

Rectifier diodes

Order code	Manufacturer code	Description
47-3164	n/a	UF5401 3A ULTRAFAST DIODE (RC)
47-3166	n/a	UF5402 3A 400V ULTRAFAST DIODE (RC)
47-3168	n/a	UF5404 3A 400V ULTRAFAST DIODE (RC)
47-3170	n/a	UF5406 3A 600V ULTRAFAST DIODE (RC)
47-3172	n/a	UF5408 3A 1000V ULTRAFAST DIODE (RC)

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

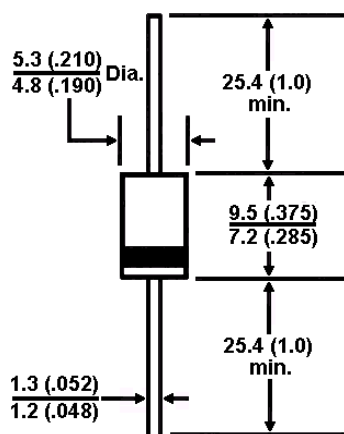
Semiconductors – Discrete Devices

UF5400 series – Ultra fast efficient plastic rectifiers

Features:

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- Low cost
- Ultra fast recovery times for high efficiency
- Low forward voltage, high current capability
- Low leakage
- High surge capability
- High temperature soldering guaranteed:
250°C (9.5mm lead length) for 10 seconds at 2.3kg (5lbs.) tension

Dimensions:



Mechanical data:

Case:	JEDEC DO-201AD, moulded plastic
Terminals:	Plated axial leads solderable per MIL-STD-750, method 2026
Polarity:	Coloured band denoted cathode
Mounting position:	Any
Weight:	1.1 grams, 0.04 ounce

Maximum ratings and electrical characteristics:

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load.

	Symbols	UF5401	UF5402	UF5404	UF5406	UF5408	Units
Maximum recurrent peak reverse voltage	V_{RRM}	100	200	400	600	1000	Volts
Maximum RMS voltage	V_{RMS}	70	140	280	420	700	Volts
Maximum DC blocking voltage	V_{DC}	100	200	400	600	1000	Volts
Maximum average forward rectified current, 9.5mm lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	3.0					Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) $T_A=55^\circ\text{C}$	I_{FSM}	150.0					Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.0		1.7			Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ At rated DC blocking voltage $T_A=125^\circ\text{C}$	I_R	10.0 50.0					μA
Maximum reverse recovery time (note1) $T_J=25^\circ\text{C}$	T_{RR}	50.0		75.0			ns
Typical junction capacitance (note2)	C_J	40.0		50.0			pf
Typical thermal resistance (note3)	$R_{\theta JA}$ $R_{\theta JL}$	20.0 8.5					$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150					$^\circ\text{C}$

Notes: 1) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, recover to 0.25A

2) Measure at 1Mhz and applied reverse voltage of 4.0 volts.

3) Thermal resistance from junction to lead, 9.5mm lead lengths, both leads attached to heatsinks.

Please note that this data is based upon information supplied by other manufacturers

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

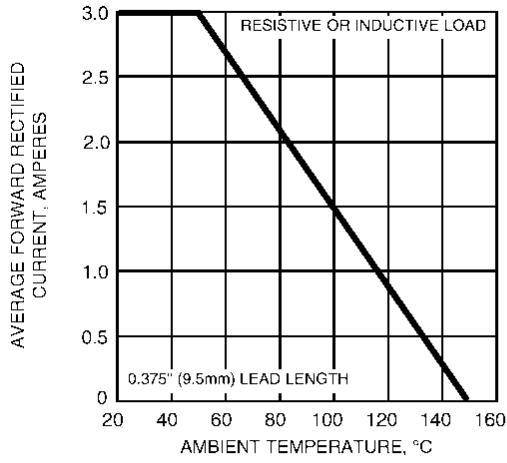


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

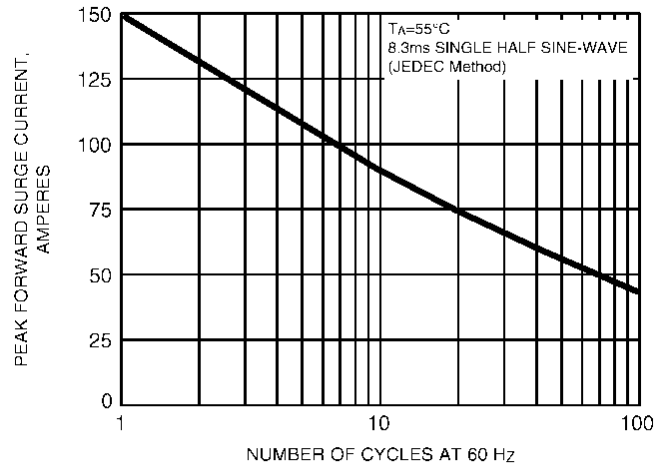


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

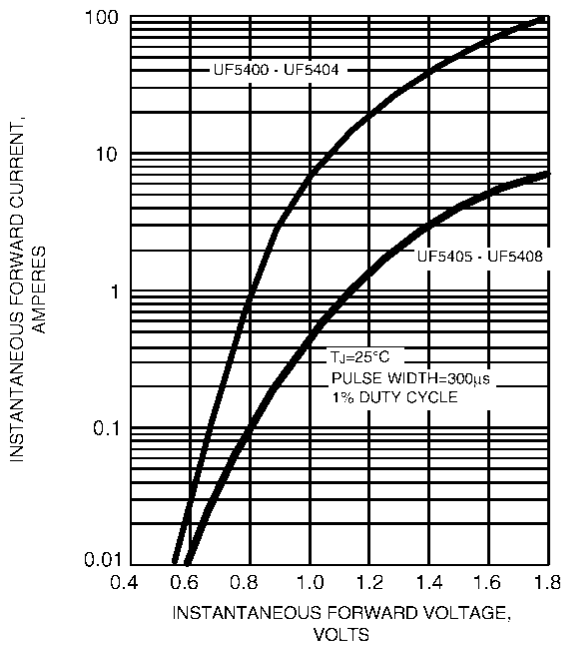


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

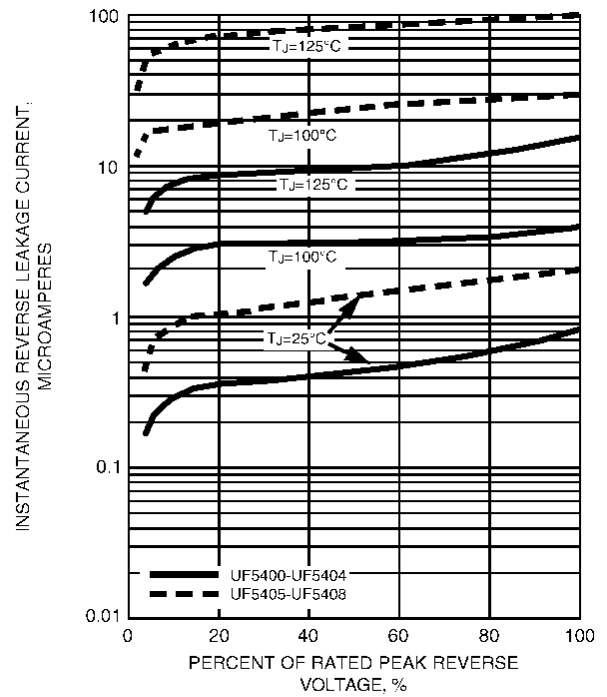


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

