

High Speed PWM Controller

FEATURES

- Compatible with Voltage or Current Mode Topologies
- Practical Operation Switching Frequencies to 1MHz
- 50ns Propagation Delay to Output
- High Current Dual Totem Pole Outputs (1.5A Peak)
- Wide Bandwidth Error Amplifier
- Fully Latched Logic with Double Pulse Suppression
- Pulse-by-Pulse Current Limiting
- Soft Start / Max. Duty Cycle Control
- Under-Voltage Lockout with Hysteresis
- Low Start Up Current (1.1mA)

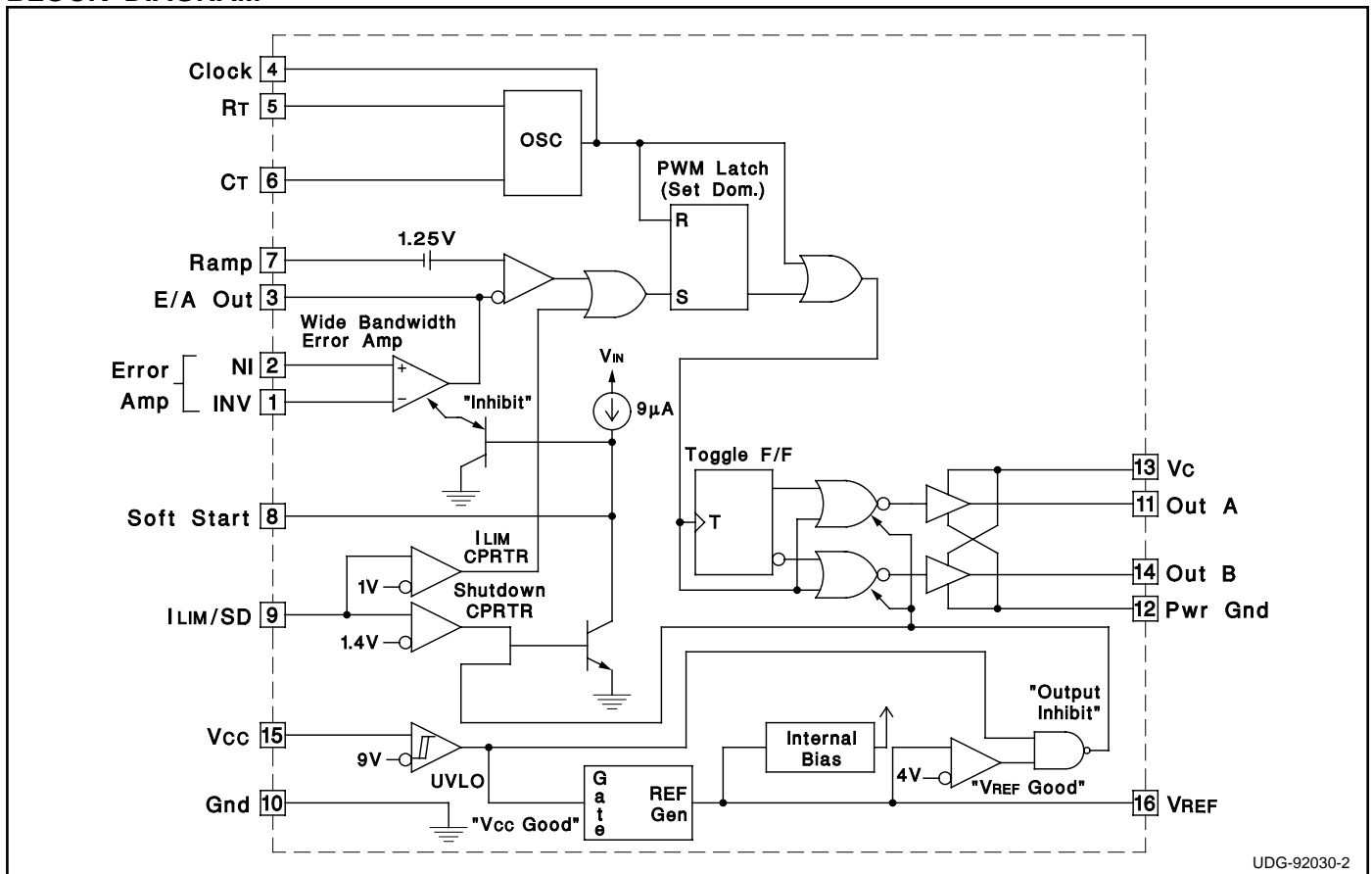
DESCRIPTION

The UC1825 family of PWM control ICs is optimized for high frequency switched mode power supply applications. Particular care was given to minimizing propagation delays through the comparators and logic circuitry while maximizing bandwidth and slew rate of the error amplifier. This controller is designed for use in either current-mode or voltage mode systems with the capability for input voltage feed-forward.

Protection circuitry includes a current limit comparator with a 1V threshold, a TTL compatible shutdown port, and a soft start pin which will double as a maximum duty cycle clamp. The logic is fully latched to provide jitter free operation and prohibit multiple pulses at an output. An under-voltage lockout section with 800mV of hysteresis assures low start up current. During under-voltage lockout, the outputs are high impedance.

These devices feature totem pole outputs designed to source and sink high peak currents from capacitive loads, such as the gate of a power MOSFET. The on state is designed as a high level.

BLOCK DIAGRAM



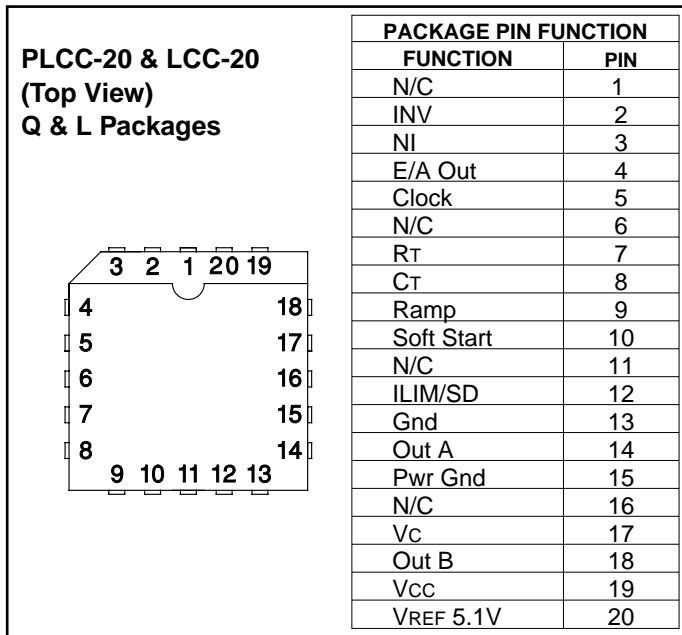
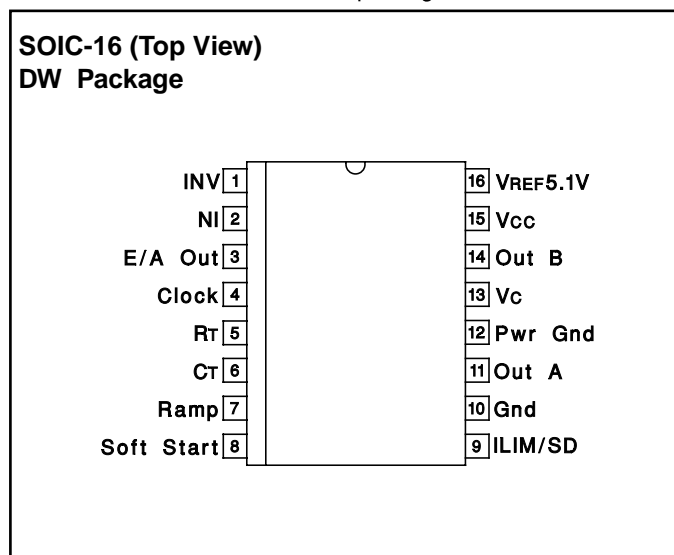
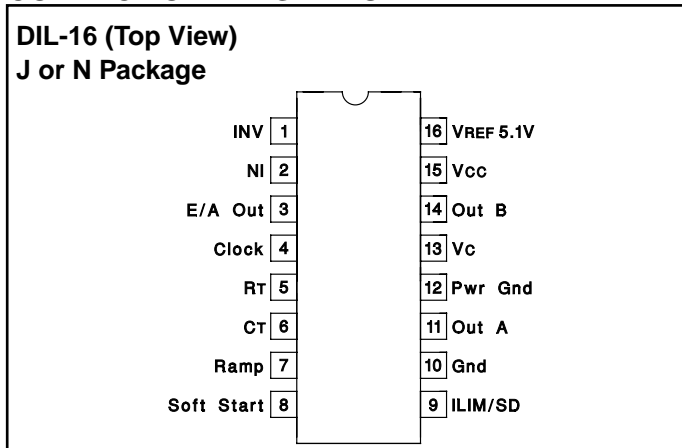
ABSOLUTE MAXIMUM RATINGS (Note 1)

