



## TL2494

Preliminary

CMOS IC

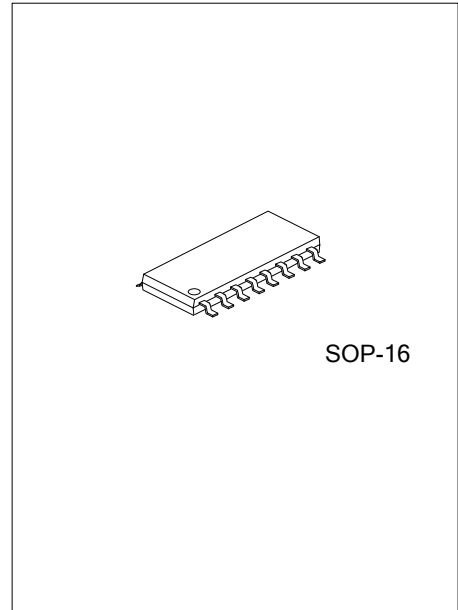
### CC CONTROL FOR CAR BALLAST

#### 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

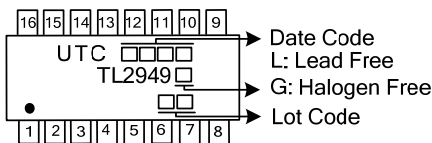


#### ORDERING INFORMATION

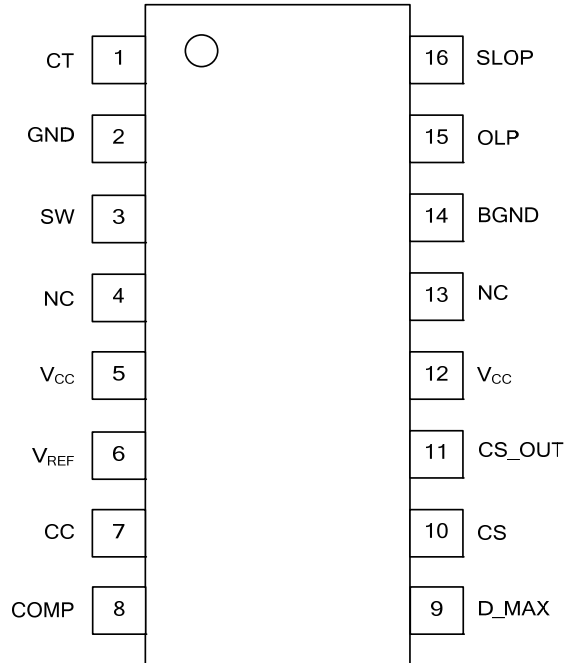
Ordering Number		Package	Packing
Lead Free	Halogen Free		
TL2494L-S16-R	TL2494G-S16-R	SOP-16	Tape Reel

<p>TL2494G-S16-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) S16: SOP-16</li> <li>(3) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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#### MARKING



