

Current Mode PWM Controller

FEATURES

- Optimized For Off-line And DC To DC Converters
- Low Start Up Current (<1mA)
- Automatic Feed Forward Compensation
- Pulse-by-pulse Current Limiting
- Enhanced Load Response Characteristics
- Under-voltage Lockout With Hysteresis
- Double Pulse Suppression
- High Current Totem Pole Output
- Internally Trimmed Bandgap Reference
- 500khz Operation
- Low Ro Error Amp

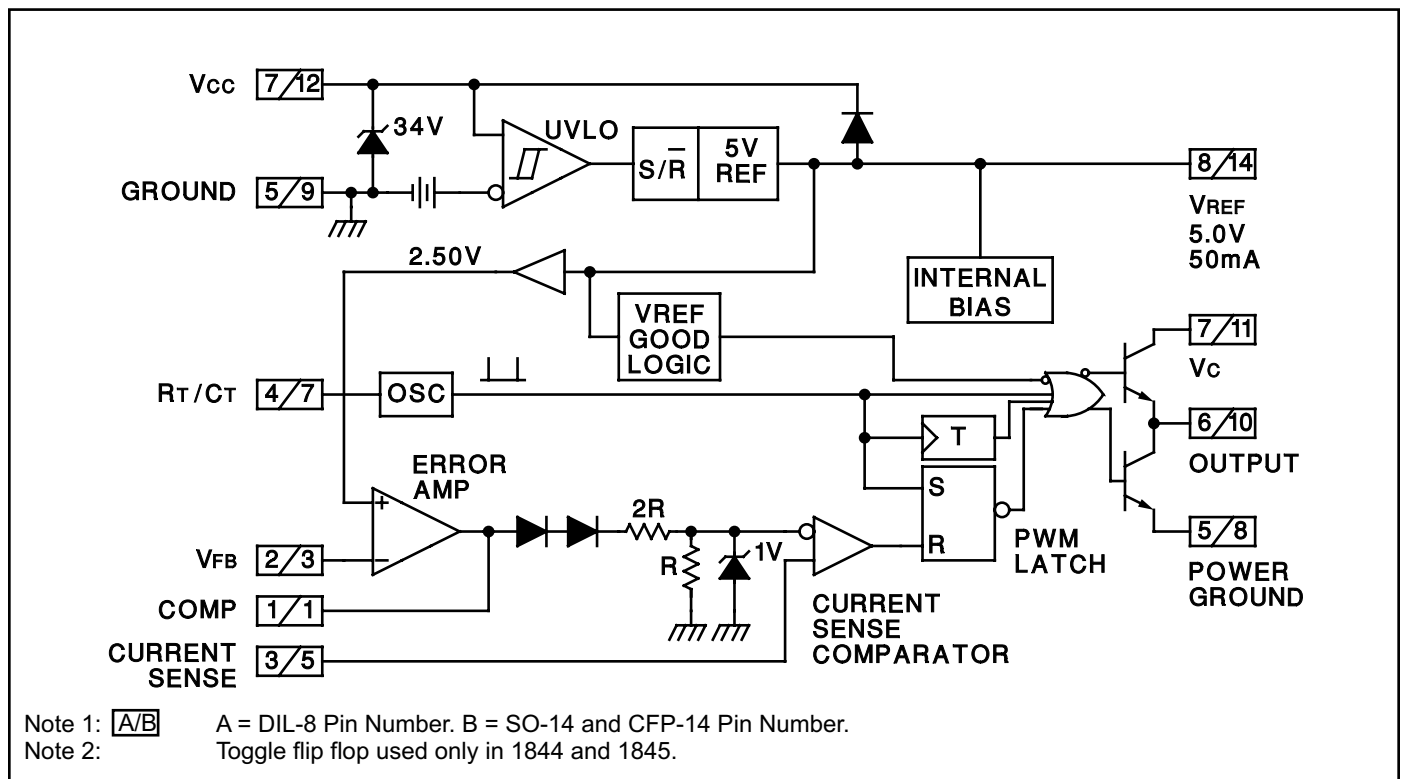
DESCRIPTION

The UC1842/3/4/5 family of control ICs provides the necessary features to implement off-line or DC to DC fixed frequency current mode control schemes with a minimal external parts count. Internally implemented circuits include under-voltage lockout featuring start up current less than 1mA, a precision reference trimmed for accuracy at the error amp input, logic to insure latched operation, a PWM comparator which also provides current limit control, and a totem pole output stage designed to source or sink high peak current. The output stage, suitable for driving N Channel MOSFETs, is low in the off state.

Differences between members of this family are the under-voltage lockout thresholds and maximum duty cycle ranges. The UC1842 and UC1844 have UVLO thresholds of 16V (on) and 10V (off), ideally suited to off-line applications. The corresponding thresholds for the UC1843 and UC1845 are 8.4V and 7.6V. The UC1842 and UC1843 can operate to duty cycles approaching 100%. A range of zero to 50% is obtained by the UC1844 and UC1845 by the addition of an internal toggle flip flop which blanks the output off every other clock cycle.

Datasheet.Live

BLOCK DIAGRAM

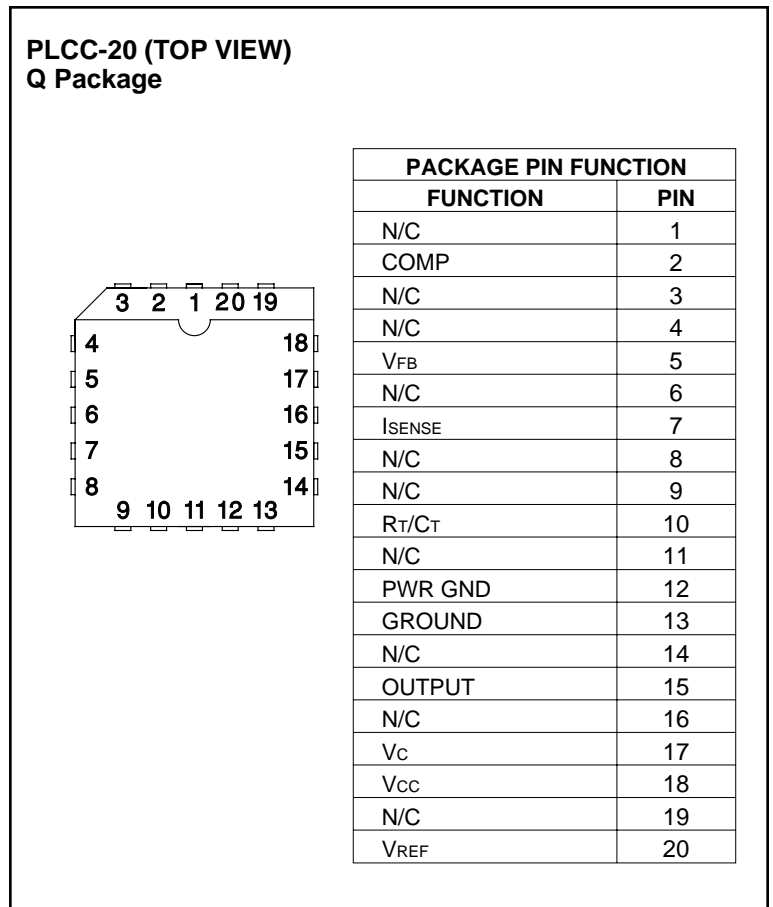
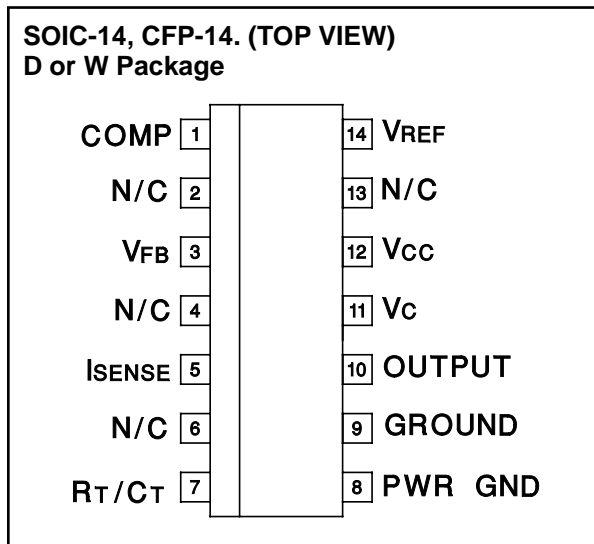
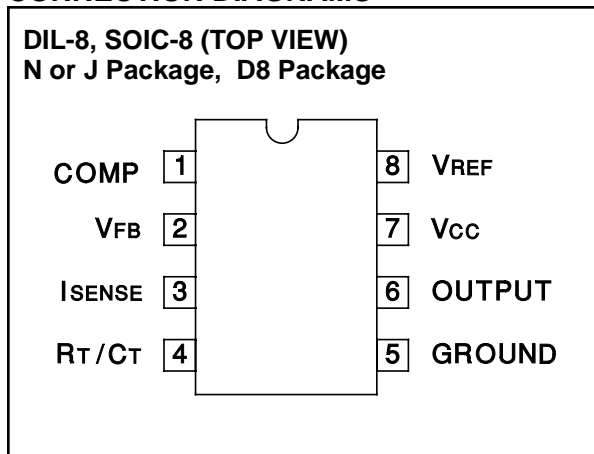


