THE DATASHEET OF

UF5408

ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089
http://www.nteinc.com

UF5400 thru UF5408
Soft Recovery Ultrafast Plastic Rectifier
DO201AD Type Package

Description:

The UF5400 thru UF5408 are soft recovery, ultrafast plastic rectifiers for use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication applications.

Features:

- Ultrafast reverse Recovery Time
- Low Forward Voltage Drop
- Low Switching Losses, High Efficiency
- High Forward Surge Capability

Absolute Maximum Ratings: (T_A = +25°C, unless otherwise specified)

Max. Repetitive Reverse Voltage,V_{RRM}
- UF5400 . . . . . 50V
- UF5401 . . . . . 100V
- UF5402 . . . . . 200V
- UF5404 . . . . . 400V
- UF5406 . . . . . 600V
- UF5407 . . . . . 800V
- UF5408 . . . . . 1000V

Max. RMS Voltage,V_{RMS}
- UF5400 . . . . . 35V
- UF5401 . . . . . 70V
- UF5402 . . . . . 140V
- UF5404 . . . . . 280V
- UF5406 . . . . . 420V
- UF5407 . . . . . 560V
- UF5408 . . . . . 700V

Max. DC Blocking Voltage,V_{DC}
- UF5400 . . . . . 50V
- UF5401 . . . . . 100V
- UF5402 . . . . . 200V
- UF5404 . . . . . 400V
- UF5406 . . . . . 600V
- UF5407 . . . . . 800V
- UF5408 . . . . . 1000V

Average Rectified Forward Current (T_A = +55°C, .375” (9.5mm) Lead Length), $I_{F(AV)}$ 3A

Peak Forward Surge Current, I_{FSM}
- 8.3ms single half sine wave superimposed on rated load 150A

Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Typical Thermal Resistance, Junction–to–Ambient (Note 1), R_{thJA} . . . . . 20°C/W

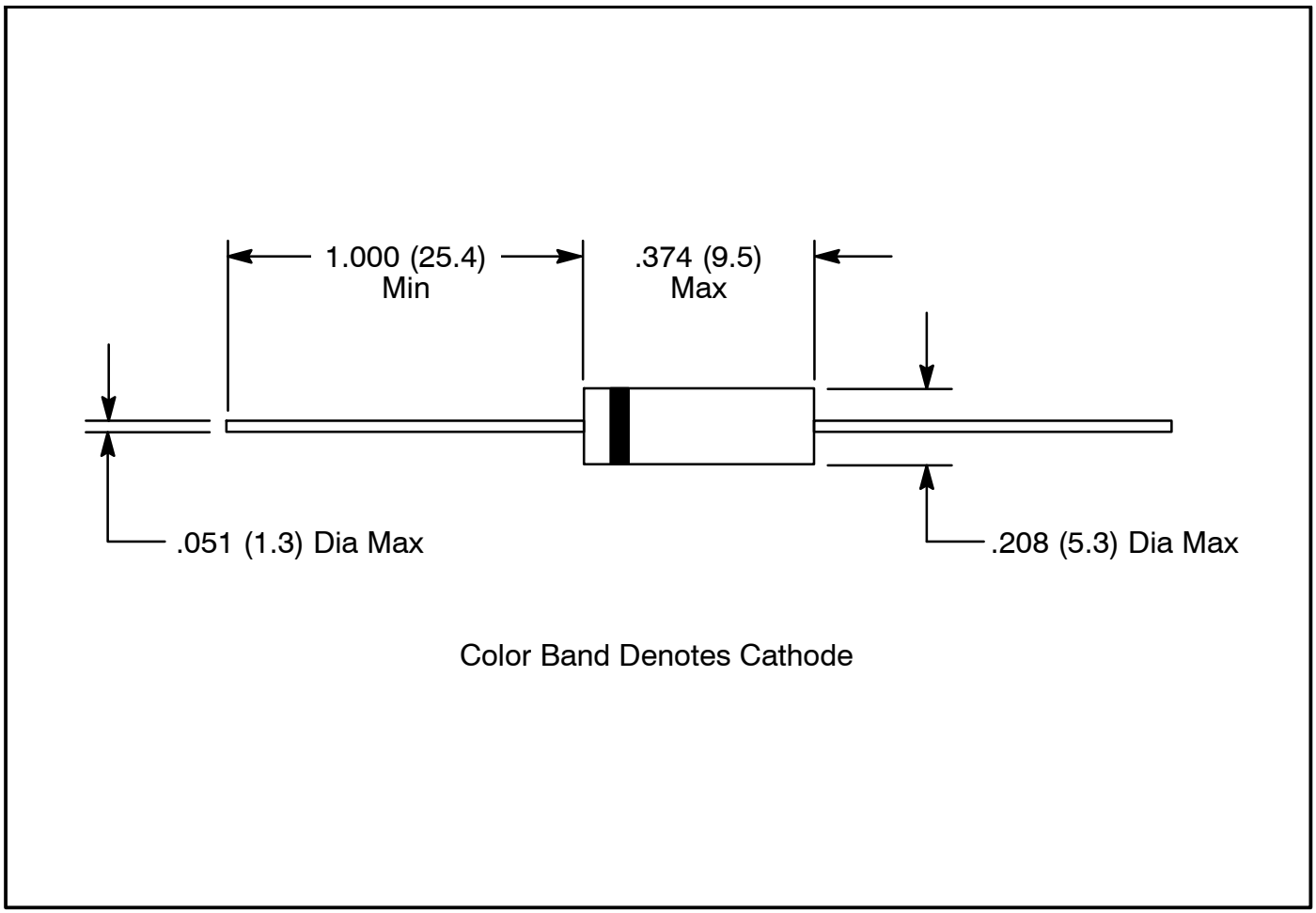
Typical Thermal Resistance, Junction–to–Lead (Note 1), R_{thJL} . . . . . 8.5°C/W

Note 1. Thermal resistance from junction to lead and junction to ambient with .375” (9.5mm) lead length, both leads attached to heatsink.

Electrical Characteristics: (T_A = +25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Instantaneous Forward Voltage UF5400, UF5401	V_F	I_F = 3A, Note 2		–	–	1.0	V
UF5402, UF5404				–	–	1.0	V
UF5406, UF5407, UF5408				–	–	1.7	V
DC Reverse Leakage Current All Devices	I_R	At Rated DC Blocking Voltage	T_A = +25°C	–	–	10	μA
UF5400, UF5401			T_A = +150°C	–	–	75	μA
UF5402, UF5404				–	–	75	μA
UF5406, UF5407, UF5408				–	–	200	μA
Reverse Recovery Time UF5400, UF5401	t_{rr}	I_F = 500mA, I_R = 1A, I_{rr} = 250mA, T_J = +25°C		–	–	50	ns
UF5402, UF5404				–	–	50	ns
UF5406, UF5407, UF5408				–	–	75	ns
Junction Capacitance UF5400, UF5401	C_J	V_R = 4V, f = 1MHz		–	45	–	pF
UF5402, UF5404				–	45	–	pF
UF5406, UF5407, UF5408				–	36	–	pF

Note 2. Pulse test: 300μs pulse width, 1% duty cycle.



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