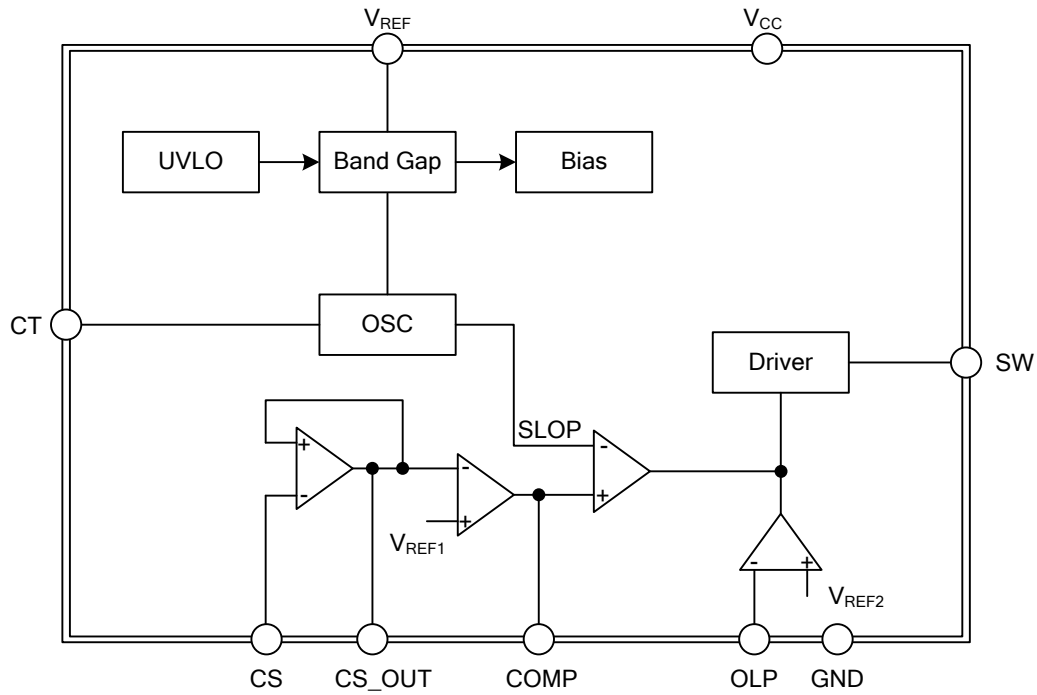
■ PIN CONFIGURATION



■ 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 <sub>CC</sub>	Supply Voltage
6	V <sub>REF</sub>	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 ( $T_A=25^\circ\text{C}$ )	$P_D$	1000	mW
Junction Temperature	$T_J$	125	$^\circ\text{C}$
Operating Temperature	$T_{OPR}$	-25 ~ +85	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 ~ +150	$^\circ\text{C}$

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.

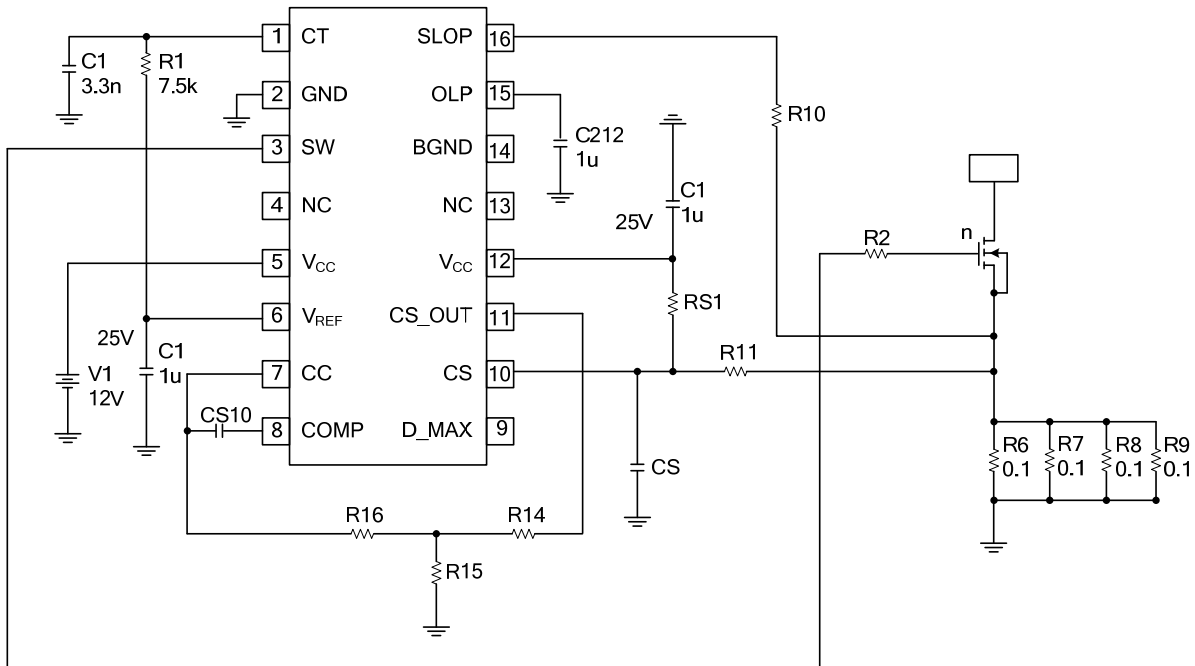
■ RECOMMENDED OPERATING CONDITIONS

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

■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Current	$I_Q$	$V_{CC}=12\text{V}$		14	18	mA
UVLO	$V_{RISE}$	RISE		6.5		V
	$V_{FALL}$	FALL		6.5		V
Band Gap Voltage	$V_{REF}$	$V_{CC}=12\text{V}$	4.95	5	5.05	V
OSC Frequency	$F_{OSC}$	$C_T=3.3\text{nF}$ , $R_T=7.5\text{k}$	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



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