ABSOLUTE MAXIMUM RATINGS(Note 1)

Supply Voltage (Low Impedance Source) 30V
 Supply Voltage (I_{cc} < 30mA) Self Limiting
 Output Current ±1A
 Output Energy (Capacitive Load) 5 μJ
 Analog Inputs (Pins 2, 3) -0.3V to +6.3V
 Error Amp Output Sink Current 10 mA
 Power Dissipation at TA ≤ 25°C (DIL-8) 1 W
 Power Dissipation at TA ≤ 25°C (SOIC-14) 725 mW
 Storage Temperature Range -65°C to +150°C
 Junction Temperature Range -55°C to +150°C
 Lead Temperature (soldering, 10 seconds) 300°C

Note 1: All voltages are with respect to Pin 5.
 All currents are positive into the specified terminal.
 Consult Packaging Section of Databook for thermal limitations and considerations of packages.

CONNECTION DIAGRAMS



DISSIPATION RATING TABLE

Package	TA ≤ 25°C Power Rating	Derating Factor Above TA ≤ 25°C	TA ≤ 70°C Power Rating	TA ≤ 85°C Power Rating	TA ≤ 125°C Power Rating
W	700 mW	5.5 mW/°C	452 mW	370 mW	150 mW

ELECTRICAL CHARACTERISTICS: Unless otherwise stated, these specifications apply for $-55^{\circ}\text{C} \leq T_A \leq 125^{\circ}\text{C}$ for the UC184X; $-40^{\circ}\text{C} \leq T_A \leq 85^{\circ}\text{C}$ for the UC284X; $0^{\circ}\text{C} \leq T_A \leq 70^{\circ}\text{C}$ for the 384X; $V_{CC} = 15\text{V}$ (Note 5); $R_T = 10\text{k}$; $C_T = 3.3\text{nF}$, $T_A = T_J$.

PARAMETER	TEST CONDITIONS	UC1842/3/4/5 UC2842/3/4/5			UC3842/3/4/5			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Reference Section								
Output Voltage	$T_J = 25^{\circ}\text{C}$, $I_o = 1\text{mA}$	4.95	5.00	5.05	4.90	5.00	5.10	V
Line Regulation	$12 \leq V_{IN} \leq 25\text{V}$		6	20		6	20	mV
Load Regulation	$1 \leq I_o \leq 20\text{mA}$		6	25		6	25	mV
Temp. Stability	(Note 2) (Note 7)		0.2	0.4		0.2	0.4	mV/ $^{\circ}\text{C}$
Total Output Variation	Line, Load, Temp. (Note 2)	4.9		5.1	4.82		5.18	V
Output Noise Voltage	$10\text{Hz} \leq f \leq 10\text{kHz}$, $T_J = 25^{\circ}\text{C}$ (Note2)		50			50		μV
Long Term Stability	$T_A = 125^{\circ}\text{C}$, 1000Hrs. (Note 2)		5	25		5	25	mV
Output Short Circuit		-30	-100	-180	-30	-100	-180	mA
Oscillator Section								
Initial Accuracy	$T_J = 25^{\circ}\text{C}$ (Note 6)	47	52	57	47	52	57	kHz
Voltage Stability	$12 \leq V_{CC} \leq 25\text{V}$		0.2	1		0.2	1	%
Temp. Stability	$T_{MIN} \leq T_A \leq T_{MAX}$ (Note 2)		5			5		%
Amplitude	$V_{PIN 4}$ peak to peak (Note 2)		1.7			1.7		V
Error Amp Section								
Input Voltage	$V_{PIN 1} = 2.5\text{V}$	2.45	2.50	2.55	2.42	2.50	2.58	V
Input Bias Current			-0.3	-1		-0.3	-2	μA
AVOL	$2 \leq V_o \leq 4\text{V}$	65	90		65	90		dB
Unity Gain Bandwidth	(Note 2) $T_J = 25^{\circ}\text{C}$	0.7	1		0.7	1		MHz
PSRR	$12 \leq V_{CC} \leq 25\text{V}$	60	70		60	70		dB
Output Sink Current	$V_{PIN 2} = 2.7\text{V}$, $V_{PIN 1} = 1.1\text{V}$	2	6		2	6		mA
Output Source Current	$V_{PIN 2} = 2.3\text{V}$, $V_{PIN 1} = 5\text{V}$	-0.5	-0.8		-0.5	-0.8		mA
VOUT High	$V_{PIN 2} = 2.3\text{V}$, $R_L = 15\text{k}$ to ground	5	6		5	6		V
VOUT Low	$V_{PIN 2} = 2.7\text{V}$, $R_L = 15\text{k}$ to Pin 8		0.7	1.1		0.7	1.1	V
Current Sense Section								
Gain	(Notes 3 and 4)	2.85	3	3.15	2.85	3	3.15	V/V
Maximum Input Signal	$V_{PIN 1} = 5\text{V}$ (Note 3)	0.9	1	1.1	0.9	1	1.1	V
PSRR	$12 \leq V_{CC} \leq 25\text{V}$ (Note 3) (Note 2)		70			70		dB
Input Bias Current			-2	-10		-2	-10	μA
Delay to Output	$V_{PIN 3} = 0$ to 2V (Note 2)		150	300		150	300	ns

Note 2: These parameters, although guaranteed, are not 100% tested in production.

Note 3: Parameter measured at trip point of latch with $V_{PIN 2} = 0$.

Note 4: Gain defined as

$$A = \frac{\Delta V_{PIN 1}}{\Delta V_{PIN 3}}, 0 \leq V_{PIN 3} \leq 0.8\text{V}$$

Note 5: Adjust V_{CC} above the start threshold before setting at 15V.

