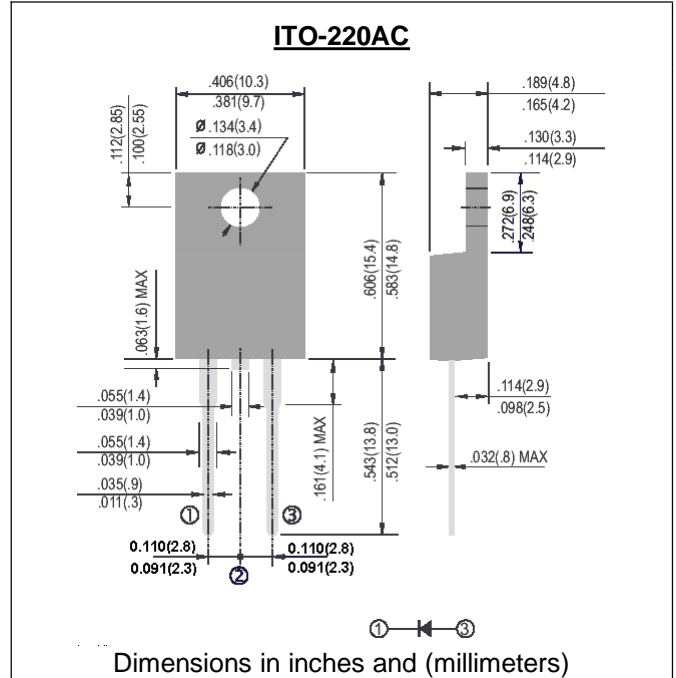


### FEATURE

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultra fast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High voltage and high reliability
- High speed switching
- Low forward voltage

### MECHANICAL DATA

Case: JEDEC ITO-220AC molded plastic body over passivated chip  
Terminals: Plated Insert leads, solderable per MIL-STD-750, Method 2026  
Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

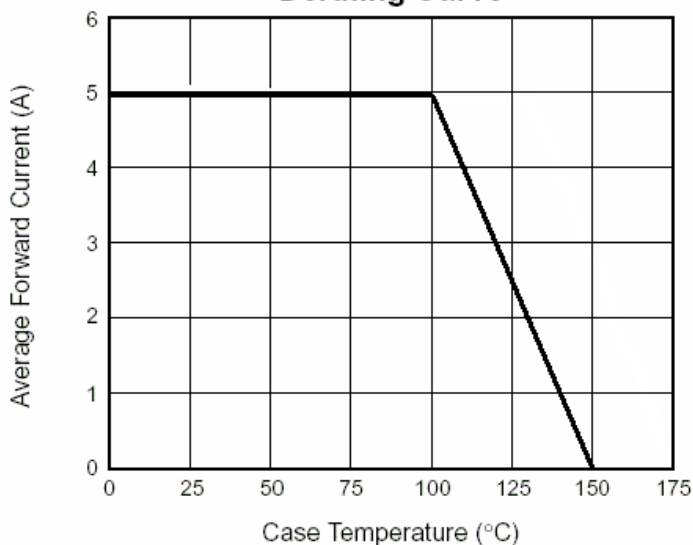
(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

Parameter	SYMBOL	UGSP05F	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	300	V
Maximum RMS Voltage	V <sub>rms</sub>	210	V
Maximum DC blocking Voltage	V <sub>dc</sub>	300	V
Maximum Average Forward Rectified	I <sub>f(av)</sub>	5.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	100	A
Maximum Forward Voltage at rated Forward Current at 5A	V <sub>f</sub>	1.4	V
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	25	nS
Typical thermal resistance junction to case	R <sub>θ Jc</sub>	5.0	°C/W
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage Ta =100°C	I <sub>r</sub>	10 100	μA μA
Storage and Operating Temperature Range	T <sub>stg, Tj</sub>	-55 to +150	°C

