MURD340T4G, NRVUD340T4G, NRVUD340T4G-VF01

Switch-mode Power Rectifier

DPAK Surface Mount Package

These state-of-the-art devices are designed for use in switching power supplies, inverters and as free wheeling diodes.

Features

- Low Forward Voltage Drop
- Low Leakage
- Ultra-Fast Recovery Time
- NRVUD Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb–Free, Halogen Free/BFR Free and are RoHS Compliant

Mechanical Characteristics

- Case: Epoxy, Molded
- Weight: 0.4 gram (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Reverse Voltage	V _R	400	V
Average Rectified Forward Current	I _{F(AV)}	3	Α
Nonrepetitive Peak Surge Current	I _{FSM}	75	Α
Operating Junction and Storage Temperature Range	T _{J,} T _{stg}	-55 to +175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.



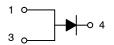
ON Semiconductor®

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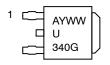
ULTRAFAST RECTIFIER 3 A, 400 V



DPAK CASE 369C



MARKING DIAGRAM



U340 = Specific Device Code A = Assembly Location*

Y = Year WW = Work Week G = Pb-Free Package

* The Assembly Location Code (A) is front side optional. In cases where the Assembly Location is stamped in the package bottom (molding ejecter pin), the front side assembly code may be blank.

ORDERING INFORMATION

Device	Package	Shipping [†]
MURD340T4G	DPAK (Pb-Free)	2,500 / Tape & Reel
NRVUD340T4G	DPAK (Pb-Free)	2,500 / Tape & Reel
NRVUD340T4G- VF01	DPAK (Pb-Free)	2,500 / Tape & Reel

†For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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THERMAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Thermal Resistance – Junction-to-Case	$R_{ heta JC}$	2	°C/W
Thermal Resistance – Junction–to–Ambient (Note 1)	$R_{\theta JA}$	49	°C/W

^{1.} Rating applies when surface mounted on a 700 mm², 1 oz Cu heat spreader.

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Value	Unit
Maximum Instantaneous Forward Voltage ($I_F = 3.0 \text{ A}, T_J = 25^{\circ}\text{C}$) ($I_F = 3.0 \text{ A}, T_J = 150^{\circ}\text{C}$)	V _F	1.15 0.92	V
Maximum Instantaneous Reverse Current (Rated V_R) (T _J = 25°C, 400 V) (T _J = 150°C, 400 V)	I _R	5 500	μΑ
Maximum Reverse Recovery Time (I _F = 1.0 A, di/dt = 50 A/ μ s, V _R = 30 V, T _J = 25°C)	t _{rr}	50	ns
ESD Ratings: Machine Model = C Human Body Model = 3B		> 400 > 8000	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL CHARACTERISTICS

