



UCRXXXX-70

Preliminary

CURRENT REGULATIVE DIODE

CURRENT REGULATOR
DIODES

■ DESCRIPTION

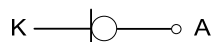
The UTC **UCRXXXX-70** is a CRD diode, which supplies constant current to an electric circuit, even if the power supply voltage fluctuations or load impedance fluctuations occur, can steady a current at a fixed value.

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

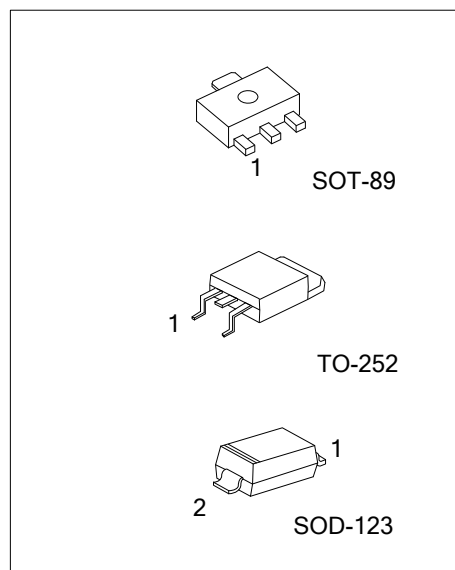


■ ORDERING INFORMATION

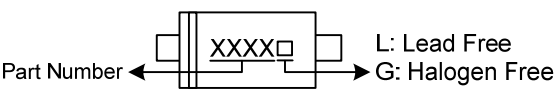
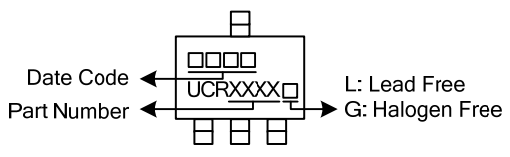
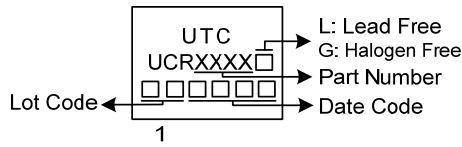
Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UCR100L-70-CA2-R	UCR100G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR1500L-70-CA2-R	UCR1500G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR1550L-70-CA2-R	UCR1550G-70-CA2-R	SOD-123	A	K	-	Tape Reel
UCR2500L-70-CA2-R	UCR2500G-70-CA2-R	SOD-123	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

UCR100G-70-CA2-R (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) CA2: SOD-123, AB3: SOT-89, TN3: TO-252 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING

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

■ **ABSOLUTE MAXIMUM RATINGS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Peak Operating Voltage	70	P_{OV}	70	V
	Normal		100	V
Power Dissipation		P_D	0.5	W
Operating Junction Temperature		T_J	+125	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-40 ~ +125	$^{\circ}\text{C}$

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	SOT-89	θ_{JC}	43	$^{\circ}\text{C/W}$
	TO-252		6	$^{\circ}\text{C/W}$
	SOD-123	θ_{JL}	20	$^{\circ}\text{C/W}$

■ **ELECTRICAL CHARACTERISTICS (PER LEG)** ($T_A=25^{\circ}\text{C}$ unless otherwise specified.)

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

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