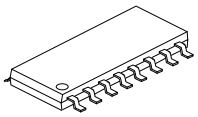
CC CONTROL FOR CAR BALLAST



SOP-16

■ DESCRIPTION

UTC **TL2494** is a constant current chip, used car ballast, through peripheral resistance can output constant current value. It is also built-in UVLO, Open circuit protect, Over current protect, overload protect, etc.

■ FEATURES

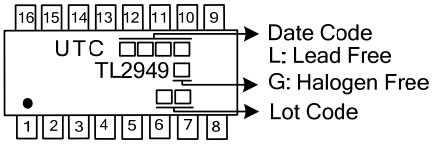
* 6 ~ 40V input
* UVLO
* Open circuit protect
* Overload protect

■ ORDERING INFORMATION

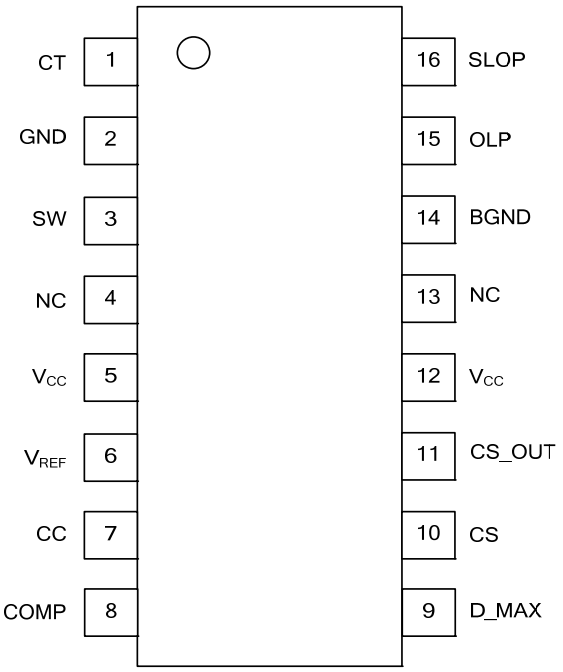
Ordering Number		Package	Packing
Lead Free	Halogen Free		
TL2494L-S16-R	TL2494G-S16-R	SOP-16	Tape Reel

TL2494G-S16-R (1)Packing Type (2)Package Type (3)Green Package	(1) R: Tape Reel (2) S16: SOP-16 (3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



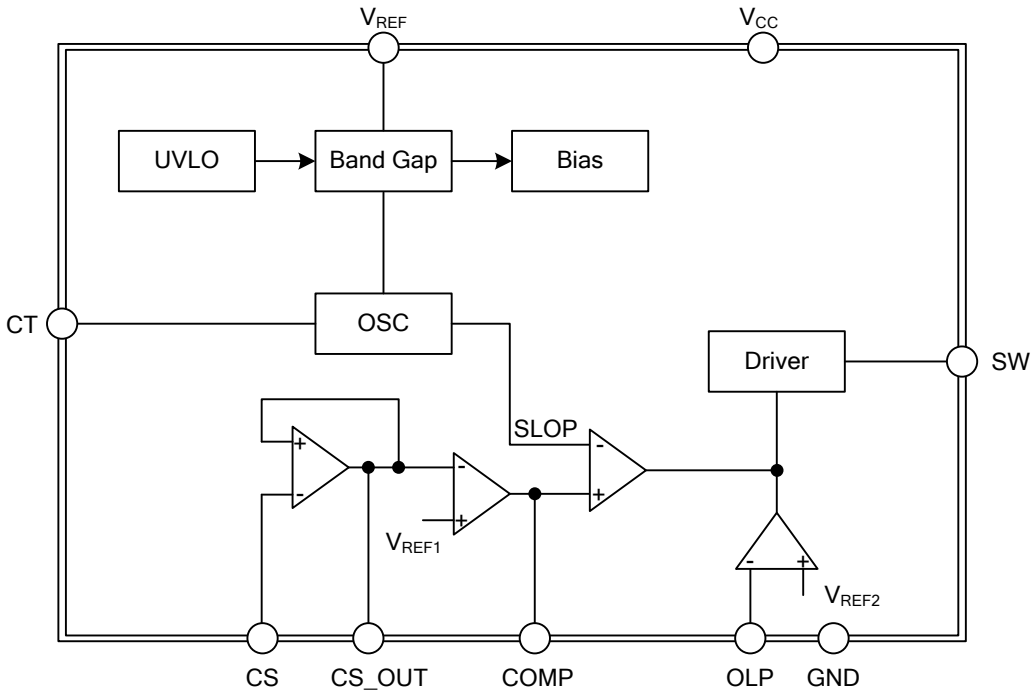
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	CT	OSC
2	GND	Ground
3	SW	Switch PIN, control power MOS gate
4, 13	NC	No bonding
5, 12	V_{CC}	Supply Voltage
6	V_{REF}	Band gap reference
7	CC	Constant current control
8	COMP	Compensation
9	D_MAX	MAX. duty ratio
10	CS	Current detection
11	CS_OUT	Current detection out
14	BGND	No bonding
15	OLP	Overload protect
16	SLOP	Slop Compensation

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	40	V
Power Dissipation (T_A=25°C)	P_D	1000	mW
Junction Temperature	T_J	125	°C
Operating Temperature	T_{OPR}	-25 ~ +85	°C
Storage Temperature	T_{STG}	-40 ~ +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.

■ RECOMMENDED OPERATING CONDITIONS

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{CC}	6 ~ 40	V
Timing Capacitor	C_T	3.3	nF
Timing Resistor	R_T	7.5	KΩ

■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current	I_Q	V_{CC}=12V		14	18	mA
UVLO	V_{RISE}	RISE		6.5		V
	V_{FALL}	FALL		6.5		V
Band Gap Voltage	V_{REF}	V_{CC}=12V	4.95	5	5.05	V
OSC Frequency	F_{OSC}	C_T=3.3nF, R_T=7.5k	60	65	70	KHZ
Triangle Wave of Upper	$V_{FOSC\ MAX}$			2.7		V
Triangle Wave of Lower	$V_{FOSC\ MIN}$			0.8		V
Sampling Current Magnification	I_{AMP}			20		

■ TYPICAL APPLICATION CIRCUIT