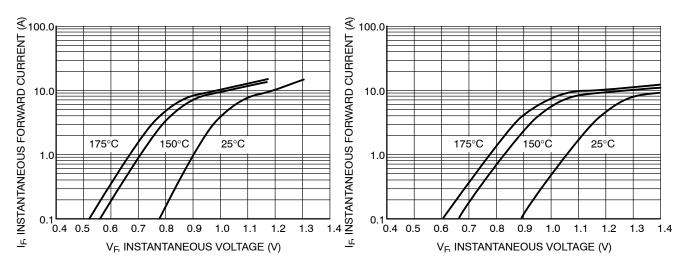


Figure 1. Typical Forward Voltage

Figure 2. Maximum Forward Voltage

MURD340T4G, NRVUD340T4G, NRVUD340T4G-VF01

TYPICAL CHARACTERISTICS

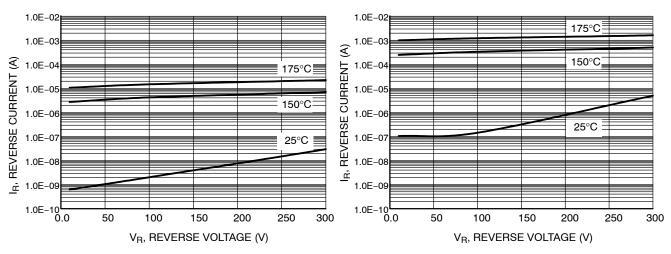


Figure 3. Typical Reverse Voltage

Figure 4. Maximum Reverse Voltage

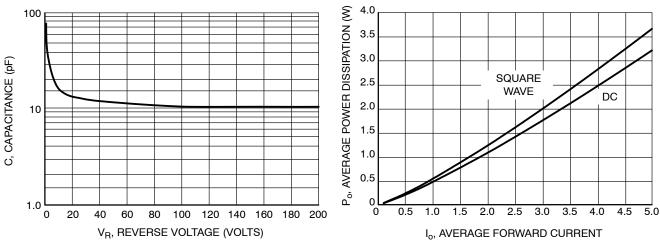


Figure 5. Typical Capacitance

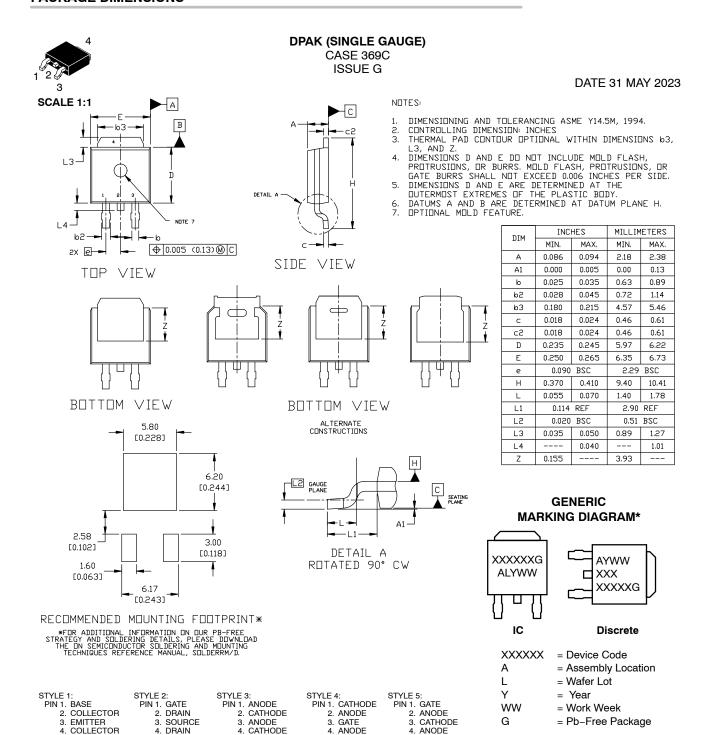
Figure 6. Power Dissipation 6.0 6.0 I_F, AVERAGE FORWARD CURRENT (A) $R_{\theta JC} = 2^{\circ}C/W$ $R_{\theta JC} = 2^{\circ}C/W$ 5.0 5.0 $T_{.J} = 175^{\circ}C/W$ 4.0 4.0 DC DC $T_J=175^{\circ}C/W$ SQUARE 3.0 **WAVE** 3.0 **SQUARE** 2.0 2.0 WAVE 1.0 1.0 0 110 150 100 120 130 140 160 170 180 20 100 120 140 T_C, CASE TEMPERATURE (°C) TA, AMBIENT TEMPERATURE (°C)

Figure 7. Current Derating, Case

IF, AVERAGE FORWARD CURRENT (A)

Figure 8. Current Derating, Ambient





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DESCRIPTION:	DPAK (SINGLE GAUGE)		PAGE 1 OF 1

STYLE 10:

PIN 1. CATHODE 2. ANODE

3 CATHODE

4. ANODE

STYLE 9:

PIN 1. ANODE 2. CATHODE

3 RESISTOR ADJUST

CATHODE

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STYLE 7: PIN 1. GATE 2. COLLECTOR

3 FMITTER

4. COLLECTOR

STYLE 8:

PIN 1. N/C 2. CATHODE

3 ANODE

CATHODE

STYLE 6:

PIN 1. MT1 2. MT2

3 GATE

*This information is generic. Please refer to device data sheet for actual part marking.

Pb-Free indicator, "G" or microdot "=", may

or may not be present. Some products may

not follow the Generic Marking.

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