

UCC28C4x/UCC280x Improvement over UC284x/TL284x

Parameter	UCC28C4x	UCC280x UCC2813-x	UC284x TL284x	UC284xA TL284xB
Process Technology	BiCMOS	BiCMOS	Bipolar	Bipolar
Supply Current at 50kHz	2.3mA	0.5mA	11mA	11mA
Startup Current	50μA	0.1mA	1mA	0.5mA
Over-Current Propagation Delay	50ns	100ns	150ns	150ns
Reference Voltage Accuracy	±1%	±2%	±2%	±2%
E/A Reference Accuracy	±25mV	±60mV	±80mV	±80mV
Maximum Operating Frequency	1MHz	1MHz	500kHz	500kHz
Output Rise/Fall Times	35ns	44ns	50ns	50ns
UVLO Turn On Accuracy	±1.0V	±1.2V	±1.5V	±1.5V

UC284x, TL284x, UCC280x, UCC2813-x, UCC28C4x are all P2P parts.

Improvements provide

- Greatly reduced power requirement
- Eliminates bootstrap supply
- Fewer external components
- Lower junction temperature
- Reduced stress during faults
- No current sense R/C filter networks
- Faster response to faults
- Higher frequency operations

TI Information – Selective Disclosure

284X Device Family

Part	Variant	Control Mode	Max Duty Cycle	UVLO (on/off V)	Max V _{dd} (V)	Gate Drive Strength (Source/Sink A)	Max Fsw (kHz)	Package
TL284x TL384x	2-5	Peak Current / Voltage	97%	16/10	30	1/1	500	SOIC-8
	2B-5B *		48%	8.4/7.6				SOIC-14 PDIP-8
UC284x UC384x	1	Peak Current / Voltage	95%	8/7.8	30	1/1	500	SOIC-18 PDIP-18
	2-5	Peak Current / Voltage	100% 50%	16/10 8.4/7.6	30	1/1	500	SOIC-8 SOIC-14 PDIP-8
	2A-5A *	Peak Current / Voltage	100% 50%	16/10 8.5/7.9	30	1/1	500	SOIC-8 SOIC-14 SOIC-16 PDIP-8
UCC280x UCC380x	0-5	Peak Current / Voltage	100% 50%	7.2/6.9 9.4/7.4 12.5/8.3 4.1/3.6	12	1/1	1,000	SOIC-8 PDIP-8 TSSOP-8
UCC2813-x UCC3813-x	0-5	Peak Current / Voltage	100% 50%	7.2/6.9 9.4/7.4 12.5/8.3 4.1/3.6	12	1/1	1,000	SOIC-8 PDIP-8 TSSOP-8
UCC28C4x UCC38C4x	0-5	Peak Current / Voltage	100% 50%	14.5/9.0 8.4/7.6 7.0/6.6	18	1/1	1,000	SOIC-8 PDIP-8 VSSOP-8

- [DN-42A Design Considerations for Transitioning from UC3842 to the New UCC3802](#)
- [Differences Between the UCC3813 and the UCC3800 PWM Families](#)
- [UCC38C42 Family of High-Speed BiCMOS Current-Mode PWM Controllers](#)

* TL284xB and UC284xA are same as alternate suppliers' UC284xB.