



## UCRXXX-70

Preliminary

CURRENT REGULATIVE DIODE

### CURRENT REGULATOR DIODES

#### DESCRIPTION

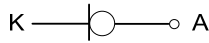
The UTC **UCRXXX-70** is a CRD diode, which supplies constant current to an electric circuit, even if the power supply voltage fluctuations or load impedance fluctuations occur, can steady a current at a fixed value.

CRD diode is used for current stabilization and current limiting.

#### FEATURES

- \* Than 1.0V or less low voltage constant current implementation
- \* Maximum voltage of 100V or more
- \* Good frequency response characteristics
- \* AC equivalent impedance is high
- \* Negative temperature coefficient
- \* Low start-up voltage
- \* DC equivalent impedance is low

#### SYMBOL

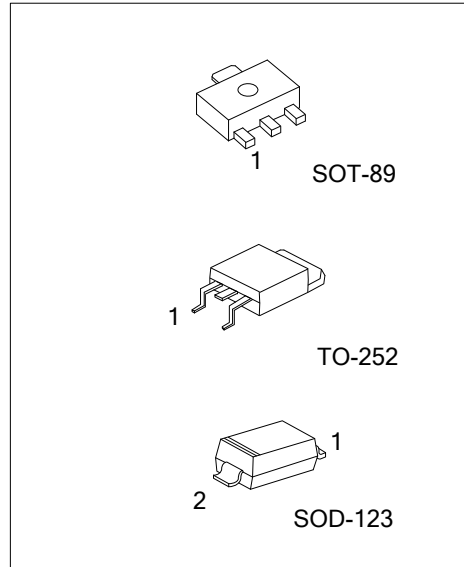


#### ORDERING INFORMATION

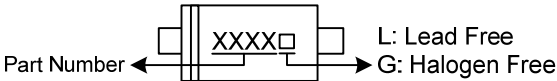
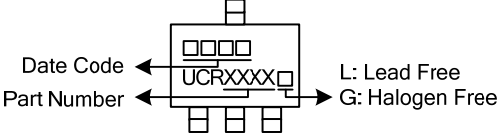
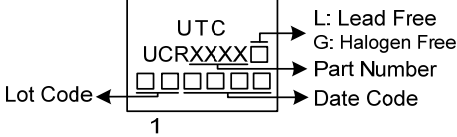
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UCR100L-70-CA2-R	UCR100G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR1500L-70-CA2-R	UCR1500G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR1550L-70-CA2-R	UCR1550G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR2500L-70-CA2-R	UCR2500G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR3000L-70-CA2-R	UCR3000G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR3500L-70-CA2-R	UCR3500G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR4000L-70-CA2-R	UCR4000G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR4500L-70-CA2-R	UCR4500G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR2050L-70-AB3-R	UCR2050G-70-AB3-R	SOT-89	K	K	A	Tape Reel
UCR2050L-70-TN3-R	UCR2050G-70-TN3-R	TO-252	K	K	A	Tape Reel

Note: Pin Assignment: A: Anode K: Cathode

<p>UCR100G-70-CA2-R</p>	<p>(1) T: Tube, R: Tape Reel</p> <p>(2) CA2: SOD-123, AB3: SOT-89, TN3: TO-252</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
-------------------------	---



■ MARKING

PACKAGE	MARKING
SOD-123	 <p>Part Number ← XXXX □ → L: Lead Free G: Halogen Free</p>
SOT-89	 <p>Date Code ← □□□□ Part Number ← UCRXXXX □ → L: Lead Free G: Halogen Free</p>
TO-252	 <p>UTC UCRXXXX □ → L: Lead Free G: Halogen Free Part Number Lot Code ← □□□□□□ → Date Code 1</p>

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

PARAMETER	SYMBOL	RATINGS	UNIT
Peak Operating Voltage	P <sub>OV</sub>	70	V
		Normal	V
Power Dissipation	P <sub>D</sub>	0.5	W
Operating Junction Temperature	T <sub>J</sub>	+125	°C
Storage Temperature	T <sub>STG</sub>	-40 ~ +125	°C

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 CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Typical Thermal Resistance	θ <sub>JC</sub>	SOT-89	43
		TO-252	6
	θ <sub>JL</sub>	SOD-123	20

■ ELECTRICAL CHARACTERISTICS (PER LEG) (T<sub>A</sub>=25°C unless otherwise specified.)

PART NUMBER	MARKING	TEST VOLTAGE (V)	PINCH-OFF CURRENT			LIMITING CURRENT		LIMITING CURRENT RATIO
			I <sub>P</sub> (mA)			V <sub>K</sub> (V)	I <sub>K</sub> (mA)	I <sub>30V</sub> / I <sub>P</sub>
			MIN.	TYP.	MAX.			
UCR100	100	10	0.8	1.0	1.2	≤ 3.5	0.8 I <sub>P</sub>	≤ 1.1
UCR1500	1500	10	12	15.0	18	≤ 3.5	0.8 I <sub>P</sub>	≤ 1.1
UCR1550	1550	10	12.4	15.5	18.6	≤ 3.5	0.8 I <sub>P</sub>	≤ 1.1
UCR2050	2050	10	16.4	20.5	24.6	≤ 4.0	0.8 I <sub>P</sub>	≤ 1.1
UCR2500	2500	10	20	25.0	30	≤ 4.0	0.8 I <sub>P</sub>	≤ 1.1
UCR3000	3000	10	24	30.0	36	≤ 4.5	0.8 I <sub>P</sub>	≤ 1.1
UCR3500	3500	10	28	35.0	42	≤ 4.5	0.8 I <sub>P</sub>	≤ 1.1
UCR4000	4000	10	32	40.0	48	≤ 6.0	0.8 I <sub>P</sub>	≤ 1.1
UCR4500	4500	10	36	45.0	54	≤ 6.0	0.8 I <sub>P</sub>	≤ 1.1

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. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.