Supply Voltage (Pins 13, 15)	30V
Output Current, Source or Sink (Pins 11, 14)	
DC	0.5A
Pulse (0.5 s)	2.0A
Analog Inputs	
(Pins 1, 2, 7)	-0.3V to 7V
(Pin 8, 9)	-0.3V to 6V
Clock Output Current (Pin 4)	-5mA
Error Amplifier Output Current (Pin 3)	5mA
Soft Start Sink Current (Pin 8)	20mA
Oscillator Charging Current (Pin 5)	-5mA
Power Dissipation	1W
Storage Temperature Range	-65°C to +150°C
Lead Temperature (Soldering, 10 seconds)	300°C

Note 1: All voltages are with respect to GND (Pin 10); all currents are positive into, negative out of part; pin numbers refer to DIL-16 package.

Note 3: Consult Unitrode Integrated Circuit Databook for thermal limitations and considerations of package.

CONNECTION DIAGRAMS



THERMAL RATINGS TABLE

Package	Θ_{JA}	Θ_{JC}
DIL-16J	80-120	28 ⁽²⁾
DIL-16N	90 ⁽¹⁾	45
PLCC-20	43-75(1)	34
LCC-20	70-80	20 ⁽²⁾
SOIC-16	50-120 ⁽¹⁾	35

(1) Specified Θ_{JA} (junction to ambient) is for devices mounted to 5in² FR4 PC board with one ounce copper where noted. When resistance range is given, lower values are for 5in² aluminum PC board. Test PWB was 0.062in thick and typically used 0.635mm trace widths for power packages and 1.3mm trace widths for non-power packages with 100 x 100 mil probe land area at the end of each trace.

(2) Θ_{JC} data values stated were derived from MIL-STD-1835B. MIL-STD-1835B states that the baseline values shown are worst case (mean +2s) for a 60 x 60mil microcircuit device silicon die and applicable for devices with die sizes up to 14400 square mils. For device die sizes greater than 14400 square mils use the following values; dual-in-line, 11°C/W; flat pack 10°C/W; pin grid array, 10°C/W.

ELECTRICAL CHARACTERISTICS: Unless otherwise stated, these specifications apply for , $R_T = 3.65k$, $C_T = 1nF$, $V_{CC} = 15V$, $-55^{\circ}C < T_A < 125^{\circ}C$ for the UC1825, $-40^{\circ}C < T_A < 85^{\circ}C$ for the UC2825, and $0^{\circ}C < T_A < 70^{\circ}C$ for the UC3825, $T_A = T_O$.

PARAMETERS	TEST CONDITIONS	UC1825 UC2825			UC3825			UNITS
		MIN	TOP	MAX	MIN	TOP	MAX	
Reference Section								
Output Voltage	$T_O = 25^{\circ}C$, $I_O = 1mA$	5.05	5.10	5.15	5.00	5.10	5.20	V
Line Regulation	$10V < V_{CC} < 30V$		2	20		2	20	mV
Load Regulation	$1mA < I_O < 10mA$		5	20		5	20	mV
Temperature Stability*	$T_{MIN} < T_A < T_{MAX}$		0.2	0.4		0.2	0.4	mV/ $^{\circ}C$
Total Output Variation*	Line, Load, Temperature	5.00		5.20	4.95		5.25	V
Output Noise Voltage*	$10Hz < f < 10kHz$		50			50		μV
Long Term Stability*	$T_J = 125^{\circ}C$, 1000hrs.		5	25		5	25	mV
Short Circuit Current	$V_{REF} = 0V$	-15	-50	-100	-15	-50	-100	mA
Oscillator Section								
Initial Accuracy*	$T_J = 2^{\circ}C$	360	400	440	360	400	440	kHz
Voltage Stability*	$10V < V_{CC} < 30V$		0.2	2		0.2	2	%
Temperature Stability*	$T_{MIN} < T_A < T_{MAX}$		5			5		%
Total Variation*	Line, Temperature	340		460	340		460	kHz
Oscillator Section (cont.)								
Clock Out High		3.9	4.5		3.9	4.5		V
Clock Out Low			2.3	2.9		2.3	2.9	V
Ramp Peak*		2.6	2.8	3.0	2.6	2.8	3.0	V
Ramp Valley*		0.7	1.0	1.25	0.7	1.0	1.25	V
Ramp Valley to Peak*		1.6	1.8	2.0	1.6	1.8	2.0	V
Error Amplifier Section								
Input Offset Voltage				10			15	mV
Input Bias Current			0.6	3		0.6	3	μA
Input Offset Current			0.1	1		0.1	1	μA
Open Loop Gain	$1V < V_O < 4V$	60	95		60	95		dB
CMRR	$1.5V < V_{CM} < 5.5V$	75	95		75	95		dB
PSRR	$10V < V_{CC} < 30V$	85	110		85	110		dB
Output Sink Current	$V_{PIN 3} = 1V$	1	2.5		1	2.5		mA
Output Source Current	$V_{PIN 3} = 4V$	-0.5	-1.3		-0.5	-1.3		mA
Output High Voltage	$I_{PIN 3} = -0.5mA$	4.0	4.7	5.0	4.0	4.7	5.0	V
Output Low Voltage	$I_{PIN 3} = 1mA$	0	0.5	1.0	0	0.5	1.0	V
Unity Gain Bandwidth*		3	5.5		3	5.5		MHz
Slew Rate*		6	12		6	12		V/ μs

ELECTRICAL CHARACTERISTICS: Unless otherwise stated, these specifications apply for , $R_T = 3.65k$, $C_T = 1nF$, $V_{CC} = 15V$, $-55^{\circ}C < T_A < 125^{\circ}C$ for the UC1825, $-40^{\circ}C < T_A < 85^{\circ}C$ for the UC2825, and $0^{\circ}C < T_A < 70^{\circ}C$ for the UC3825, $T_A = T_J$.

PARAMETERS	TEST CONDITIONS	UC1825 UC2825			UC3825			UNITS
		MIN	TOP	MAX	MIN	TOP	MAX	
PWM Comparator Section								
Pin 7 Bias Current	$V_{PIN 7} = 0V$		-1	-5		-1	-5	μA
Duty Cycle Range		0		80	0		85	%
Pin 3 Zero DC Threshold	$V_{PIN 7} = 0V$	1.1	1.25		1.1	1.25		V
Delay to Output*			50	80		50	80	ns
Soft-Start Section								
Charge Current	$V_{PIN 8} = 0.5V$	3	9	20	3	9	20	μA
Discharge Current	$V_{PIN 8} = 1V$	1			1			mA
Current Limit / Shutdown Section								
Pin 9 Bias Current	$0 < V_{PIN 9} < 4V$			15			10	μA
Current Limit Threshold		0.9	1.0	1.1	0.9	1.0	1.1	V
Shutdown Threshold		1.25	1.40	1.55	1.25	1.40	1.55	V
Delay to Output			50	80		50	80	ns
Output Section								
Output Low Level	$I_{OUT} = 20mA$		0.25	0.40		0.25	0.40	V
	$I_{OUT} = 200mA$		1.2	2.2		1.2	2.2	V
Output High Level	$I_{OUT} = -20mA$	13.0	13.5		13.0	13.5		V
	$I_{OUT} = -200mA$	12.0	13.0		12.0	13.0		V
Collector Leakage	$V_C = 30V$		100	500		10	500	μA
Rise/Fall Time*	$CL = 1nF$		30	60		30	60	ns
Under-Voltage Lockout Section								
Start Threshold		8.8	9.2	9.6	8.8	9.2	9.6	V
UVLO Hysteresis		0.4	0.8	1.2	0.4	0.8	1.2	V
Supply Current Section								
Start Up Current	$V_{CC} = 8V$		1.1	2.5		1.1	2.5	mA
ICC	$V_{PIN 1}, V_{PIN 7}, V_{PIN 9} = 0V; V_{PIN 2} = 1V$		22	33		22	33	mA