Note 6: Output frequency equals oscillator frequency for the UC1842 and UC1843.

Output frequency is one half oscillator frequency for the UC1844 and UC1845.

Note 7: Temperature stability, sometimes referred to as average temperature coefficient, is described by the equation:

$$\text{Temp Stability} = \frac{V_{REF(max)} - V_{REF(min)}}{T_J(max) - T_J(min)}$$

$V_{REF(max)}$ and $V_{REF(min)}$ are the maximum and minimum reference voltages measured over the appropriate temperature range. Note that the extremes in voltage do not necessarily occur at the extremes in temperature.

ELECTRICAL CHARACTERISTICS: Unless otherwise stated, these specifications apply for $-55^{\circ}\text{C} \leq T_A \leq 125^{\circ}\text{C}$ for the UC184X; $-40^{\circ}\text{C} \leq T_A \leq 85^{\circ}\text{C}$ for the UC284X; $0^{\circ}\text{C} \leq T_A \leq 70^{\circ}\text{C}$ for the 384X; $V_{CC} = 15\text{V}$ (Note 5); $R_T = 10\text{k}$; $C_T = 3.3\text{nF}$, $T_A = T_J$.

PARAMETER	TEST CONDITION	UC1842/3/4/5 UC2842/3/4/5			UC3842/3/4/5			UNITS
		MIN	TYP	MAX	MIN	TYP	MAX	
Output Section								
Output Low Level	$I_{\text{SINK}} = 20\text{mA}$		0.1	0.4		0.1	0.4	V
	$I_{\text{SINK}} = 200\text{mA}$		1.5	2.2		1.5	2.2	V
Output High Level	$I_{\text{SOURCE}} = 20\text{mA}$	13	13.5		13	13.5		V
	$I_{\text{SOURCE}} = 200\text{mA}$	12	13.5		12	13.5		V
Rise Time	$T_J = 25^{\circ}\text{C}$, $C_L = 1\text{nF}$ (Note 2)		50	150		50	150	ns
Fall Time	$T_J = 25^{\circ}\text{C}$, $C_L = 1\text{nF}$ (Note 2)		50	150		50	150	ns
Under-voltage Lockout Section								
Start Threshold	X842/4	15	16	17	14.5	16	17.5	V
	X843/5	7.8	8.4	9.0	7.8	8.4	9.0	V
Min. Operating Voltage After Turn On	X842/4	9	10	11	8.5	10	11.5	V
	X843/5	7.0	7.6	8.2	7.0	7.6	8.2	V
PWM Section								
Maximum Duty Cycle	X842/3	95	97	100	95	97	100	%
	X844/5	46	48	50	47	48	50	%
Minimum Duty Cycle				0			0	%
Total Standby Current								
Start-Up Current			0.5	1		0.5	1	mA
Operating Supply Current	$V_{\text{PIN } 2} = V_{\text{PIN } 3} = 0\text{V}$		11	17		11	17	mA
V _{CC} Zener Voltage	$I_{\text{CC}} = 25\text{mA}$	30	34		30	34		V

Note 2: These parameters, although guaranteed, are not 100% tested in production.

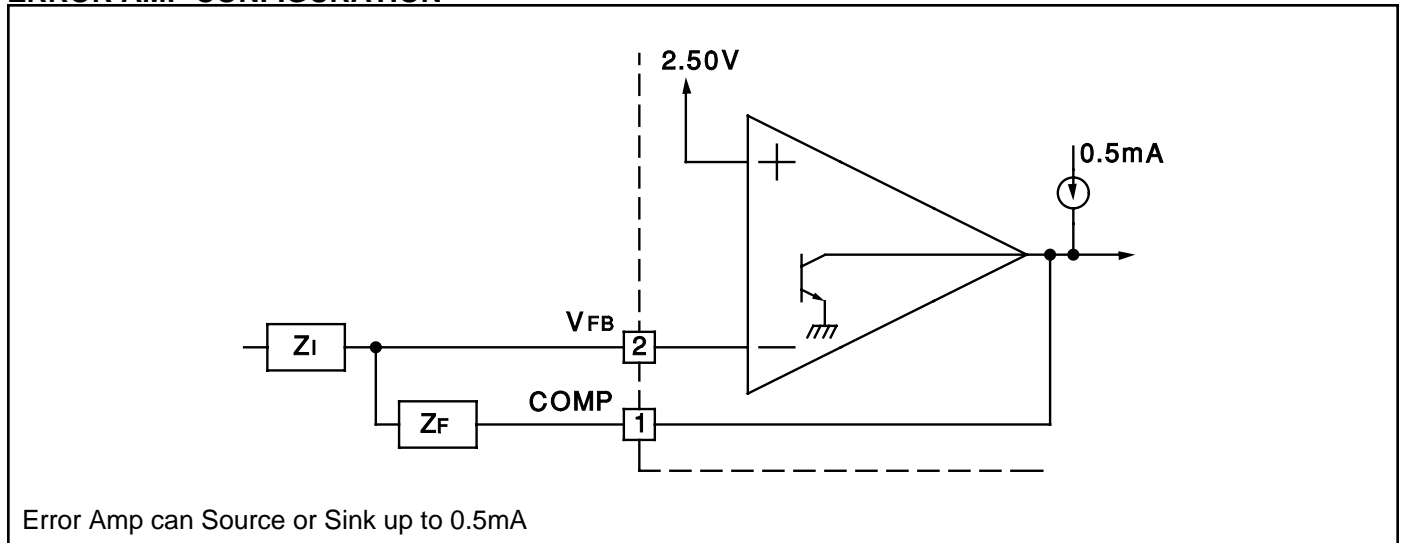
Note 3: Parameter measured at trip point of latch with $V_{\text{PIN } 2} = 0$

Note 4: Gain defined as: $A = \frac{\Delta V_{\text{PIN } 1}}{\Delta V_{\text{PIN } 3}}$; $0 \leq V_{\text{PIN } 3} \leq 0.8\text{V}$.

Note 5: Adjust V_{CC} above the start threshold before setting at 15V.

Note 6: Output frequency equals oscillator frequency for the UC1842 and UC1843.
 Output frequency is one half oscillator frequency for the UC1844 and UC1845.

ERROR AMP CONFIGURATION



UNDER-VOLTAGE LOCKOUT

	UC1842	UC1843
	UC1844	UC1845
V _{ON}	16V	8.4V
V _{OFF}	10V	7.6V

During under-voltage lock-out, the output driver is biased to sink minor amounts of current. Pin 6 should be shunted to ground with a bleeder resistor to prevent activating the power switch with extraneous leakage currents.

CURRENT SENSE CIRCUIT

$$I_{SMAX} \approx \frac{1.0V}{RS}$$

A small RC filter may be required to suppress switch transients.

