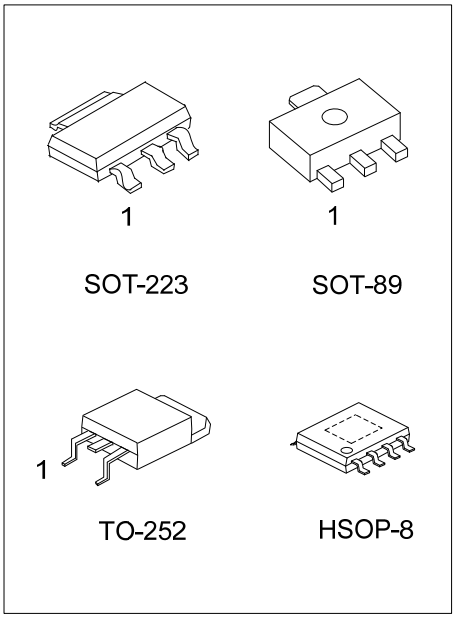
HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER



■ DESCRIPTION

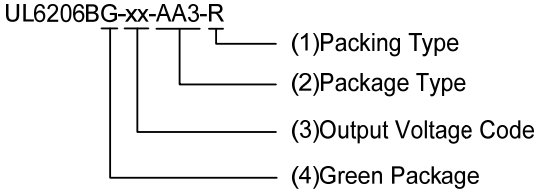
The UTC **UL6206B** is a linear constant current IC with a built-in power MOSFET. The output current can be adjusted from 5mA to 80mA, and constant current accuracy up to ± 4%. The application scheme is simple and the cost is low. This device also incorporates temperature compensation and thermal shutdown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

■ FEATURES

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

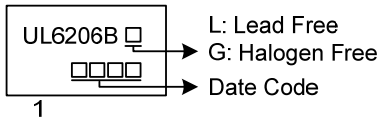
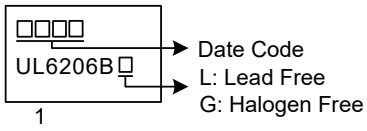
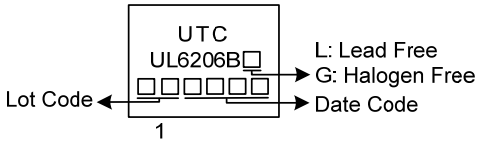
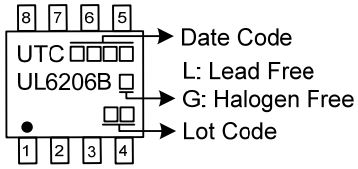
■ ORDERING INFORMATION

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



(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

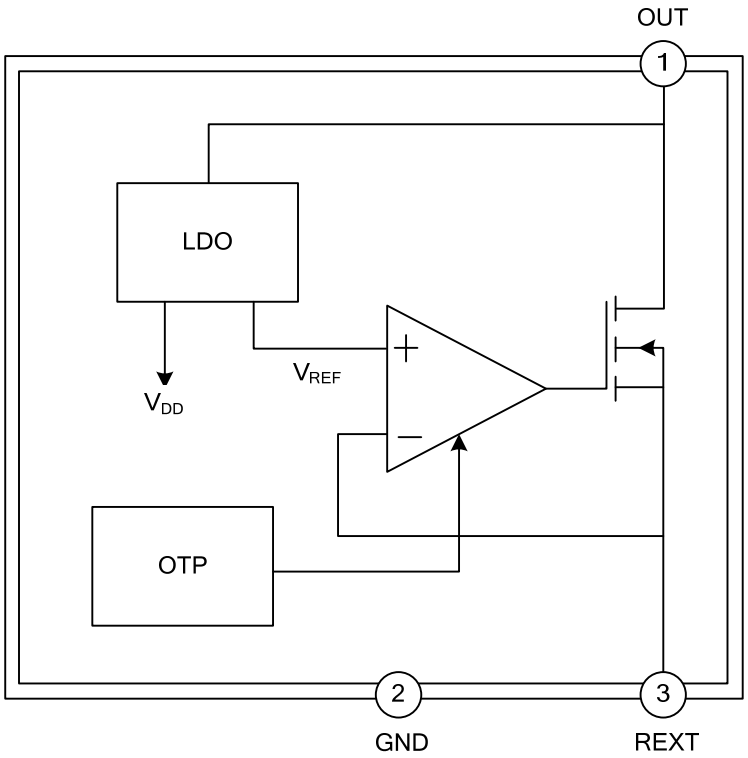
■ MARKING

SOT-223	SOT-89
	
TO-252	**HSOP-8**
	

■ 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}=5~80mA		± 4		%
Temperature Compensate Point	T_{CP}			150		°C

■ TYPICAL APPLICATION CIRCUIT