



## UASS103

Preliminary

LINEAR INTEGRATED CIRCUIT

### REMOVE PHANTOM POWER

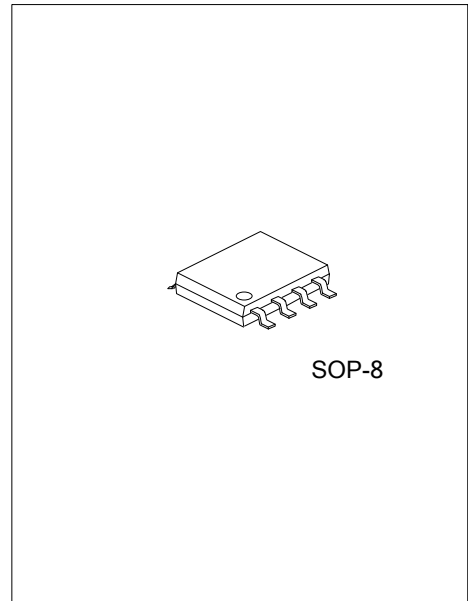
#### DESCRIPTION

The **UASS103** is designed to improve no-load consumption IC controller.

The **UASS103** is designed to reduce the no load consumption or so called Phantom power for AC Adapter, Desk Top PC power supply, TV Power Supply and others.

#### FEATURES

- \* No load consumption can be reduced ~180mw for EPA/Climate Saver Application to reduce the phantom power.
- \* Reliable and rugged
- \* No  $V_{CC}$

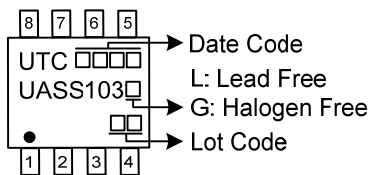


#### ORDERING INFORMATION

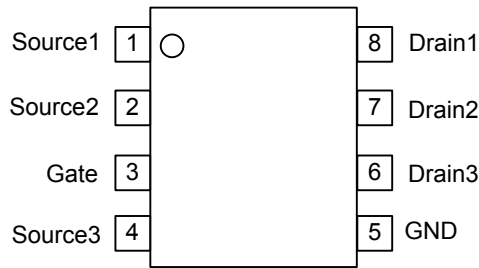
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UASS103L-S08-R	UASS103G-S08-R	SOP-8	Tape Reel

<p>UASS103G-S08-R</p> <pre>                 (1)Packing Type                 (2)Package Type                 (3)Green Package     </pre>	<p>(1) R: Tape Reel          (2) S08: SOP-8          (3) G: Halogen Free and Lead Free, L: Lead Free</p>
---	--

#### MARKING



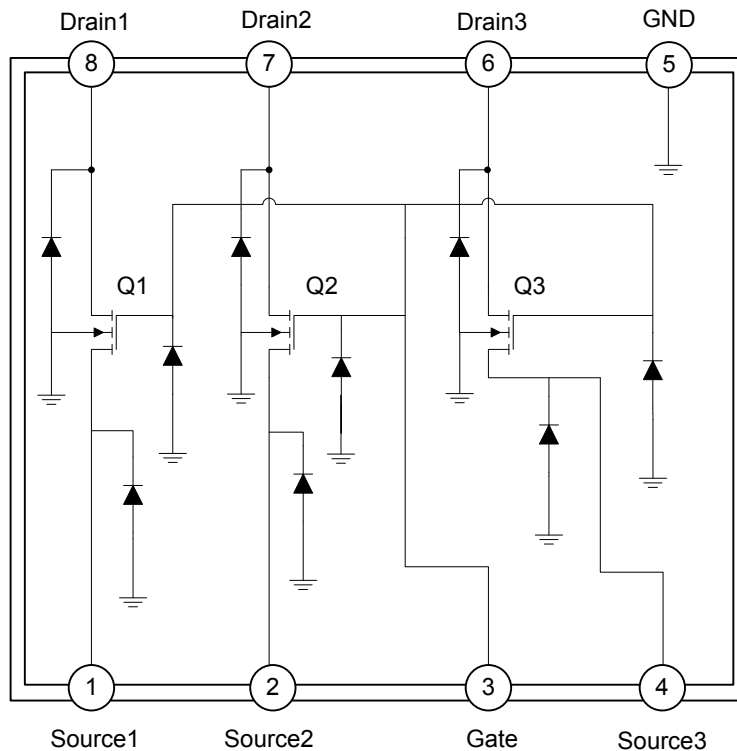
■ PIN DESCRIPTION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	Source1	Source of MOSFET-1
2	Source2	Source of MOSFET-2
3	Gate	Common gate of MOSFET-1 & -2 & -3
4	Source3	Source of MOSFET-3
5	GND	Ground
6	Drain3	Drain of MOSFET-3
7	Drain2	Drain of MOSFET-2
8	Drain1	Drain of MOSFET-1

■ BLOCK DIAGRAM



### ■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Drain-Source Voltage	$V_{DSS}$	800	V
Gate-Source Voltage	$V_{GSS}$	+20/-0.3	V
Source Pin Voltage	$V_{sb}$	< 8	V
Continuous Drain Current	$I_D$	25	mA
Pulsed Continuous Drain Current	$I_{DM}$	200	mA
Power Dissipation	$P_{D(MAX)}$	1.3	W
Junction Temperature	$T_J$	+150	°C
Storage Temperature (SOP8/DIP8)	$T_{STG}$	-55 ~ +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.