OSCILLATOR SECTION

For $RT > 5k$ $f \approx \frac{1.72}{RTCT}$

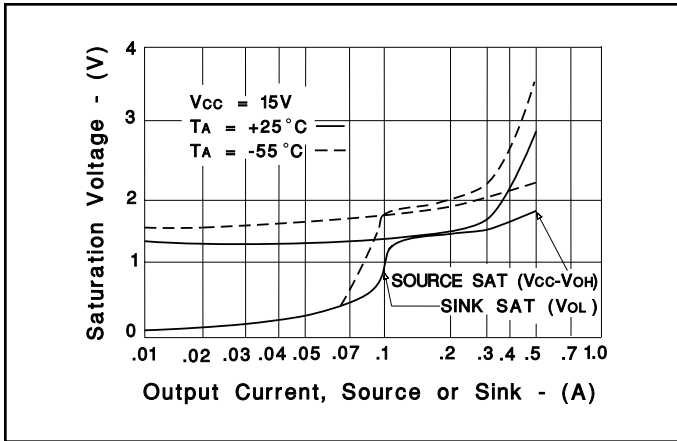
Deadtime vs CT (RT > 5k)

CT - (nF)	td - (μs)
1	0.3
2.2	0.6
4.7	1.2
10	2.4
22	4.8
47	9.6
100	19.2

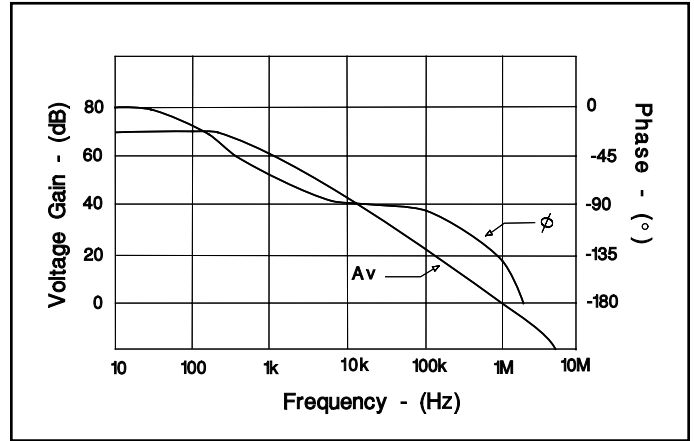
Timing Resistance vs Frequency

FREQUENCY - (Hz)	RT - (kΩ)
100	100
1k	10
10k	1
100k	0.1
1M	0.01

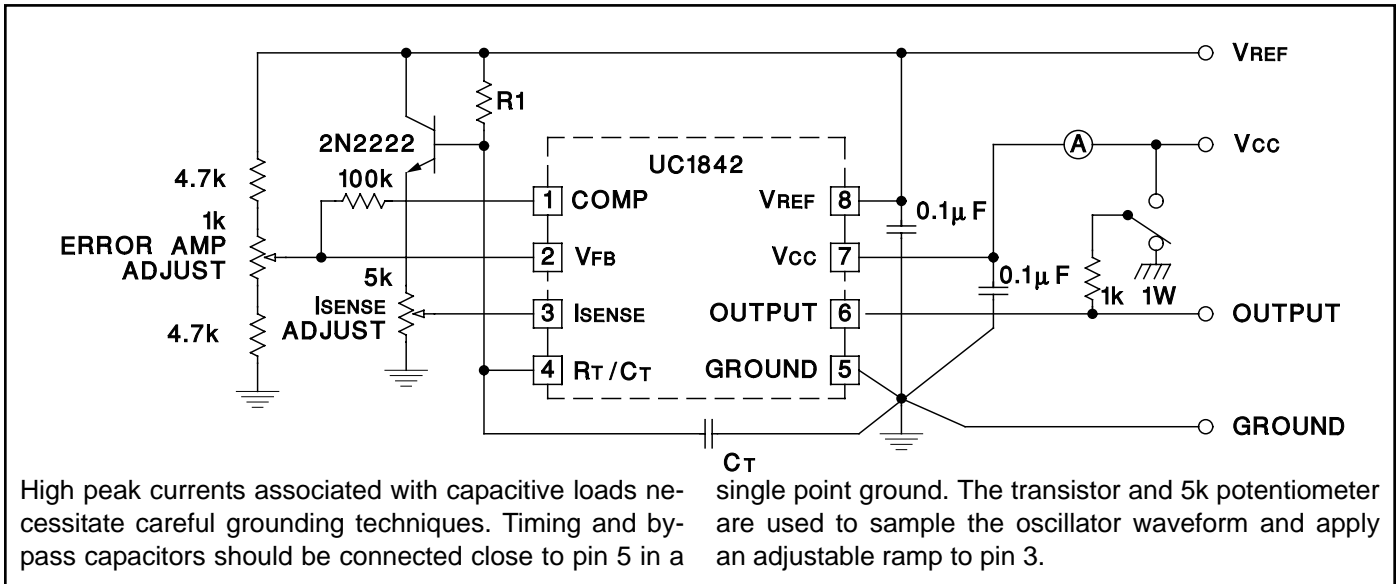
OUTPUT SATURATION CHARACTERISTICS



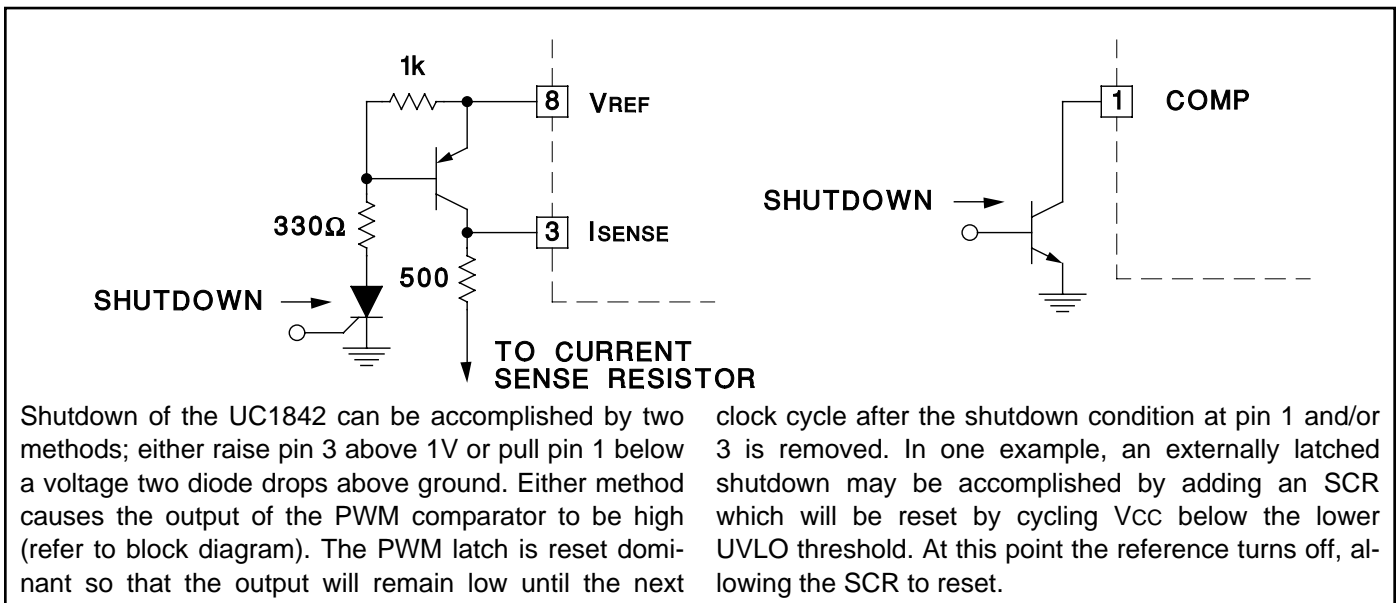
ERROR AMPLIFIER OPEN-LOOP FREQUENCY RESPONSE



