

UF4001S THRU UF4007S

ULTRA FAST RECTIFIERS

Voltage Range - 50 to 1000 V

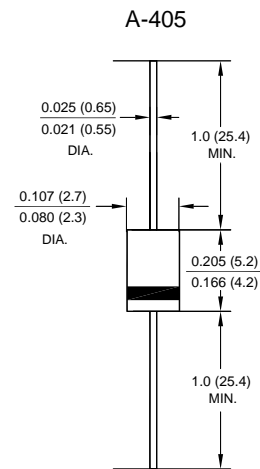
Forward Current - 1 A

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 ($T_a = 25\text{ }^\circ\text{C}$)

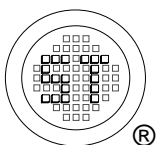
Ratings at $25\text{ }^\circ\text{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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			μA
Maximum Reverse Recovery Time ¹⁾	t_{rr}	50				75			ns
Typical Junction Capacitance ²⁾	C_J	15							pF
Typical Thermal Resistance ³⁾	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_S	- 65 to + 150							$^\circ\text{C}$

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

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

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



SEMTECH ELECTRONICS LTD.

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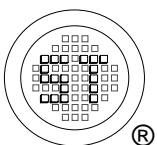
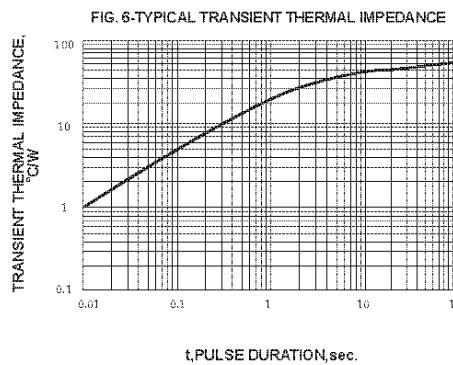
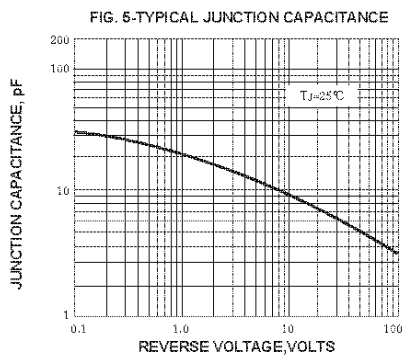
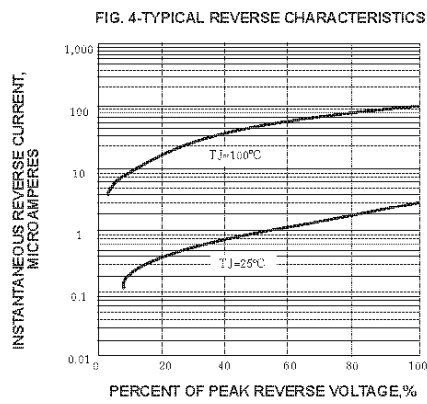
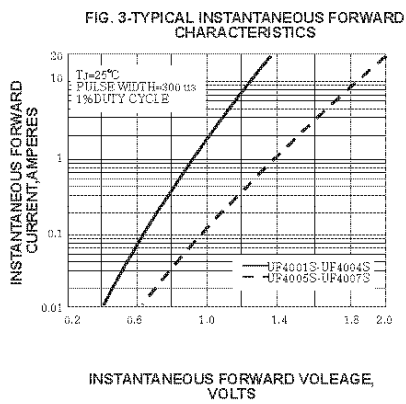
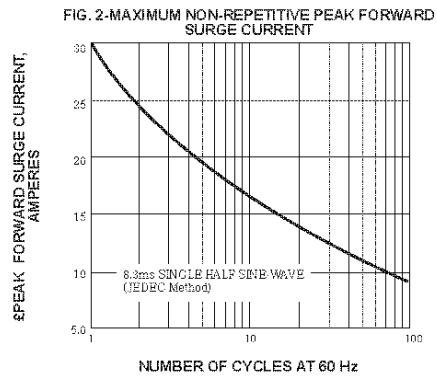
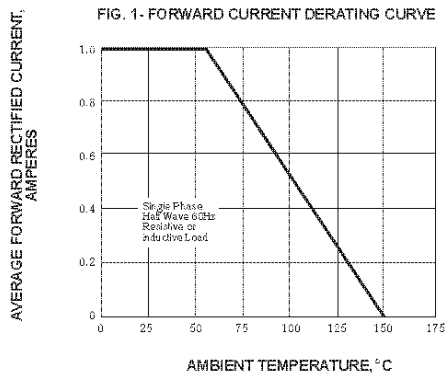


ISO/TS 16949 : 2002
Certificate No. 05103

ISO 14001:2004
Certificate No. 7116

ISO 9001:2000
Certificate No. 0506088

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