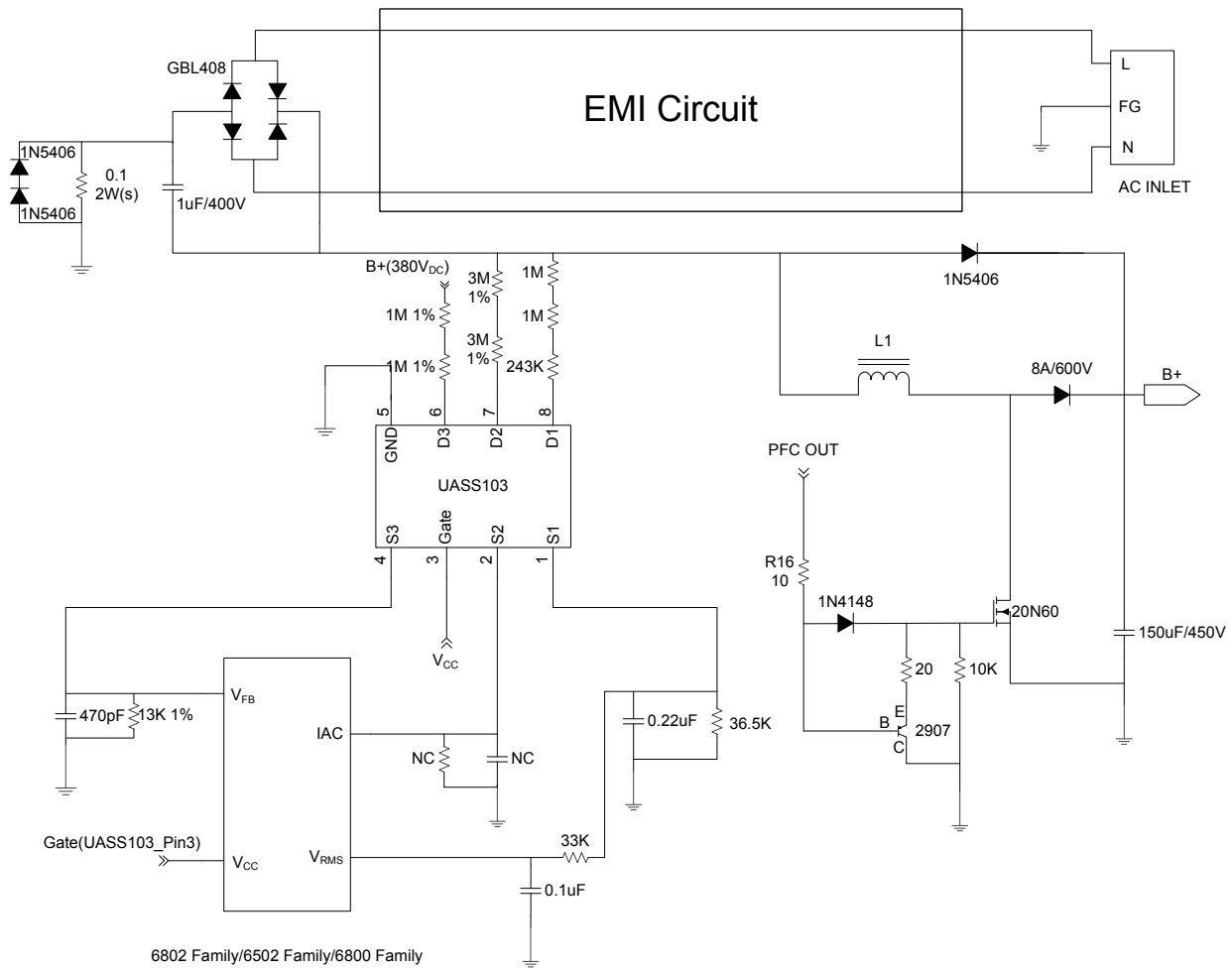
### ■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
<b>OFF CHARACTERISTICS</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=40\mu A$	800			V
Drain-Source Leakage Current	$I_{DSS}$	$V_{DS}=500V, V_{GS}=0V$			0.1	$\mu A$
Gate-Source Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 0.1$	$\mu A$
<b>ON CHARACTERISTICS</b>						
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.9		1.3	V
Drain-Source On-State Resistance (Note 1)	$R_{DS(ON)}$	$V_{GS}=5V, I_D=1mA$		500	1000	$\Omega$
		$V_{GS}=2.5V, I_D=1mA$		530	1000	$\Omega$
<b>SWITCHING CHARACTERISTICS</b>						
Gate-Source Charge	$Q_{GS}$	$V_{DS}=50V, V_{GS}=10V, I_D=25mA$		6.4		nC
Turn-On Delay Time (Note 1)	$t_{D(ON)}$	$V_{DS}=50V, V_{GS}=5V, I_D=12.5mA, R_G=3\Omega,$		14		ns
Turn-On Rise Time	$t_R$			60		ns
Turn-Off Delay Time	$t_{D(OFF)}$			38		ns
Turn-Off Fall Time	$t_F$			280		ns
<b>SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS</b>						
Diode Continuous Forward Current (Note 2)	$I_S$			25		mA
Drain-Source Diode Forward Voltage (Note 1)	$V_{SD}$	$I_S=25mA, V_{GS}=0V$		0.81	1	V
<b>SOURCE CHARACTERISTICS</b>						
Normal Operating Voltage	$V_{sb}$		0		7	V
Breakdown Voltage	$V_{sb}$			10		V

Note 1 : Pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .

Note 2 : Surface Mounted on 1in 2 pad area,  $t \leq 10sec$ .

■ TYPICAL APPLICATION CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.