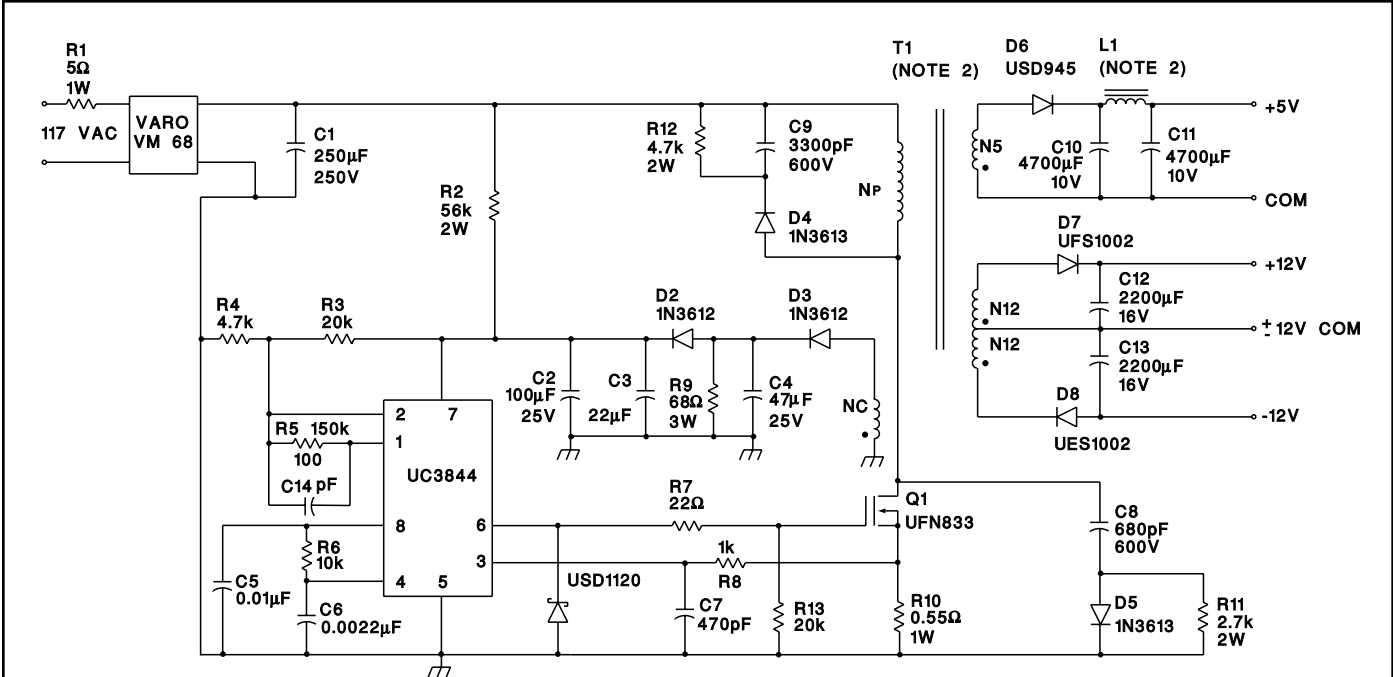
OPEN-LOOP LABORATORY FIXTURE



SHUT DOWN TECHNIQUES



OFFLINE FLYBACK REGULATOR



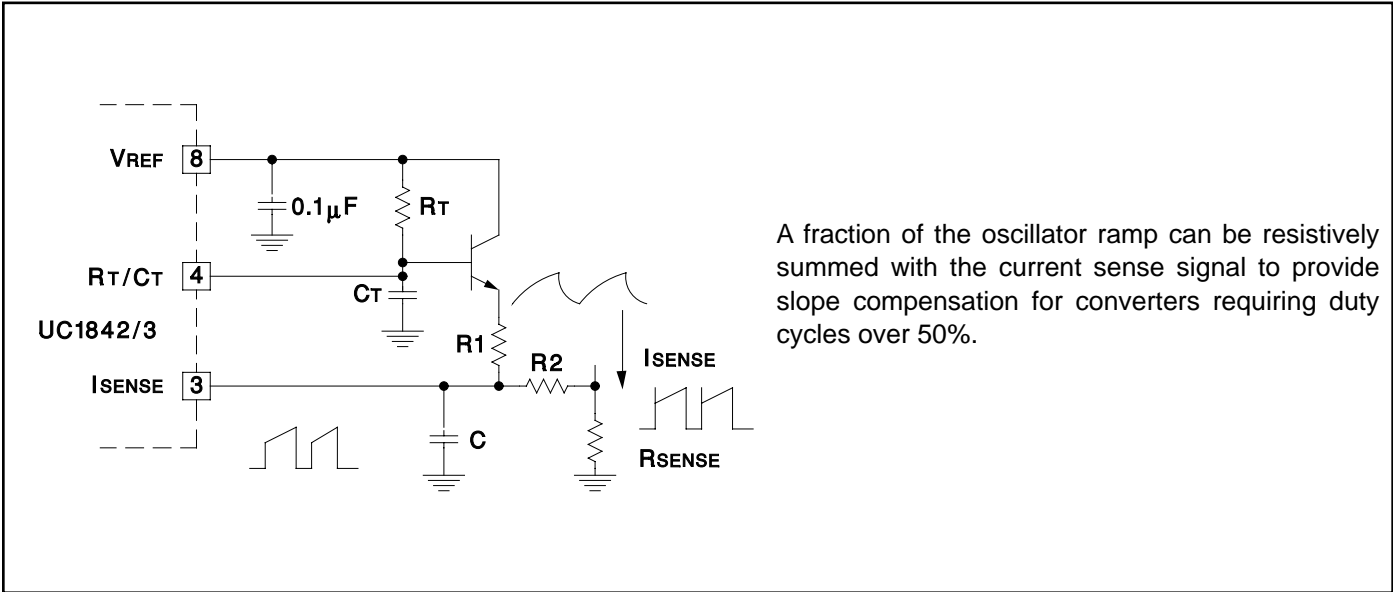
Power Supply Specifications

- 1. Input Voltages 5VAC to 130VAC (50 Hz/60Hz)
- 2. Line Isolation 3750V
- 3. Switching Frequency 40kHz
- 4. Efficiency at Full Load 70%

5. Output Voltage:

- A. +5V, ±5%; 1A to 4A load
Ripple voltage: 50mV P-P Max
- B. +12V, ±3%; 0.1A to 0.3A load
Ripple voltage: 100mV P-P Max
- C. -12V, ±3%; 0.1A to 0.3A load
Ripple voltage: 100mV P-P Max

SLOPE COMPENSATION



A fraction of the oscillator ramp can be resistively summed with the current sense signal to provide slope compensation for converters requiring duty cycles over 50%.