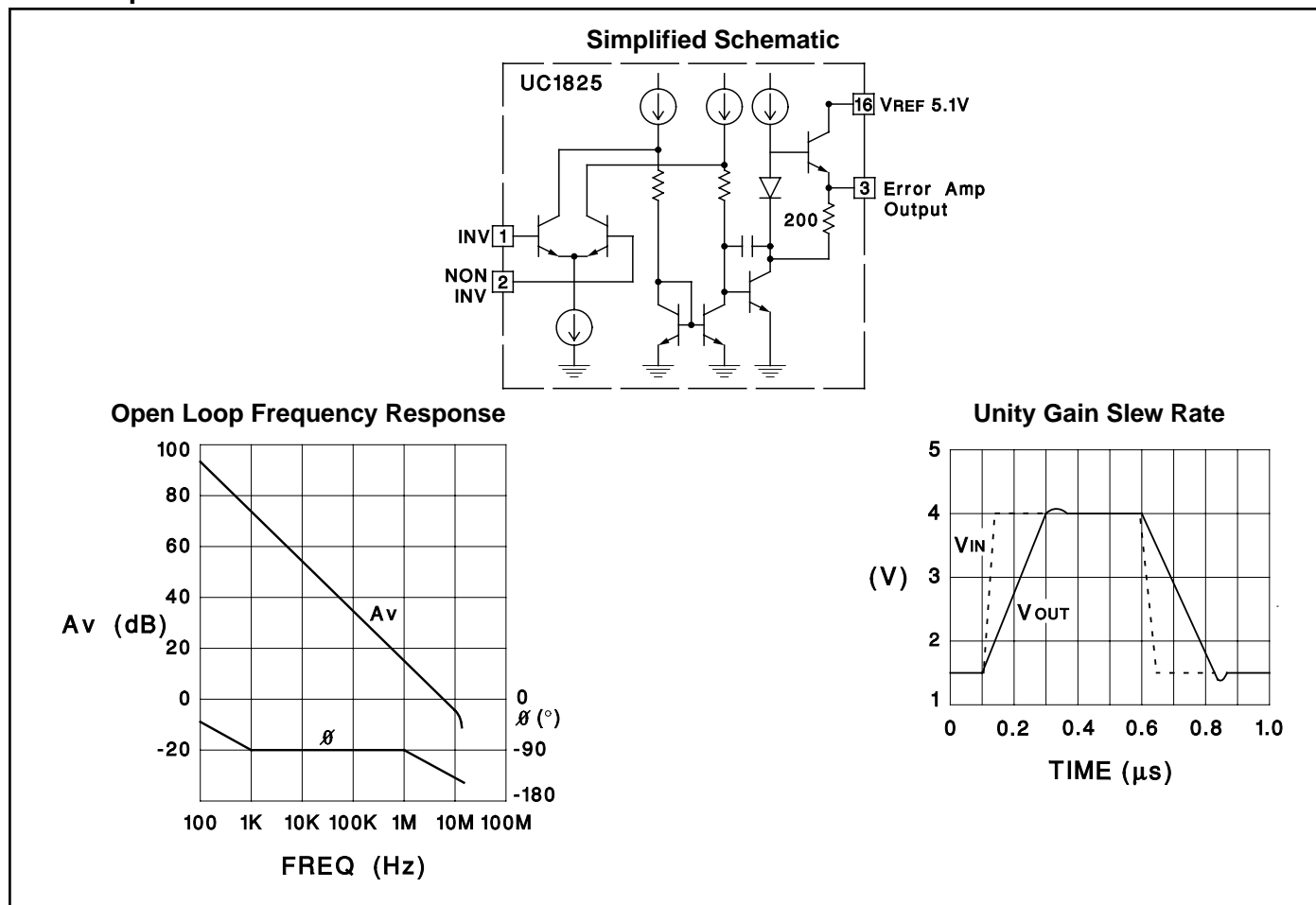
* This parameter not 100% tested in production but guaranteed by design.

Printed Circuit Board Layout Considerations

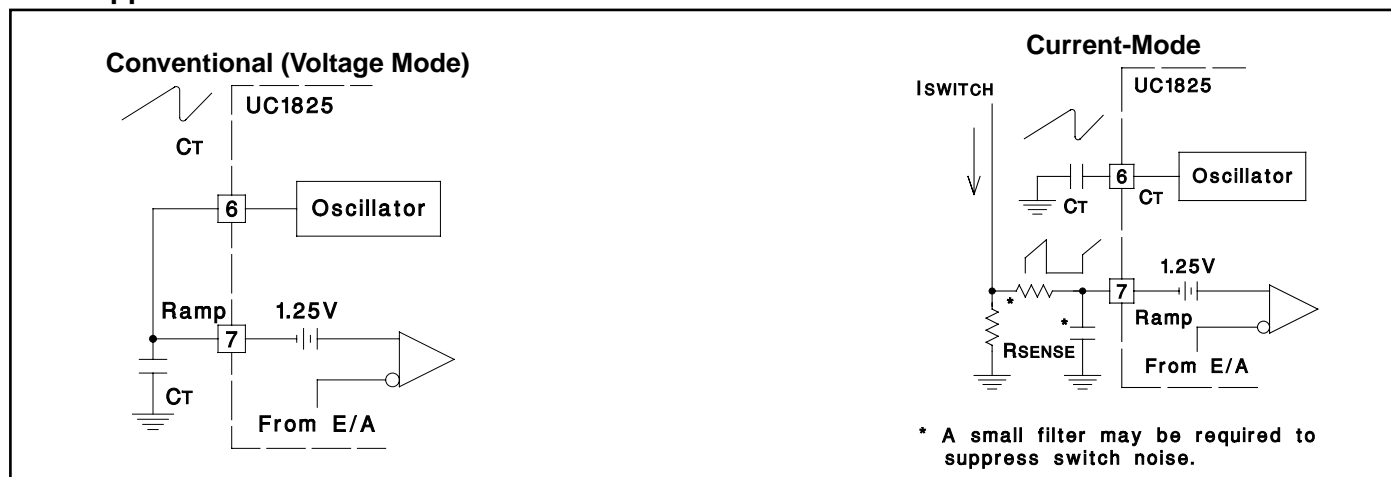
High speed circuits demand careful attention to layout and component placement. To assure proper performance of the UC1825 follow these rules: 1) Use a ground plane. 2) Damp or clamp parasitic inductive kick energy from the gate of driven MOSFETs. Do not allow the output pins to ring below ground. A series gate resistor or a shunt 1 Amp Schottky diode at the output pin will serve

this purpose. 3) Bypass VCC, VC, and VREF. Use 0.1 μ F monolithic ceramic capacitors with low equivalent series inductance. Allow less than 1 cm of total lead length for each capacitor between the bypassed pin and the ground plane. 4) Treat the timing capacitor, CT, like a bypass capacitor.

