

# UF4001S THRU UF4007S

## ULTRA FAST RECTIFIERS

Voltage Range - 50 to 1000 V

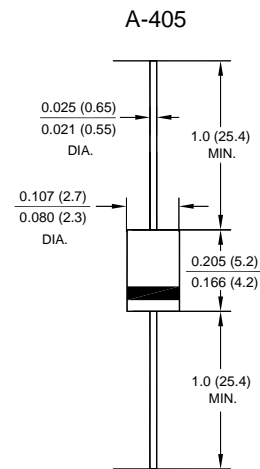
Forward Current - 1 A

### Features

- Ultra fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability

### Mechanical data

- **Case:** A-405 molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750 Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting position:** any



Dimensions in inches and (millimeters)

### Absolute Maximum Ratings and Electrical characteristics ( $T_a = 25\text{ }^\circ\text{C}$ )

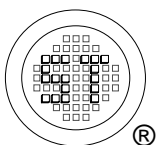
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	UF4001S	UF4002S	UF4003S	UF4004S	UF4005S	UF4006S	UF4007S	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Length at $T_A = 55\text{ }^\circ\text{C}$	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Forward Voltage at 1 A	$V_F$	1				1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25\text{ }^\circ\text{C}$ $T_A = 100\text{ }^\circ\text{C}$	$I_R$	5				50			$\mu\text{A}$
Maximum Reverse Recovery Time <sup>1)</sup>	$t_{rr}$	50				75			ns
Typical Junction Capacitance <sup>2)</sup>	$C_J$	15							pF
Typical Thermal Resistance <sup>3)</sup>	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$	- 65 to + 150							$^\circ\text{C}$

<sup>1)</sup> Reverse recovery condition  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$ .

<sup>2)</sup> Measured at 1 MHz and applied reverse voltage of 4 V D.C.

<sup>3)</sup> Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted.



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

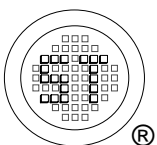
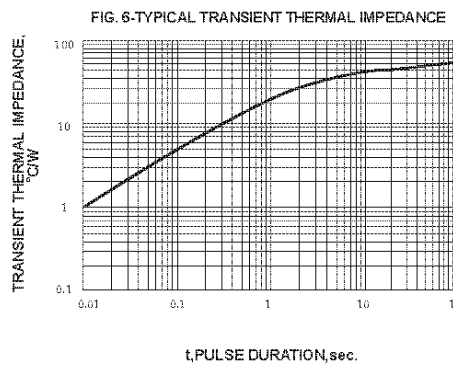
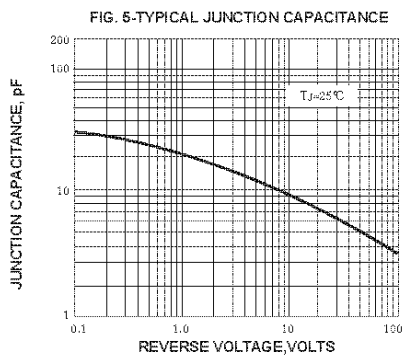
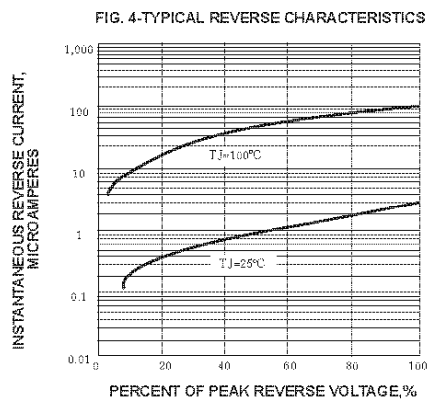
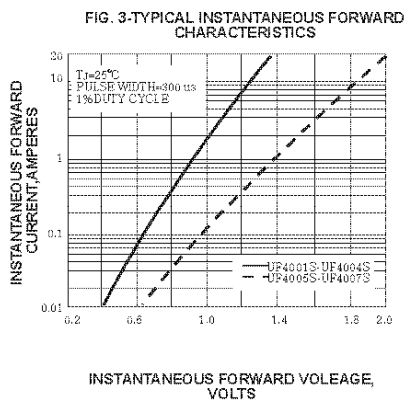
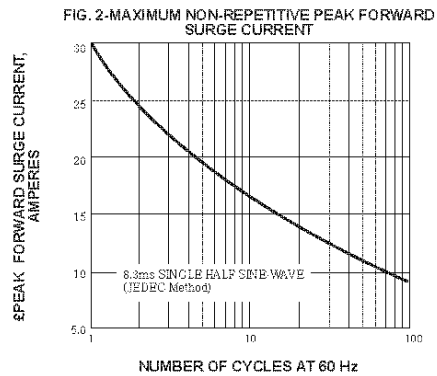
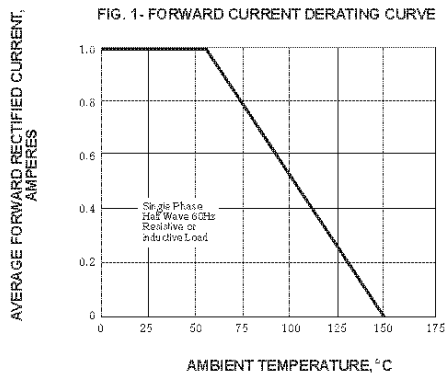


ISO/TS 16949 : 2002  
Certificate No. 05103

ISO 14001:2004  
Certificate No. 7116

ISO 9001:2000  
Certificate No. 0506088

# UF4001S THRU UF4007S



**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949:2002 Certificate No. 05103  
 ISO 14001:2004 Certificate No. 7116  
 ISO 9001:2000 Certificate No. 0506088