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8670401PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670401VPA	ACTIVE	CDIP	JG	8	1	TBD	Call TI	Level-NC-NC-NC
5962-8670401VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670401XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670402PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670402VPA	ACTIVE	CDIP	JG	8	1	TBD	Call TI	Level-NC-NC-NC
5962-8670402VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670402XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670403PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670403VPA	ACTIVE	CDIP	JG	8	1	TBD	Call TI	Level-NC-NC-NC
5962-8670403VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670403XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670404PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670404VPA	ACTIVE	CDIP	JG	8	1	TBD	Call TI	Level-NC-NC-NC
5962-8670404VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670404XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1842J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1842J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1842JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1842L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1842W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1843L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1843L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1843LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1843W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1844L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1844L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1844LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1844W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1845L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1845L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1845LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1845W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
UC2842D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DR	ACTIVE	SOIC	D	14		TBD	Call TI	Call TI
UC2842DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DW	ACTIVE	SOIC	DW	16	40	TBD	CU NIPDAU	Level-1-220C-UNLIM
UC2842DWTR	ACTIVE	SOIC	DW	16	2000	TBD	CU NIPDAU	Level-1-220C-UNLIM
UC2842J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2842N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC2842P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC2843D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843DR	OBSOLETE	SOIC	D	14		TBD	Call TI	Call TI
UC2843DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2843N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC2844D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC2845D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2845D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2845J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2845N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3842D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
						no Sb/Br)		
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UC3842DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3842N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3842P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3843D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
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UC3843D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3843N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3843P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3843QTR	OBSOLETE	PLCC	FN	20		TBD	Call TI	Call TI
UC3844D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3844N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3844P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3845D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3845N	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3845NG4	ACTIVE	PDIP	P	8	50	TBD	CU NIPDAU	Level-NA-NA-NA
UC3845P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI

⁽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.

Important Information and Disclaimer:The information provided on this page represents TI's knowledge and belief as of the date that it is provided. TI bases its knowledge and belief on information provided by third parties, and makes no representation or warranty as to the accuracy of such information. Efforts are underway to better integrate information from third parties. TI has taken and continues to take reasonable steps to provide representative and accurate information but may not have conducted destructive testing or chemical analysis on incoming materials and chemicals. TI and TI suppliers consider certain information to be proprietary, and thus CAS numbers and other limited information may not be available for release.

In no event shall TI's liability arising out of such information exceed the total purchase price of the TI part(s) at issue in this document sold by TI to Customer on an annual basis.

JG (R-GDIP-T8)

CERAMIC DUAL-IN-LINE



- 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.
 E. Falls within MIL STD 1835 GDIP1-T8

W (R-GDFP-F14)

CERAMIC DUAL FLATPACK



4040180-2/D 07/03

- 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-F14 and JEDEC MO-092AB

FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



- 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

P (R-PDIP-T8)

PLASTIC DUAL-IN-LINE



- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-001

For the latest package information, go to http://www.ti.com/sc/docs/package/pkg_info.htm



D (R-PDSO-G14)

PLASTIC SMALL-OUTLINE PACKAGE

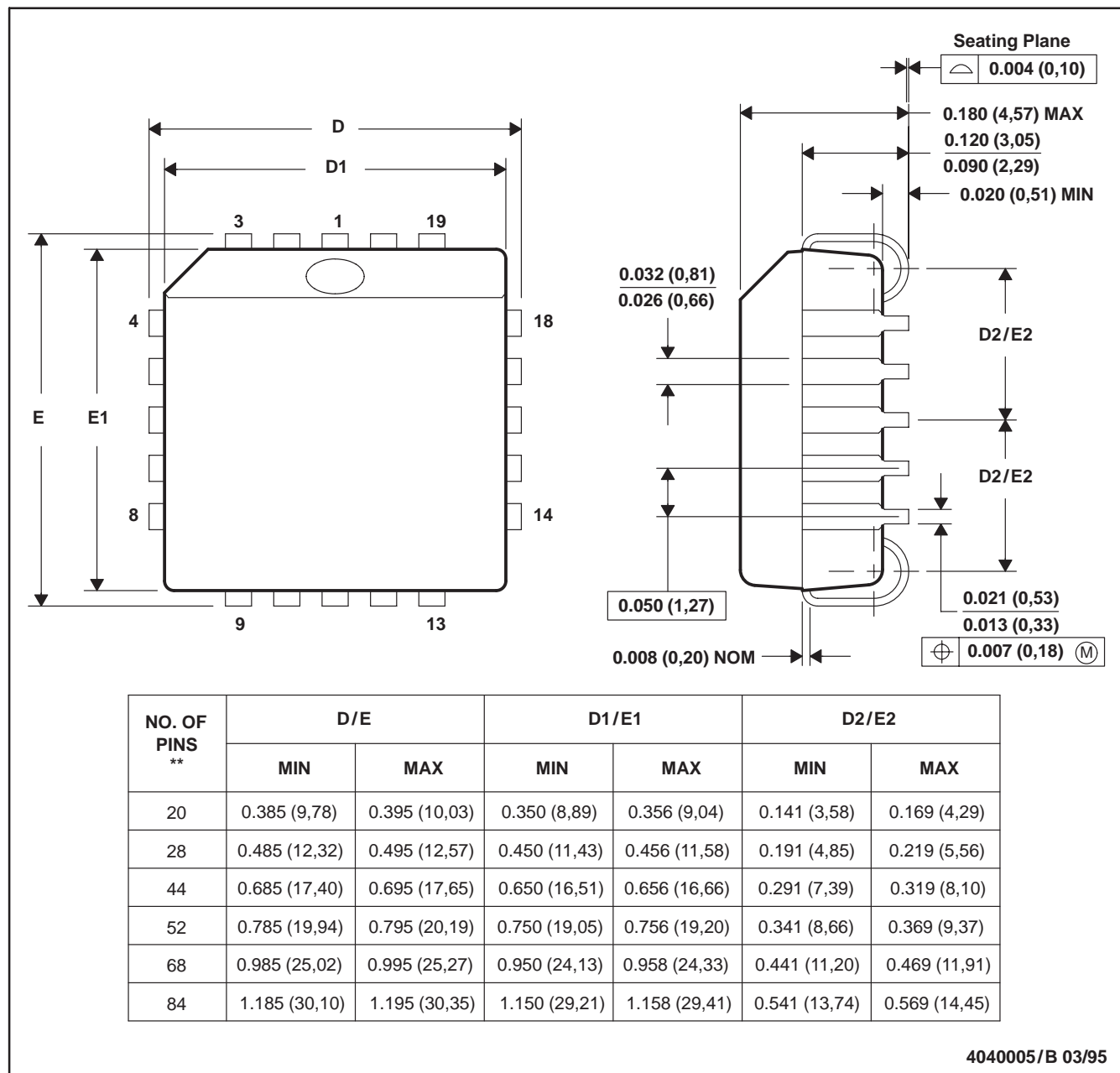


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).
 - D. Falls within JEDEC MS-012 variation AB.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