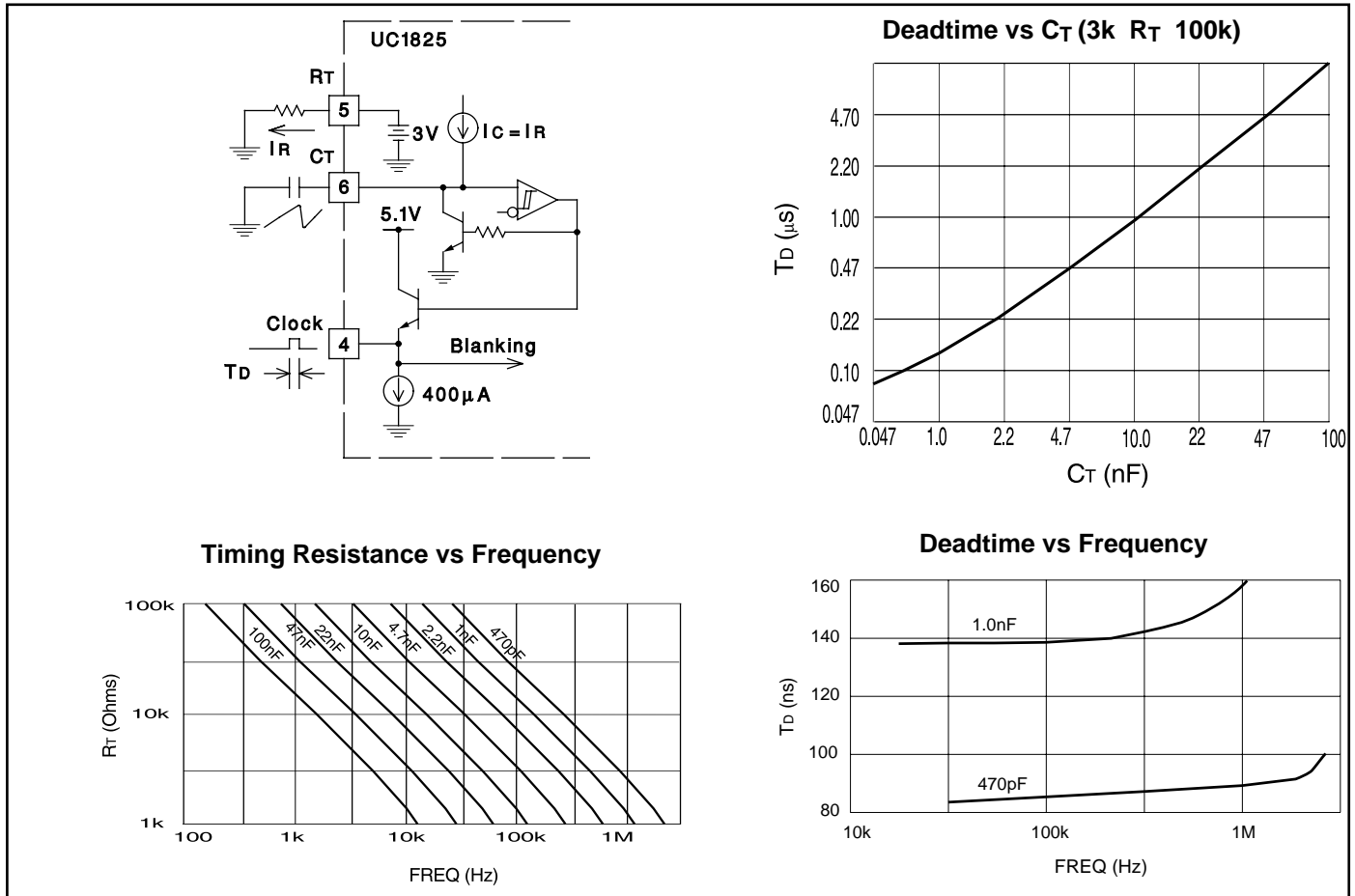
Error Amplifier Circuit



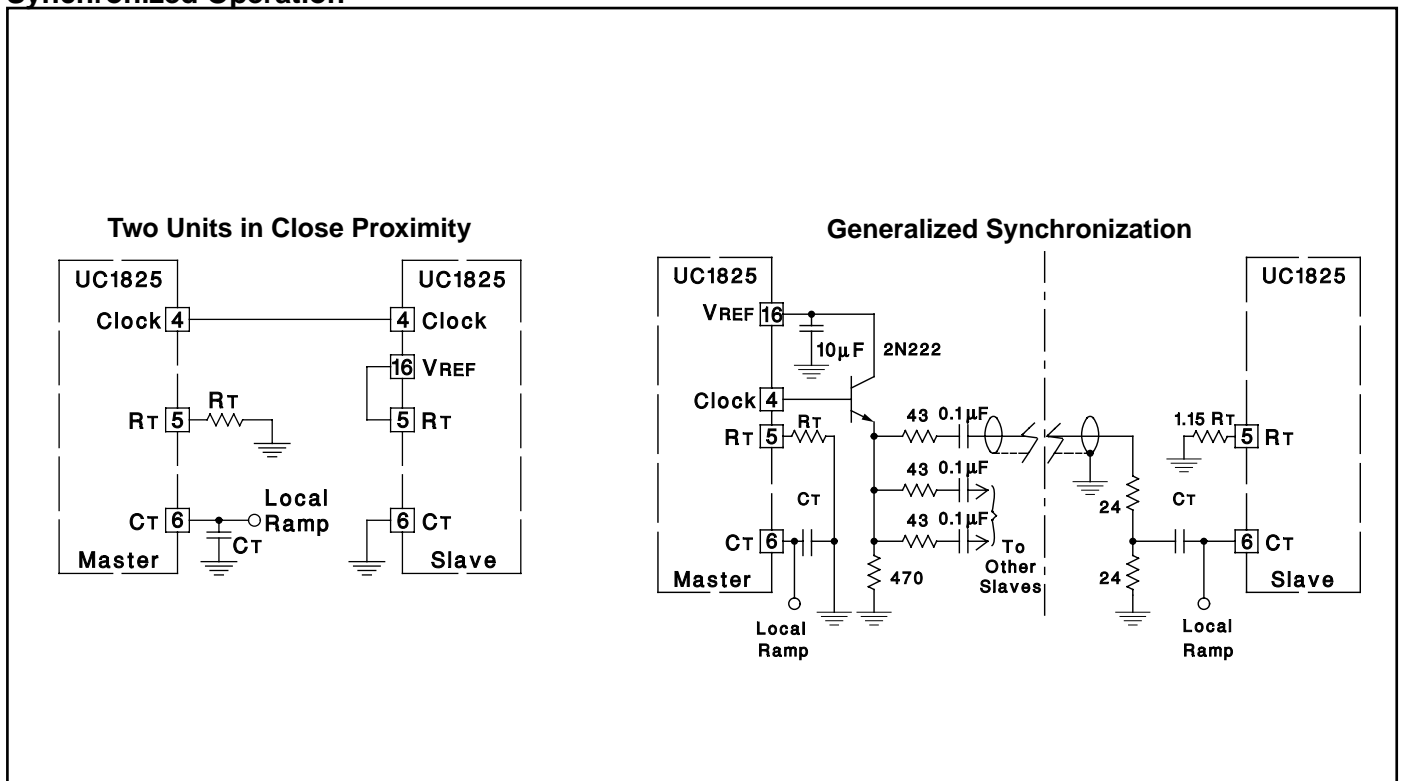
PWM Applications



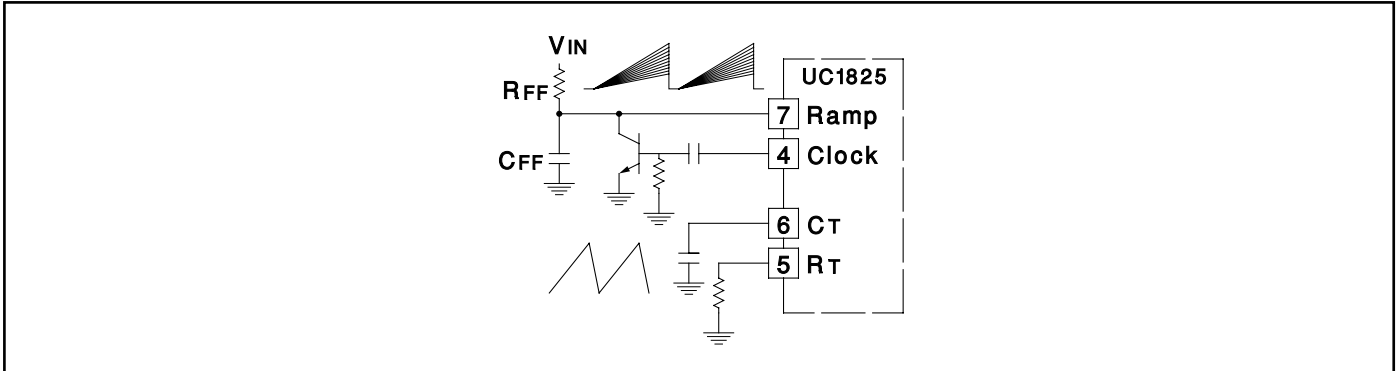
Oscillator Circuit



Synchronized Operation

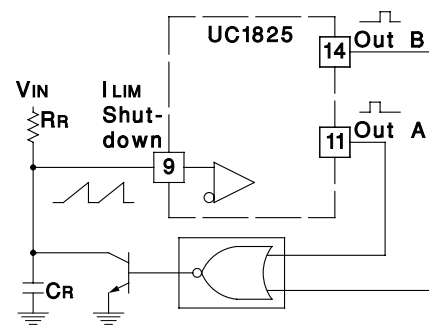


Forward Technique for Off-Line Voltage Mode Application



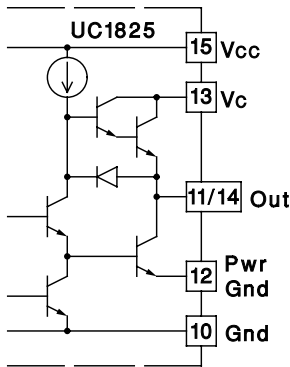
Constant Volt-Second Clamp Circuit

The circuit shown here will achieve a constant volt-second product clamp over varying input voltages. The ramp generator components, R_T and C_R are chosen so that the ramp at Pin 9 crosses the 1V threshold at the same time the desired maximum volt-second product is reached. The delay through the functional nor block must be such that the ramp capacitor can be completely discharged during the minimum deadtime.