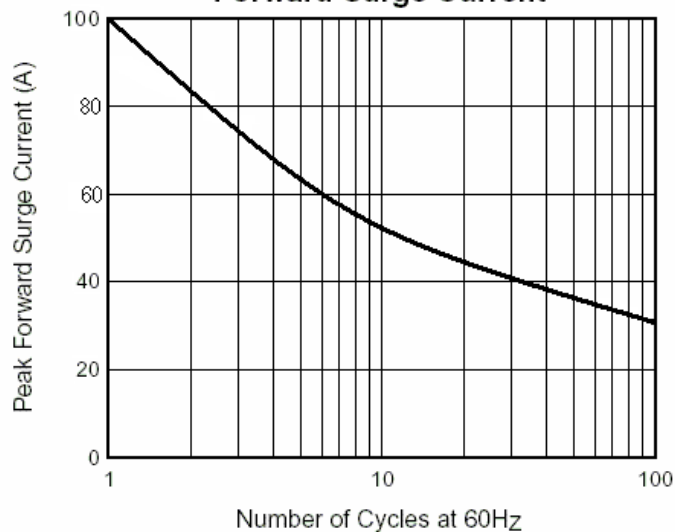
#### Note:

1. Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A

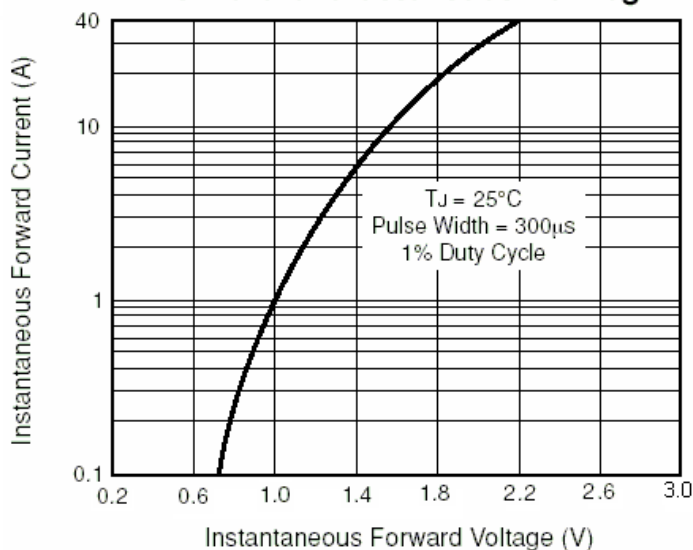
**Fig. 1 – Forward Current Derating Curve**



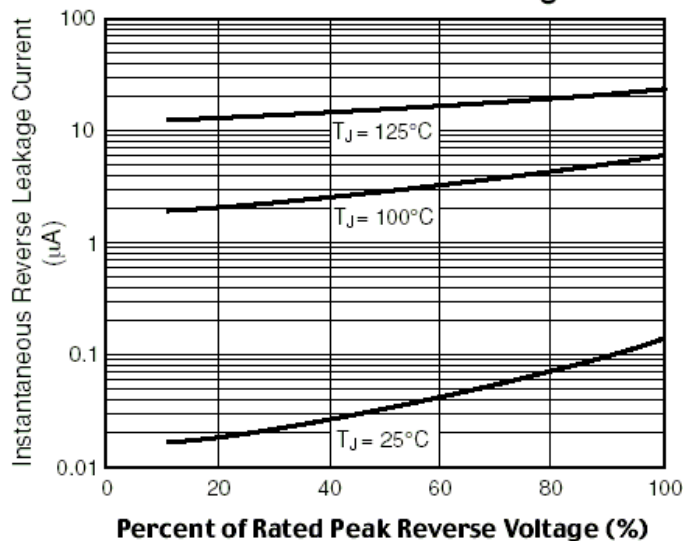
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



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



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



**Fig. 5 – Typical Junction Capacitance Per Leg**

