



## UL6206B

Advance

CMOS IC

### HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER

#### DESCRIPTION

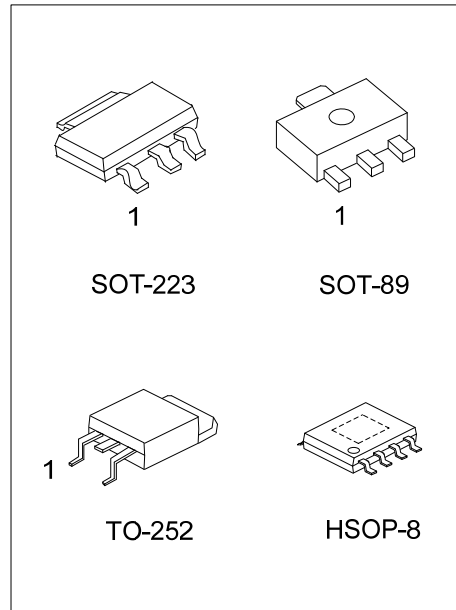
The UTC **UL6206B** is a linear constant current IC with a built-in power MOSFET. The output current can be adjusted from 5mA to 80mA, and constant current accuracy up to ± 4%. The application scheme is simple and the cost is low. This device also incorporates temperature compensation and thermal shutdown functions.

#### FEATURES

- \* 5mA ~ 80mA Output Current
- \* Up to ± 4% Constant Current Accuracy
- \* No EMC Problem
- \* Temperature Compensate
- \* Thermal Shutdown

#### ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UL6206BL-AA3-R	UL6206BG-AA3-R	SOT-223	Tape Reel
UL6206BL-AB3-R	UL6206BG-AB3-R	SOT-89	Tape Reel
UL6206BL-TN3-R	UL6206BG-TN3-R	TO-252	Tape Reel
UL6206BL-SH2-R	UL6206BG-SH2-R	HSOP-8	Tape Reel



<p>UL6206BG-xx-AA3-R</p>	<p>(1) R: Tape Reel  (2) AA3: SOT-223, AB3: SOT-89, TN3: TO-252  SH2: HSOP-8  (3) xx: Refer to Marking Information  (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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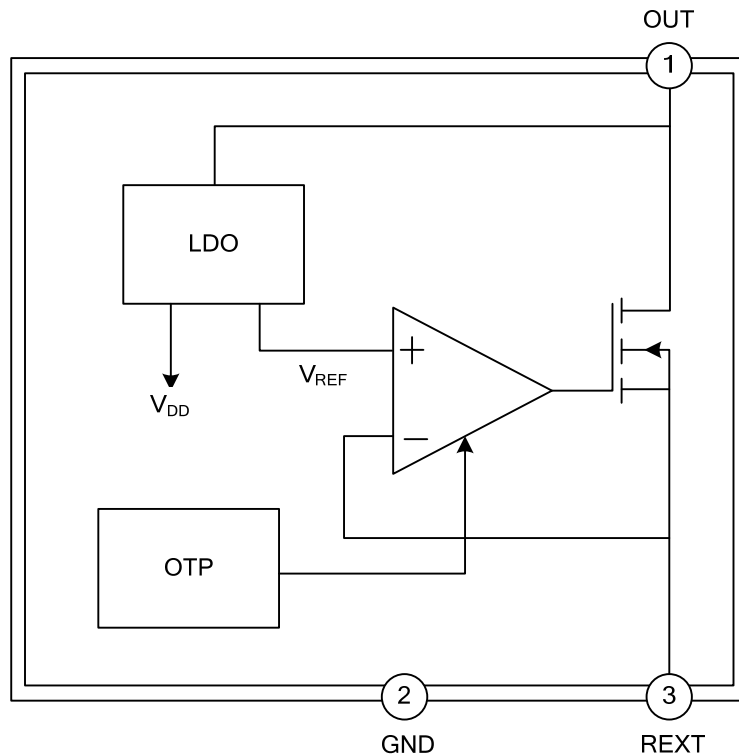
### MARKING

SOT-223	SOT-89
<p>UL6206B □            L: Lead Free            G: Halogen Free            □□□□            1</p>	<p>□□□□            UL6206B □            Date Code            L: Lead Free            G: Halogen Free            1</p>
TO-252	HSOP-8
<p>UTC            UL6206B □            L: Lead Free            G: Halogen Free            □□□□□□            Lot Code ←            1</p>	<p>8 7 6 5            UTC □□□□            UL6206B □            L: Lead Free            G: Halogen Free            □□            Lot Code            1 2 3 4</p>

### PIN DESCRIPTION

PIN NO.		PIN NAME	DESCRIPTION
SOT-223 SOT-89 TO-252	HSOP-8		
1	7	OUT	Current Output Pin.
2	1	GND	Ground.
3	2	REXT	Output Current Setting Pin.
-	3, 4, 5, 6, 8	NC	NC

### BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

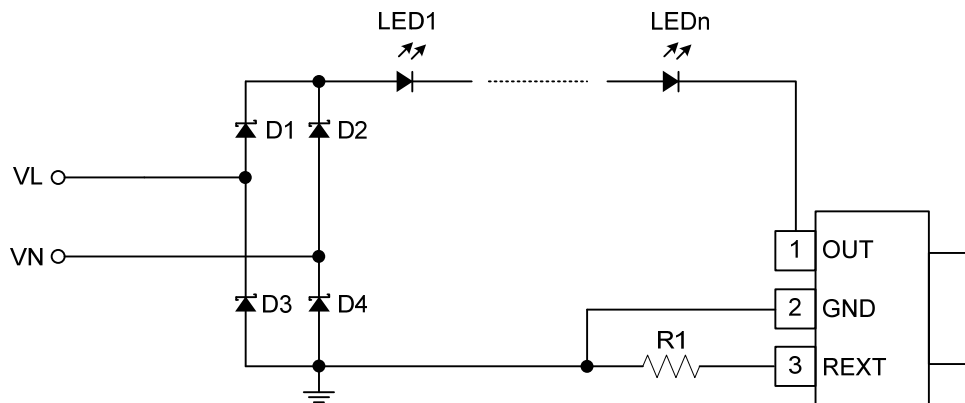
PARAMETER	SYMBOL	RATINGS	UNIT
OUT Pin Voltage	$V_{OUT}$	-0.5 ~ 550	V
OUT Pin Current	$I_{OUT}$	5 ~ 80	mA
Operating Junction Temperature	$T_{OPT}$	-40 ~ +150	°C
Storage Junction Temperature	$T_{STG}$	-50 ~ +150	°C

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.

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OUT Pin Voltage	$V_{OUT}$	$I_{OUT}=30mA$		8		V
OUT Pin Withstanding Voltage		$I_{OUT}=0$	550			V
Output Current	$I_{OUT}$		5		80	mA
Quiescent Current	$I_Q$	$V_{OUT}=10V$ REXT No Collection		0.15	0.3	mA
REXT Pin Voltage	$V_{REXT}$	$V_{OUT}=10V$		0.6		V
Output Current Error		$I_{OUT}=5\sim 80mA$		$\pm 4$		%
Temperature Compensate Point	$T_{CP}$			150		°C

■ TYPICAL APPLICATION CIRCUIT



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