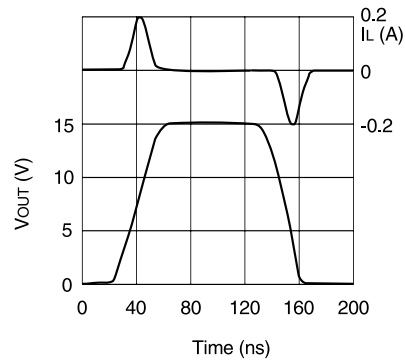


Output Section

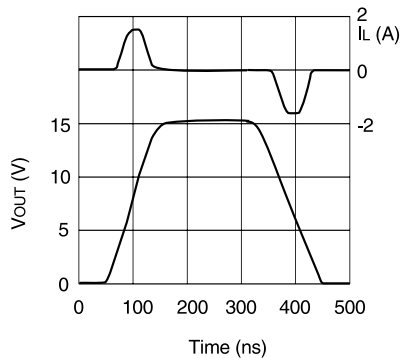
Simplified Schematic



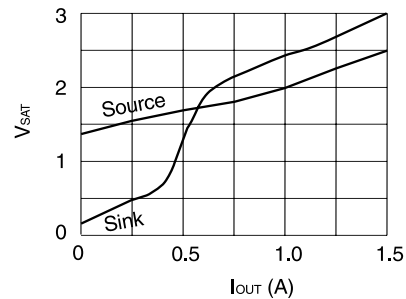
Rise/Fall Time ($C_L=1nF$)



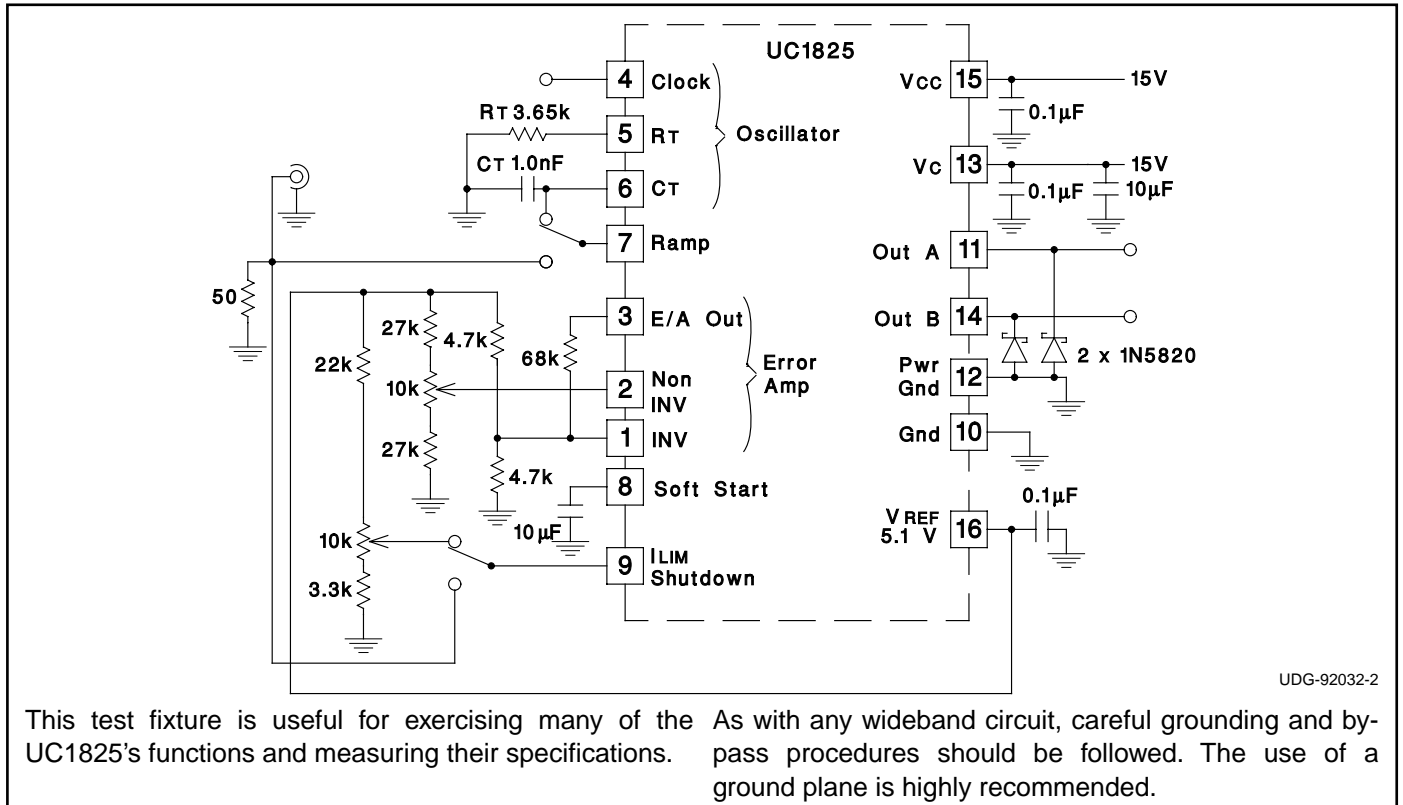
Rise/Fall Time ($C_L=10nF$)



