

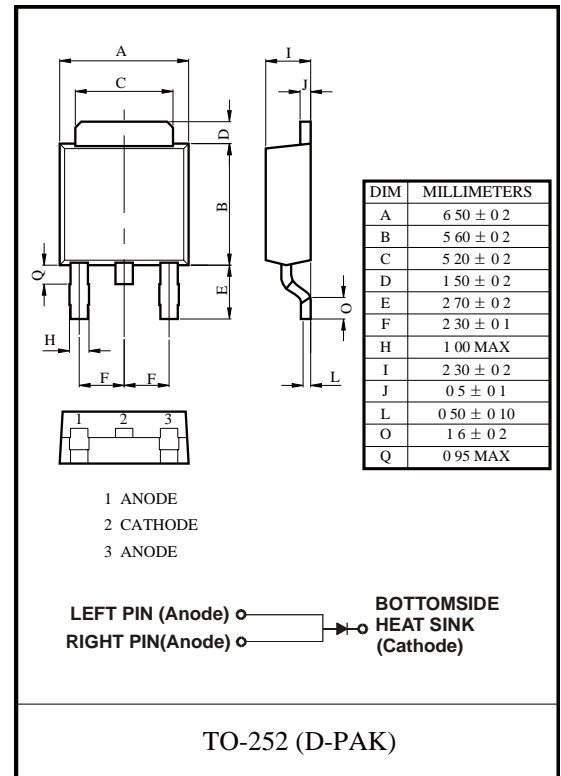
## 5A,400V ULTRA-FAST RECTIFIER

### Features

- Ultra-Fast Die Construction
- Soft, Fast Switching Capability
- Low Leakage Current

### Mechanical Data

- Case: TO-252
- Case Material: Molded Plastic,  
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Annealed Over Copper Leadframe  
Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram



### Maximum Ratings (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Rating	Symbol	UF5A400D1	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	400	Volts
Average Rectified Forward Current Total Device, (Rated V <sub>R</sub> ), TC = 150°C	I <sub>F(AV)</sub>	5	Amps
Peak Repetitive Forward Current (Rated V <sub>R</sub> , Square Wave, 20 kHz), TC = 150°C	I <sub>FM</sub>	10	Amps
Nonrepetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I <sub>FSM</sub>	100	Amps
Operating Junction Temperature and Storage Temperature	T <sub>J</sub> , T <sub>stg</sub>	-50 to +150	°C

### Thermal Characteristics

Maximum Thermal Resistance, Junction to Case	R <sub>θJC</sub>	2.0	°C/W
--	------------------	-----	------

### Electrical Characteristics (@T<sub>A</sub> = +25°C, unless otherwise specified.)

Maximum Instantaneous Forward Voltage (1) (I <sub>F</sub> = 5 Amps, TC = 150°C) (I <sub>F</sub> = 5 Amps, TC = 25°C)	V <sub>F</sub>	1.00 1.40	Volts
Maximum Instantaneous Reverse Current (1) (Rated dc Voltage, T <sub>J</sub> = 150°C) (Rated dc Voltage, T <sub>J</sub> = 25°C)	I <sub>R</sub>	250 5.0	μA
Maximum Reverse Recovery Time (I <sub>F</sub> = 1.0 Amp, di/dt = 50 Amps/μs) (I <sub>F</sub> = 0.5 Amp, I <sub>R</sub> = 1.0 Amp, I <sub>REC</sub> = 0.25 Amp)	t <sub>rr</sub>	35 25	ns

(1) Pulse Test: Pulse Width = 300us, Duty Cycle ≤ 2.0%.



# Typical Characteristics

