



## UUD80D40

DIODE

### SILICON DIODE

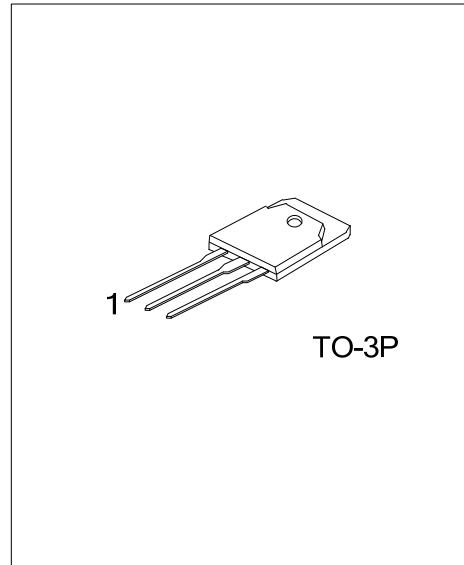
#### DESCRIPTION

The UTC **UUD80D40** is a silicon diode, it uses UTC's advanced technology to provide customers with low forward voltage, low leakage current and high surge current capability, etc.

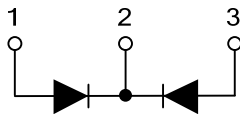
The UTC **UUD80D40** is suitable for various applications such as PFC and plating power supply, etc.

#### FEATURES

- \* Ultrafast recovery time
- \* Soft recovery characteristic
- \* Low forward voltage
- \* Low leakage current
- \* Low recovery Loss
- \* High surge current capability



#### SYMBOL



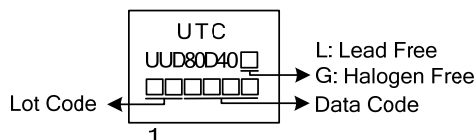
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UUD80D40L-T3P-T	UUD80D40G-T3P-T	TO-3P	A	K	A	Tube

Note: Pin Assignment: A: Anode K: Cathode

<p>UUD80D40L-T3P-T</p> <p>(1)Packing Type (2)Package Type (3)Halogen Free</p>	<p>(1) T: Tube (2) T3P: TO-3P (3) L: Lead Free, G: Halogen Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS (T<sub>c</sub>=25°C, unless otherwise specified.)

PARAMETER		SYMBOL	RATINGS	UNIT
Working Peak Reverse Voltage		V <sub>RWM</sub>	400	V
Repetitive Reverse Voltage		V <sub>RRM</sub>	400	V
DC Reverse Voltage		V <sub>RM</sub>	400	V
Average Forward Current (T <sub>c</sub> =110°C)	Per Leg	I <sub>F</sub>	40	A
	Total		80	A
Maximum RMS Forward Current (T <sub>c</sub> =110°C)		I <sub>F(RMS)</sub>	56	A
Non-Repetitive Forward Surge Current (T <sub>J</sub> =45°C, t=10ms, 50Hz, sine)		I <sub>FSM</sub>	300	A
Power Dissipation		P <sub>D</sub>	156	W
Junction Temperature		T <sub>J</sub>	-40~+150	°C
Storage Temperature		T <sub>STG</sub>	-40~+150	°C
Module-Sink	Recommended (M3)	T <sub>orque</sub>	1.1	N-m

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

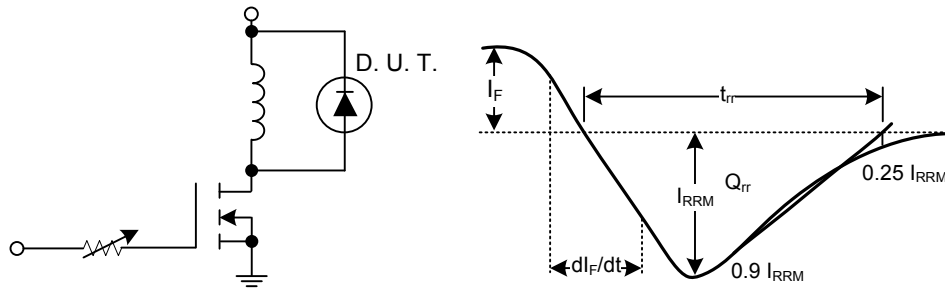
■ THERMAL RESISTANCE

PARAMETER	SYMBOL	RATINGS	UNIT
Junction to Case	θ <sub>JC</sub>	0.8	°C/W

■ ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C, unless otherwise specified.)

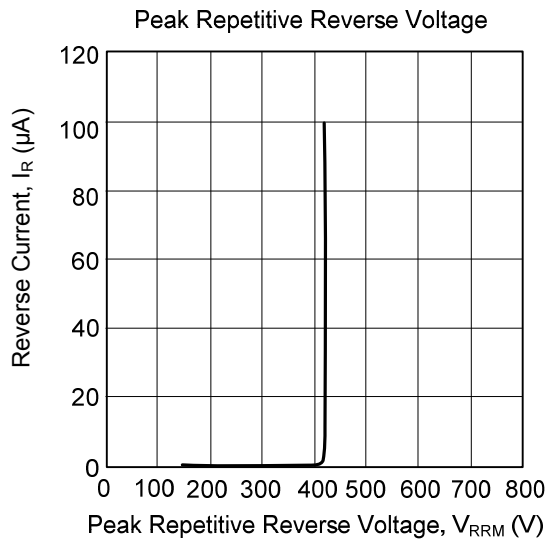
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =40A		1.0	1.5	V
		I <sub>F</sub> =40A, T <sub>J</sub> =125°C		0.9		V
Reverse Leakage Current	I <sub>RM</sub>	V <sub>R</sub> =400V			10	μA
		V <sub>R</sub> =400V, T <sub>J</sub> =125°C			150	μA
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=50A/μs		108		ns

■ TEST CIRCUITS AND WAVEFORMS



Diode Reverse Recovery Test Circuit and Waveform

■ TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.