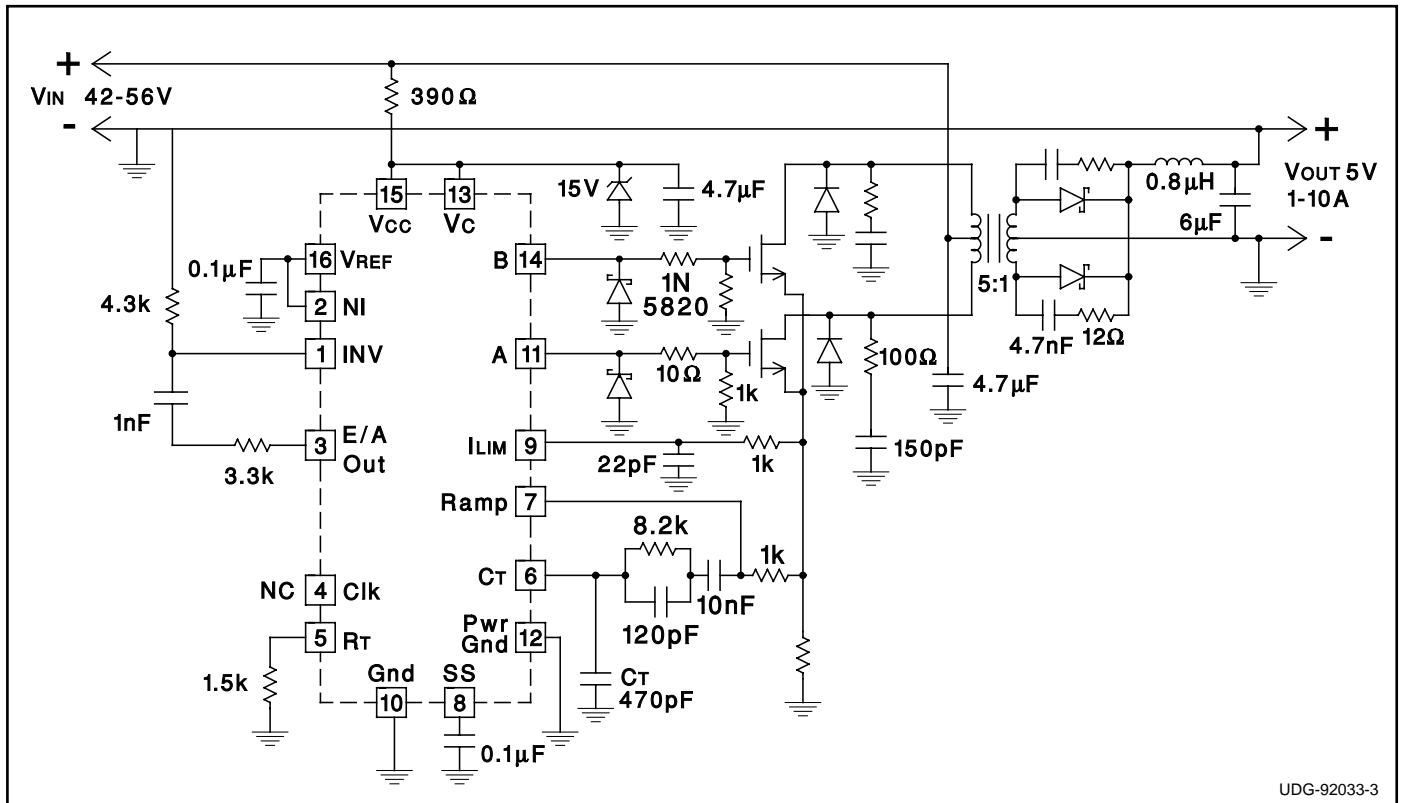
Saturation Curves



Open Loop Laboratory Test Fixture



Design Example: 50W, 48V to 5V DC to DC Converter - 1.5MHz Clock Frequency



PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-87681012A	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8768101EA	ACTIVE	CDIP	J	16	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8768101QFA	ACTIVE	CFP	W	16	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8768101V2A	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8768101VEA	ACTIVE	CDIP	J	16	1	TBD	Call TI	Level-NC-NC-NC
UC1825J	ACTIVE	CDIP	J	16	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1825J883B	ACTIVE	CDIP	J	16	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1825JQMLV	ACTIVE	CDIP	J	16		TBD	Call TI	Call TI
UC1825L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1825L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1825LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1825W883B	ACTIVE	CFP	W	16	1	TBD	A42 SNPB	Level-NC-NC-NC
UC2825DW	ACTIVE	SOIC	DW	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2825DW/1	PREVIEW	SOIC	DW	16		Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2825DWTR	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2825DWTRG4	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2825J	ACTIVE	CDIP	J	16	1	TBD	A42 SNPB	Level-NC-NC-NC
UC2825N	ACTIVE	PDIP	N	16	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2825NG4	ACTIVE	PDIP	N	16	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NA-NA-NA
UC2825Q	ACTIVE	PLCC	FN	20	46	Green (RoHS & no Sb/Br)	CU SN	Level-2-260C-1 YEAR
UC2825QTR	ACTIVE	PLCC	FN	20	1000	Green (RoHS & no Sb/Br)	CU SN	Level-2-260C-1 YEAR
UC3825DW	ACTIVE	SOIC	DW	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3825DWG4	ACTIVE	SOIC	DW	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3825DWTR	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3825DWTRG4	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3825J	ACTIVE	CDIP	J	16	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3825N	ACTIVE	PDIP	N	16	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3825NG4	ACTIVE	PDIP	N	16	25	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3825Q	ACTIVE	PLCC	FN	20	46	Green (RoHS & no Sb/Br)	CU SN	Level-2-260C-1 YEAR
UC3825QTR	ACTIVE	PLCC	FN	20	1000	Green (RoHS & no Sb/Br)	CU SN	Level-2-260C-1 YEAR

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSOLETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS) or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. -- The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

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J (R-GDIP-T**)

14 LEADS SHOWN

CERAMIC DUAL IN-LINE PACKAGE



DIM \ PINS **	14	16	18	20
A	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC	0.300 (7,62) BSC
B MAX	0.785 (19,94)	.840 (21,34)	0.960 (24,38)	1.060 (26,92)
B MIN	—	—	—	—
C MAX	0.300 (7,62)	0.300 (7,62)	0.310 (7,87)	0.300 (7,62)
C MIN	0.245 (6,22)	0.245 (6,22)	0.220 (5,59)	0.245 (6,22)

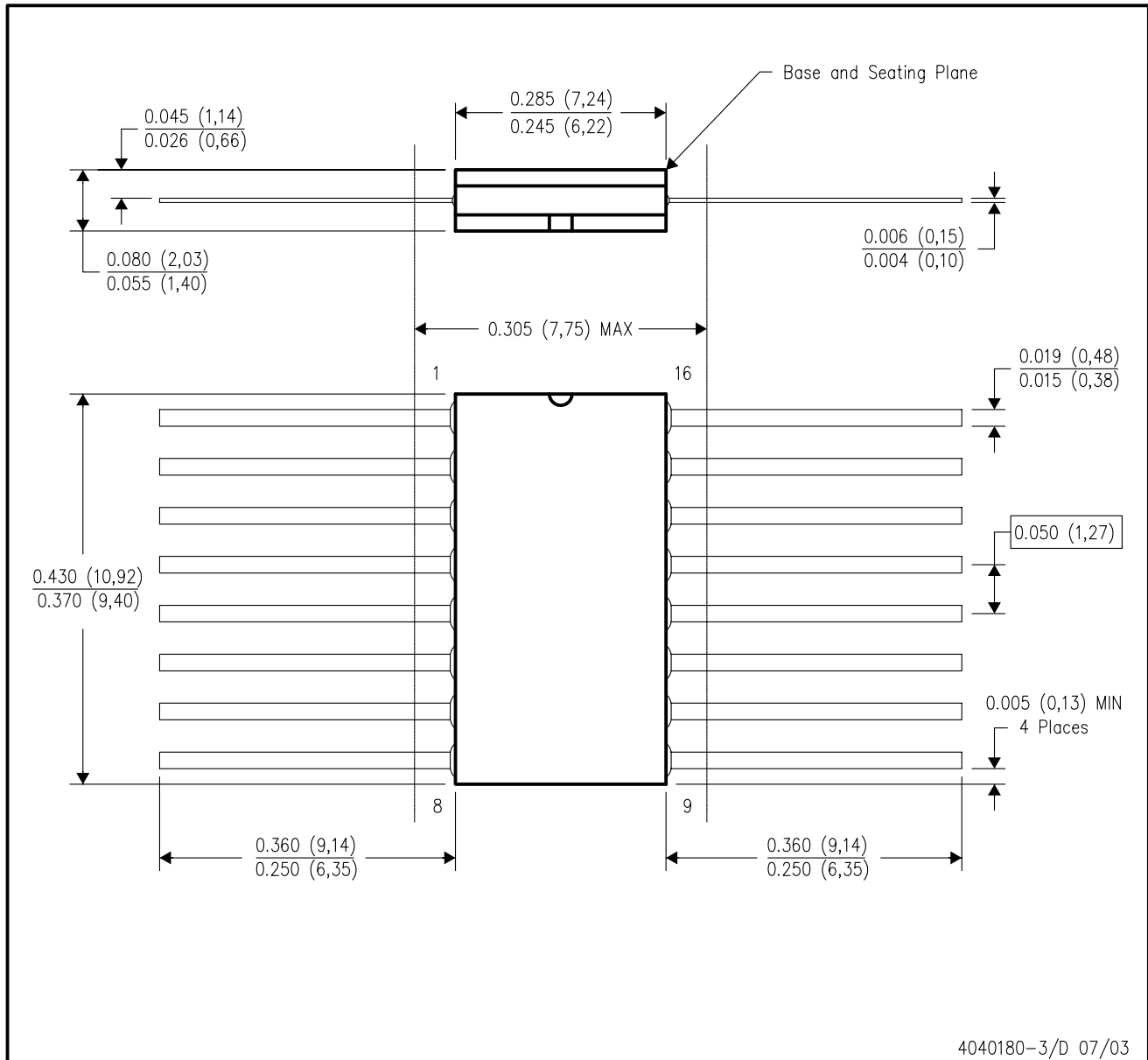


4040083/F 03/03

- NOTES:
- All linear dimensions are in inches (millimeters).
 - This drawing is subject to change without notice.
 - This package is hermetically sealed with a ceramic lid using glass frit.
 - Index point is provided on cap for terminal identification only on press ceramic glass frit seal only.
 - Falls within MIL STD 1835 GDIP1-T14, GDIP1-T16, GDIP1-T18 and GDIP1-T20.