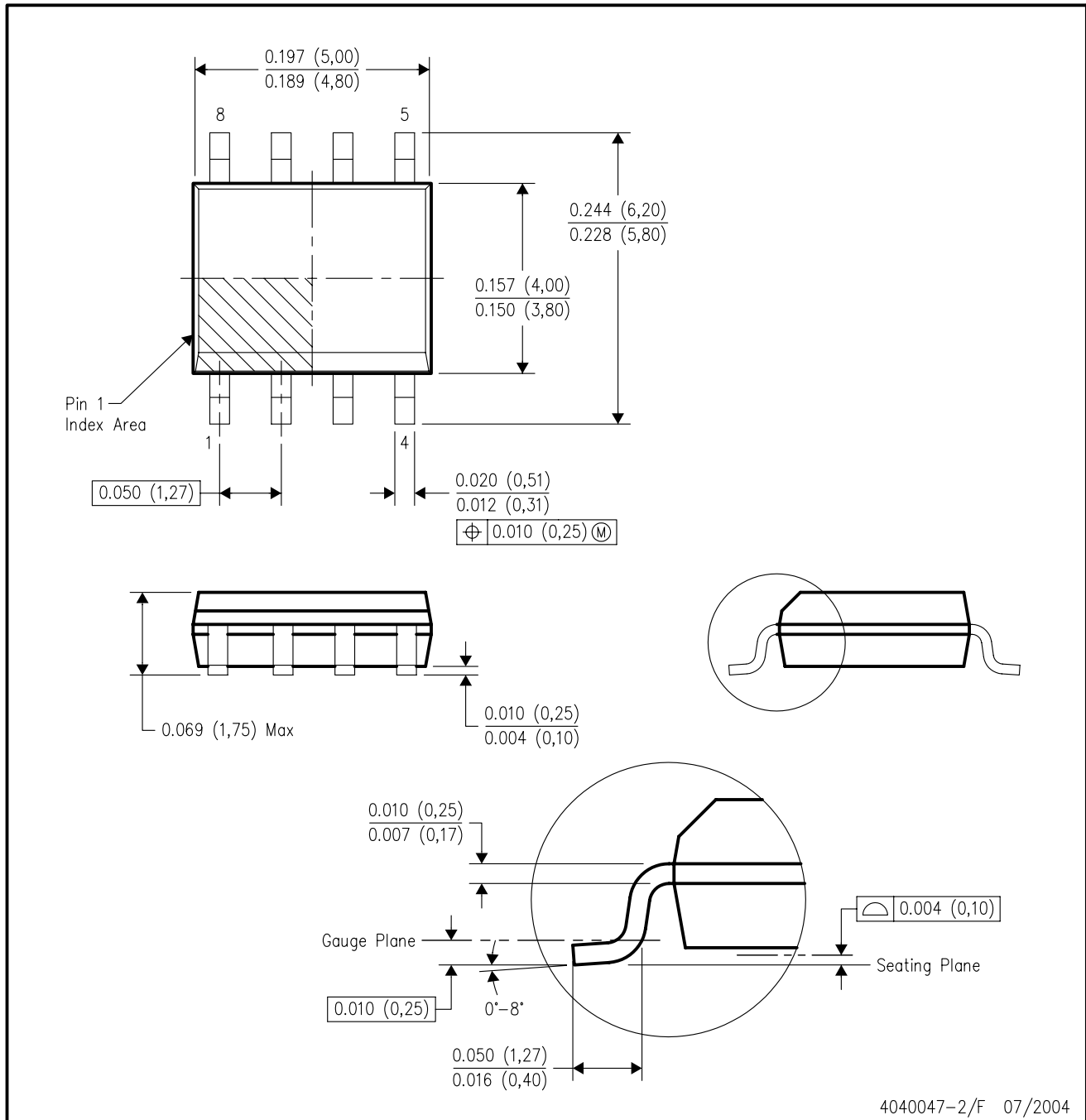
20 PIN SHOWN



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

D (R-PDSO-G8)

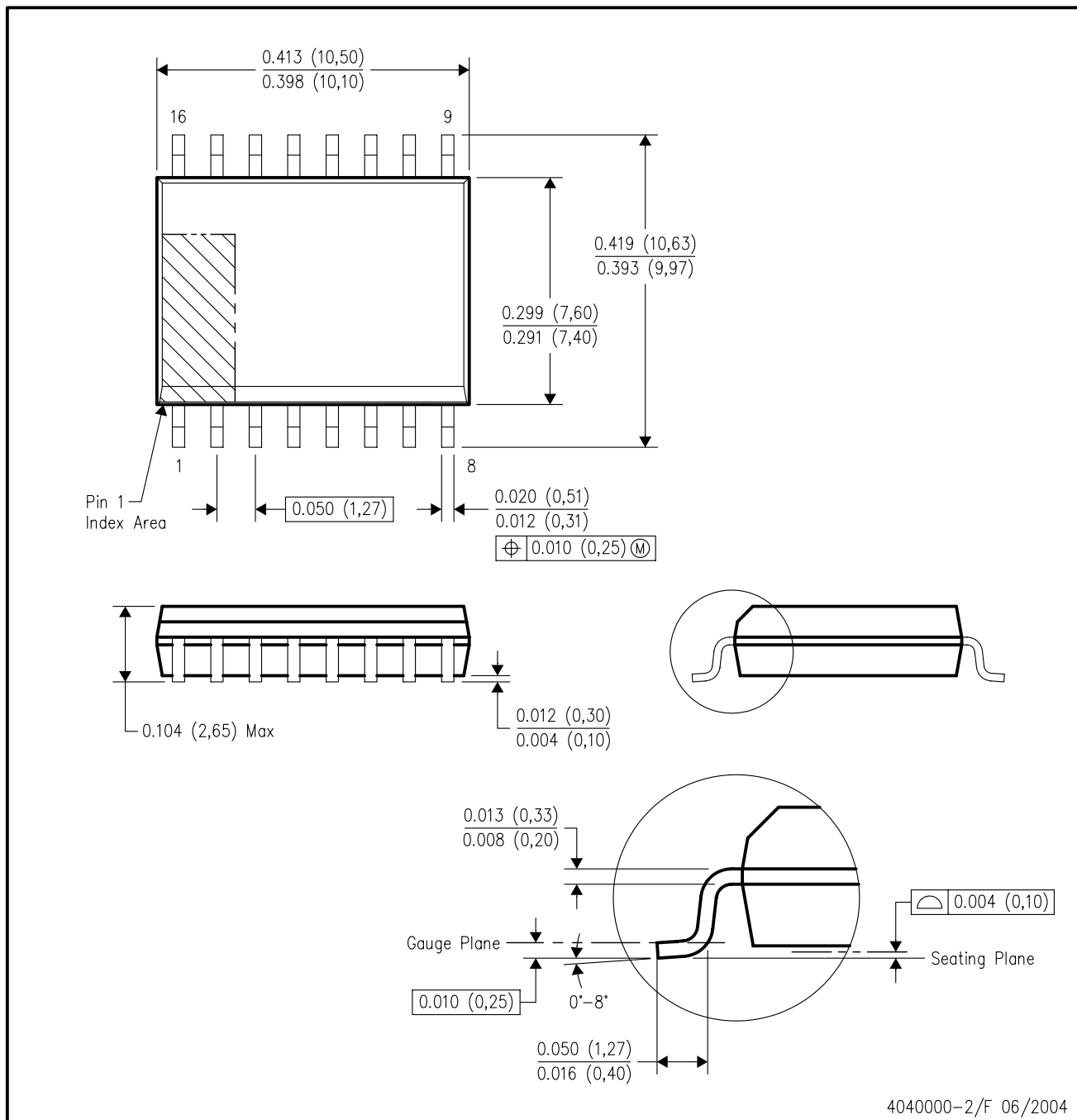
PLASTIC SMALL-OUTLINE PACKAGE



- 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-012 variation AA.

