



SUPER FAST RECOVERY RECTIFIER

SF41 THRU SF46

VOLTAGE RANGE
CURRENT

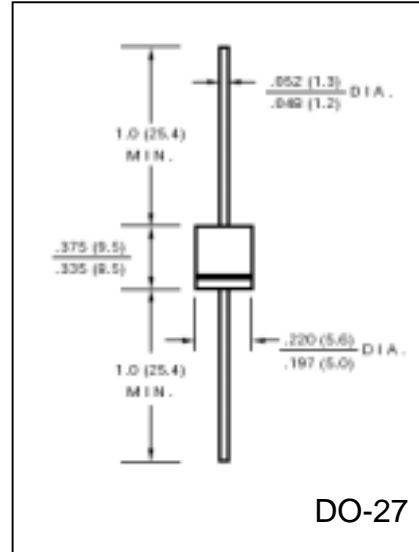
50 to 400 Volts
4.0 Ampere

FEATURES

- Super fast switching speed
- Low Leakage
- Low forward voltage
- Glass passivated junction
- High current capability
- High surge capacity
- High Temperature soldering guaranteed:
260 °C / 10 second, 0.375" (9.5mm) lead length
at 5 lbs. (2.3Kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V – 0 rate flame retardant
- Polarity: Color Band denotes cathode end
- Lead: Plated axial lead, solderable per MIL – STD-202E
Method 208C
- Mounting Position: Any
- Weight: 0.042 ounce, 1.19 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	SF41	SF42	SF43	SF44	SF45	SF46	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current, 0.375" (9.5mm) lead length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	4.0						Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	150						Amps
Maximum Instantaneous Forward Voltage @ 4.0A	V_F	0.95				1.25		Volts
Maximum DC Reverse Current at Rated $T_A = 25^\circ\text{C}$	I_R	5.0						μA
DC Blocking Voltage per element $T_A = 125^\circ\text{C}$		150						
Maximum Reverse Recovery Time Test conditions $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	t_{rr}	35						nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	35						pF
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	30						$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	(-55 to +150)						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	(-55 to +150)						$^\circ\text{C}$

Notes:

1. Thermal resistance from junction to ambient with 0.375" (9.5mm) lead length, PCB mounted