W (R-GDFP-F16)

CERAMIC DUAL FLATPACK



- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a ceramic lid using glass frit.
 - D. Index point is provided on cap for terminal identification only.
 - E. Falls within MIL STD 1835 GDFP1-F16 and JEDEC MO-092AC

FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



4040140/D 10/96

- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. This package can be hermetically sealed with a metal lid.
 - D. The terminals are gold plated.
 - E. Falls within JEDEC MS-004

N (R-PDIP-T**)

PLASTIC DUAL-IN-LINE PACKAGE

16 PINS SHOWN

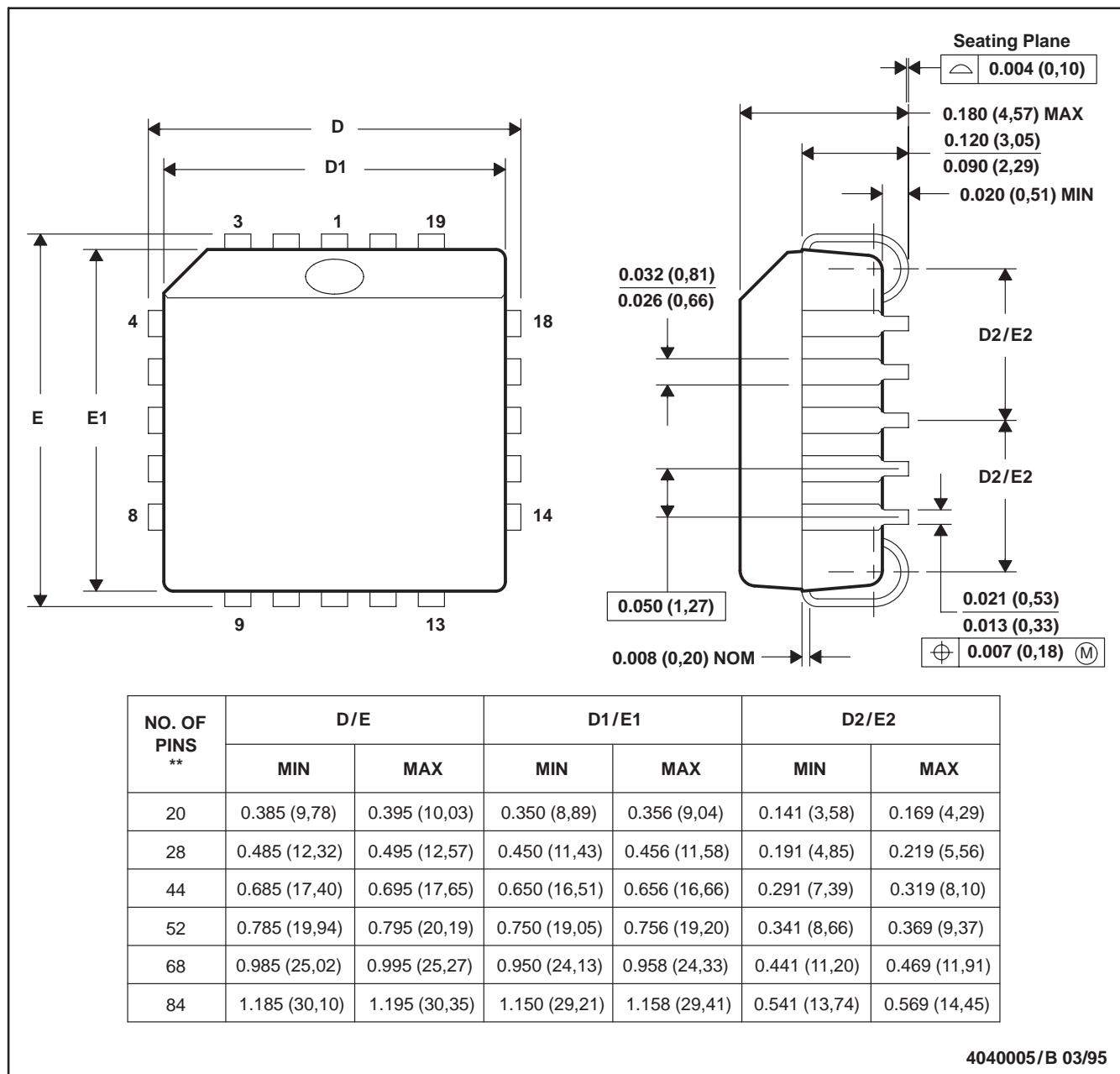


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C Falls within JEDEC MS-001, except 18 and 20 pin minimum body length (Dim A).
 - D The 20 pin end lead shoulder width is a vendor option, either half or full width.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

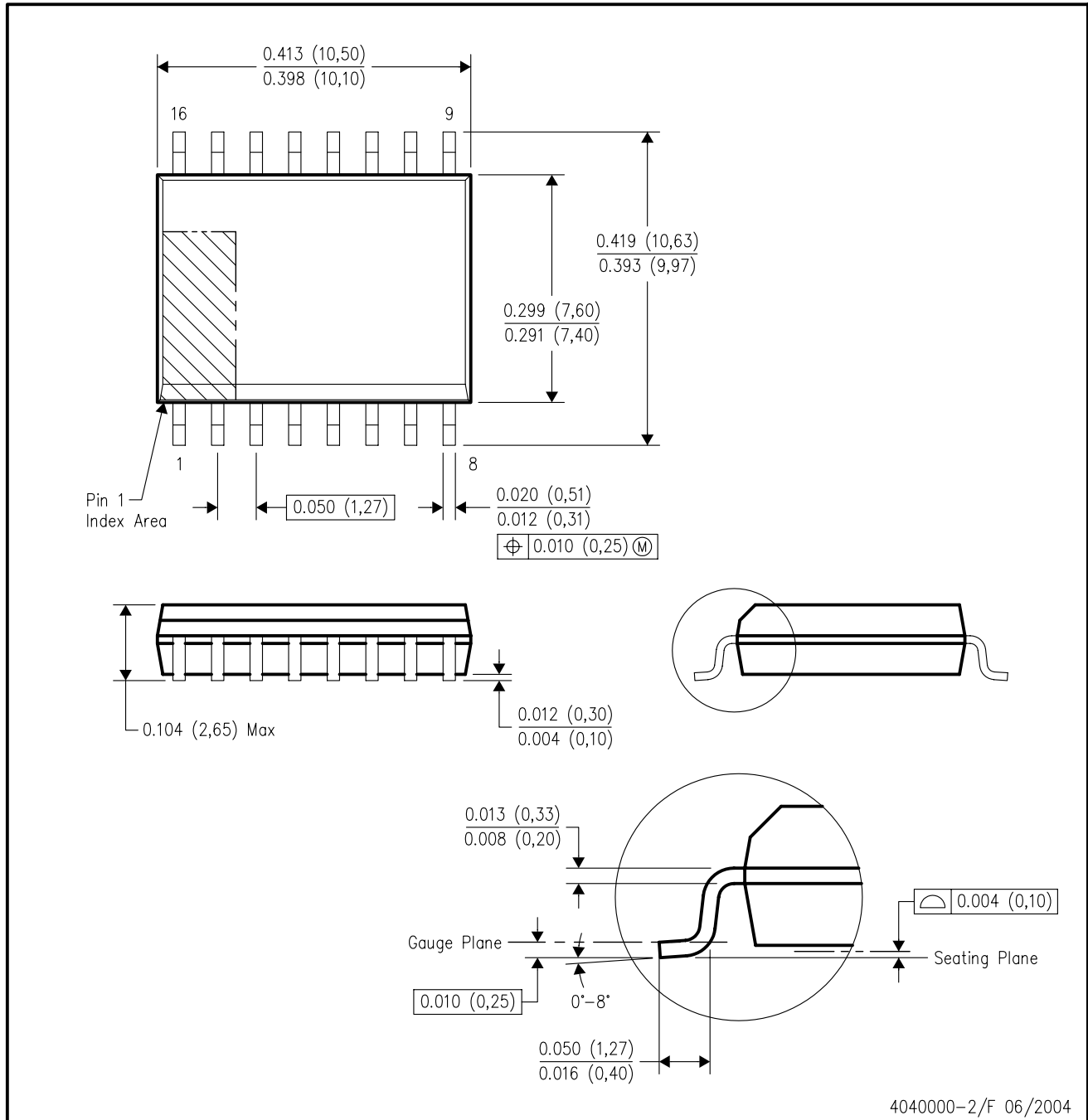
20 PIN SHOWN



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-018

DW (R-PDSO-G16)

PLASTIC SMALL-OUTLINE PACKAGE



4040000-2/F 06/2004

- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).
 - D. Falls within JEDEC MS-013 variation AA.

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Interface	interface.ti.com	Digital Control	www.ti.com/digitalcontrol
Logic	logic.ti.com	Military	www.ti.com/military
Power Mgmt	power.ti.com	Optical Networking	www.ti.com/opticalnetwork
Microcontrollers	microcontroller.ti.com	Security	www.ti.com/security
		Telephony	www.ti.com/telephony
		Video & Imaging	www.ti.com/video
		Wireless	www.ti.com/wireless

Mailing Address: Texas Instruments
Post Office Box 655303 Dallas, Texas 75265

UC1825, Status: ACTIVE
High Speed PWM Controller

! clear gif

Features	Samples	Technical Documents
Quality & Pb-Free Data	Pricing/Packaging	Applications Notes
Related Products	Inventory	Simulation Models
Tools & Software	Symbols/Footprints	Reference Designs

- ! Refine Your Se
- Selection Gui
 - Analog & Mix
 - Power Supply
- Support
- KnowledgeBa
 - Contact Tech
 - TI Cross Ref
 - Training
 - Part Marking

Datasheet

! Download Datasheet **High Speed PWM Controller (Rev. A)** (uc1825.pdf, 914 KB)
24 Feb 2004 Download

	UC1825	UC2825	UC3825
Topology	Boost, Flyback, Forward, Full-Bridge, Half-Bridge, Push-Pull	Boost, Flyback, Forward, Full-Bridge, Half-Bridge, Push-Pull	Boost, Buck, Flyback, Forward, Full-Bridge, Half-Bridge, Push-Pull
Control Method	Current Mode	Current Mode	Current Mode, Voltage
Duty Cycle(Max)(%)	50	50	50
PWM Outputs(#)	2	2	2
Frequency(Max)(kHz)	1000	1000	1000
UVLO Thresholds On/Off(V)	9.2/8.4	9.2/8.4	9.2/8.4
Pin/Package	16CDIP,16CFP,20LCCC	16CDIP,16PDIP,16SOIC,20PLCC	16CDIP,16PDIP,16SOIC,20PLCC
Approx. 1KU Price (US\$)	6.03	1.7	1.6
	Samples	Samples	Samples
	Inventory	Inventory	Inventory

Product Information

Features Save this to your personal library

- Compatible with Voltage or Current Mode Topologies
- Practical Operation Switching Frequencies to 1MHz
- 50ns Propagation Delay to Output
- High Current Dual Totem Pole Outputs (1.5A Peak)
- Wide Bandwidth Error Amplifier
- Fully Latched Logic with Double Pulse Suppression
- Pulse-by-Pulse Current Limiting
- Soft Start / Max. Duty Cycle Control
- Under-Voltage Lockout with Hysteresis
- Low Start Up Current (1.1mA)

Description

The UC1825 family of PWM control ICs is optimized for high frequency switched mode power supply applications. Particular care was given to minimizing propagation delays through the comparators and logic circuitry while maximizing bandwidth and slew rate of the error amplifier. This controller is designed for use in either current-mode or voltage mode systems with the capability for input voltage feed-forward.

Protection circuitry includes a current limit comparator with a 1V threshold, a TTL compatible shutdown port, and a soft start pin which will double as a maximum duty cycle clamp. The logic is fully latched to provide jitter free operation and prohibit multiple pulses at an output. An under-voltage lockout section with 800mV of hysteresis assures low start up current. During under-voltage lockout, the outputs are high impedance.

These devices feature totem pole outputs designed to source and sink high peak currents from capacitive loads, such as the gate of a power MOSFET. The on state is designed as a high level.

Pricing/Packaging/CAD Design Tools/Samples

				Price	Packaging	CAD Design Tools		Samples	
Device	Status	Temp (°C)	DSCC #	Budget Price (\$US) QTY	Industry Standard (TI Pkg) Pins	Standard Pack Quantity	Symbols	Footprints	Samples
5962-87681012A	ACTIVE	-55 to 125		12.80 1KU	LCCC (FK) 20	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
5962-8768101EA	ACTIVE	-55 to 125		7.68 1KU	CDIP (J) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
5962-8768101QFA	ACTIVE	-55 to 125		14.96 1KU	CFP (W) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
5962-8768101V2A	ACTIVE	-55 to 125		153.65 1KU	LCCC (FK) 20	1	<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
5962-8768101VEA	ACTIVE	-55 to 125		114.30 1KU	CDIP (J) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
UC1825J	ACTIVE	-55 to 125		6.03 1KU	CDIP (J) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1825J883B	ACTIVE	-55 to 125	5962-8768101EA	7.68 1KU	CDIP (J) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1825JQMLV	ACTIVE	-55 to 125			CDIP (J) 16		<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
UC1825L	ACTIVE	-55 to 125		8.73 1KU	LCCC (FK) 20	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1825L883B	ACTIVE	-55 to 125	5962-87681012A	12.80 1KU	LCCC (FK) 20	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1825LQMLV	ACTIVE	-55 to 125			LCCC (FK) 20		<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
UC1825W883B	ACTIVE	-55 to 125	5962-8768101QFA	14.96 1KU	CFP (W) 16	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples

Inventory

		TI Inventory Status			Reported Distributor Inventory			
5962-87681012A		As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase	
	693*		8 Weeks	Americas	Avnet	104	<input type="text"/>	
5962-8768101EA		As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase	
	1509*	>10k 28 Dec	8 Weeks	Americas	Avnet	630	<input type="text"/>	
				Europe	EBV Elektronik	3	<input type="text"/>	
5962-8768101QFA		As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase	
	334*	>10k 28 Dec	8 Weeks	Americas	Avnet	40	<input type="text"/>	
5962-8768101V2A		As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase	
	126*	179 13 Feb	16 Weeks	None Reported View Distributors				
		179 20 Feb						
		179 27 Feb						
		179 6 Mar						
		179 13 Mar						
5962-8768101VEA		As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase	

View all Distributors

Choose a Region



	214*	128 9 Jan	16 Weeks	None Reported View Distributors			
		116 18 Jan					
		216 24 Jan					
		216 31 Jan					
		216 7 Feb					
UC1825J	As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	>10k*	>10k 28 Dec	8 Weeks	Americas	Avnet	266	<input type="text"/>
				Europe	EBV Elektronik	992	<input type="text"/>
					Spoerle	41	<input type="text"/>
UC1825J883B	As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	1509*	>10k 28 Dec	8 Weeks	Europe	EBV Elektronik	10	<input type="text"/>
UC1825L	As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	162*	61 19 Jan	8 Weeks	Europe	Avnet-SILICA	90	<input type="text"/>
		>10k 23 Jan					
UC1825L883B	As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	693*		8 Weeks	None Reported View Distributors			
UC1825W883B	As of 8:29 AM GMT, 29 Nov 2005			As of 8:29 AM GMT, 29 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	334*	>10k 28 Dec	8 Weeks	None Reported View Distributors			

* Our information is updated daily, so please check back with us soon if this does not meet your needs. You may also contact your [TI Authorized Distributor](#), including those [listed above](#), for real time stock information.

** Lead time information is not available at this time. However, our information is updated daily so please check back with us soon. Please contact your preferred [TI Authorized Distributor](#) for additional information.

Quality & Lead (Pb)-Free Data

<input type="checkbox"/>					
Product Content					MTBF/FIT Rate
Device	Eco Plan*	Lead/Ball Finish	MSL Rating/Peak Reflow	Details	Details
5962-87681012A	TBD	POST-PLATE	Level-NC-NC-NC	View	View
5962-8768101EA	TBD	A42 SNPB	Level-NC-NC-NC	View	View
5962-8768101QFA	TBD	A42 SNPB	Level-NC-NC-NC	View	View
5962-8768101V2A	TBD	Call TI	Level-NC-NC-NC	View	View
5962-8768101VEA	TBD	Call TI	Level-NC-NC-NC	View	View
UC1825J	TBD	A42 SNPB	Level-NC-NC-NC	View	View
UC1825J883B	TBD	A42 SNPB	Level-NC-NC-NC	View	View
UC1825JQMLV					View
UC1825L	TBD	POST-PLATE	Level-NC-NC-NC	View	View
UC1825L883B	TBD	POST-PLATE	Level-NC-NC-NC	View	View
UC1825LQMLV					View
UC1825W883B	TBD	A42 SNPB	Level-NC-NC-NC	View	View

* The planned eco-friendly classification: Pb-Free (RoHS) or Green (RoHS & no Sb/Br) - please click on the Product Content Details "View" link in the table above for the latest availability information and additional product content details.

If the information you are requesting is not available online at this time, contact one of our [Product Information Centers](#) regarding the availability of this information.

Technical Documents

Datasheets

Keep track of what's new

High Speed PWM Controller (Rev. A) (uc1825.pdf, 914 KB)

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Application Notes

U-110 1.5 Mhz Current Mode IC Controlled 50-Watt Power Supply (slua053.htm, 9 KB)

05 Sep 1999 [Abstract](#)

U-111, Practical Considerations in Current Mode Power Supplies (slua110.htm, 9 KB)

05 Sep 1999 [Abstract](#)

[View Application Notes for PWM Power Supply Controllers](#)

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