DW (R-PDSO-G16)

PLASTIC SMALL-OUTLINE PACKAGE



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

PACKAGING INFORMATION

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
5962-8670401PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670401VPA	ACTIVE	CDIP	JG	8	1	TBD	A42	Level-NC-NC-NC
5962-8670401VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670401XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670402PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670402VPA	ACTIVE	CDIP	JG	8	1	TBD	A42	Level-NC-NC-NC
5962-8670402VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670402XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670403PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670403VPA	ACTIVE	CDIP	JG	8	1	TBD	A42	Level-NC-NC-NC
5962-8670403VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670403XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
5962-8670404PA	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
5962-8670404VPA	ACTIVE	CDIP	JG	8	1	TBD	A42	Level-NC-NC-NC
5962-8670404VXA	ACTIVE	LCCC	FK	20	1	TBD	Call TI	Level-NC-NC-NC
5962-8670404XA	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1842J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1842J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1842JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1842L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1842W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1843JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1843L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1843L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1843LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1843W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1844JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1844L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1844L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1844LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1844W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845J883B	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC1845JQMLV	ACTIVE	CDIP	JG	8		TBD	Call TI	Call TI
UC1845L	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1845L883B	ACTIVE	LCCC	FK	20	1	TBD	POST-PLATE	Level-NC-NC-NC
UC1845LQMLV	ACTIVE	LCCC	FK	20		TBD	Call TI	Call TI
UC1845W	ACTIVE	CFP	W	14	1	TBD	A42 SNPB	Level-NC-NC-NC

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
UC2842D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC2842D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC2842D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC2842DR	ACTIVE	SOIC	D	14		TBD	Call TI	Call TI
UC2842DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DW	ACTIVE	SOIC	DW	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DWG4	ACTIVE	SOIC	DW	16	40	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DWTR	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842DWTRG4	ACTIVE	SOIC	DW	16	2000	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2842J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2842N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2842NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2842P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC2843D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8G4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843DR	OBSOLETE	SOIC	D	14		TBD	Call TI	Call TI
UC2843DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2843J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2843N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2844D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
UC2844D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2844N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2844NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2845D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2845D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845D8G4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-1-260C-UNLIM
UC2845DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2845DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC2845J	OBSOLETE	CDIP	JG	8		TBD	Call TI	Call TI
UC2845N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC2845NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3842D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3842DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC3842DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC3842J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3842N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3842NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3842P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3843D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
UC3843D8G4	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3843DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	Call TI	Level-1-260C-UNLIM
UC3843J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3843N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3843NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3843P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3843QTR	OBSOLETE	PLCC	FN	20		TBD	Call TI	Call TI
UC3844D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3844J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC
UC3844N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3844NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3844P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI
UC3845D	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845D8	ACTIVE	SOIC	D	8	75	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845D8TR	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845D8TRG4	ACTIVE	SOIC	D	8	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845DG4	ACTIVE	SOIC	D	14	50	Green (RoHS & no Sb/Br)	Call TI	Level-2-260C-1 YEAR
UC3845DTR	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845DTRG4	ACTIVE	SOIC	D	14	2500	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR
UC3845J	ACTIVE	CDIP	JG	8	1	TBD	A42 SNPB	Level-NC-NC-NC

Orderable Device	Status ⁽¹⁾	Package Type	Package Drawing	Pins	Package Qty	Eco Plan ⁽²⁾	Lead/Ball Finish	MSL Peak Temp ⁽³⁾
UC3845N	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3845NG4	ACTIVE	PDIP	P	8	50	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-NC-NC-NC
UC3845P	OBSOLETE	PDIP	P	8		TBD	Call TI	Call TI

⁽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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JG (R-GDIP-T8)

CERAMIC DUAL-IN-LINE



- 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.
 E. Falls within MIL STD 1835 GDIP1-T8

W (R-GDFP-F14)

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-F14 and JEDEC MO-092AB

FK (S-CQCC-N**)

LEADLESS CERAMIC CHIP CARRIER

28 TERMINAL SHOWN



- 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

P (R-PDIP-T8)

PLASTIC DUAL-IN-LINE



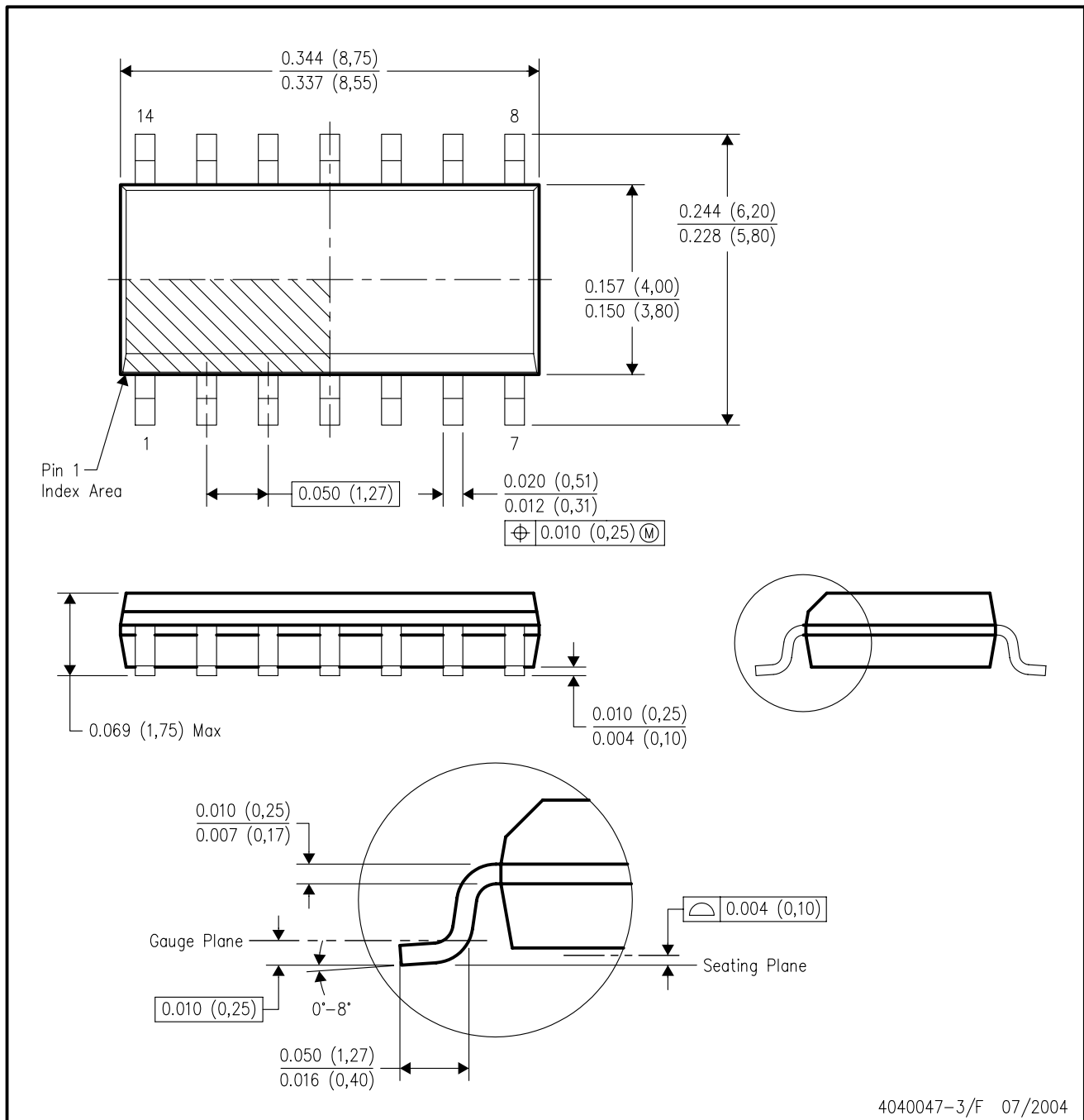
- NOTES: A. All linear dimensions are in inches (millimeters).
 B. This drawing is subject to change without notice.
 C. Falls within JEDEC MS-001

For the latest package information, go to http://www.ti.com/sc/docs/package/pkg_info.htm



D (R-PDSO-G14)

PLASTIC SMALL-OUTLINE PACKAGE

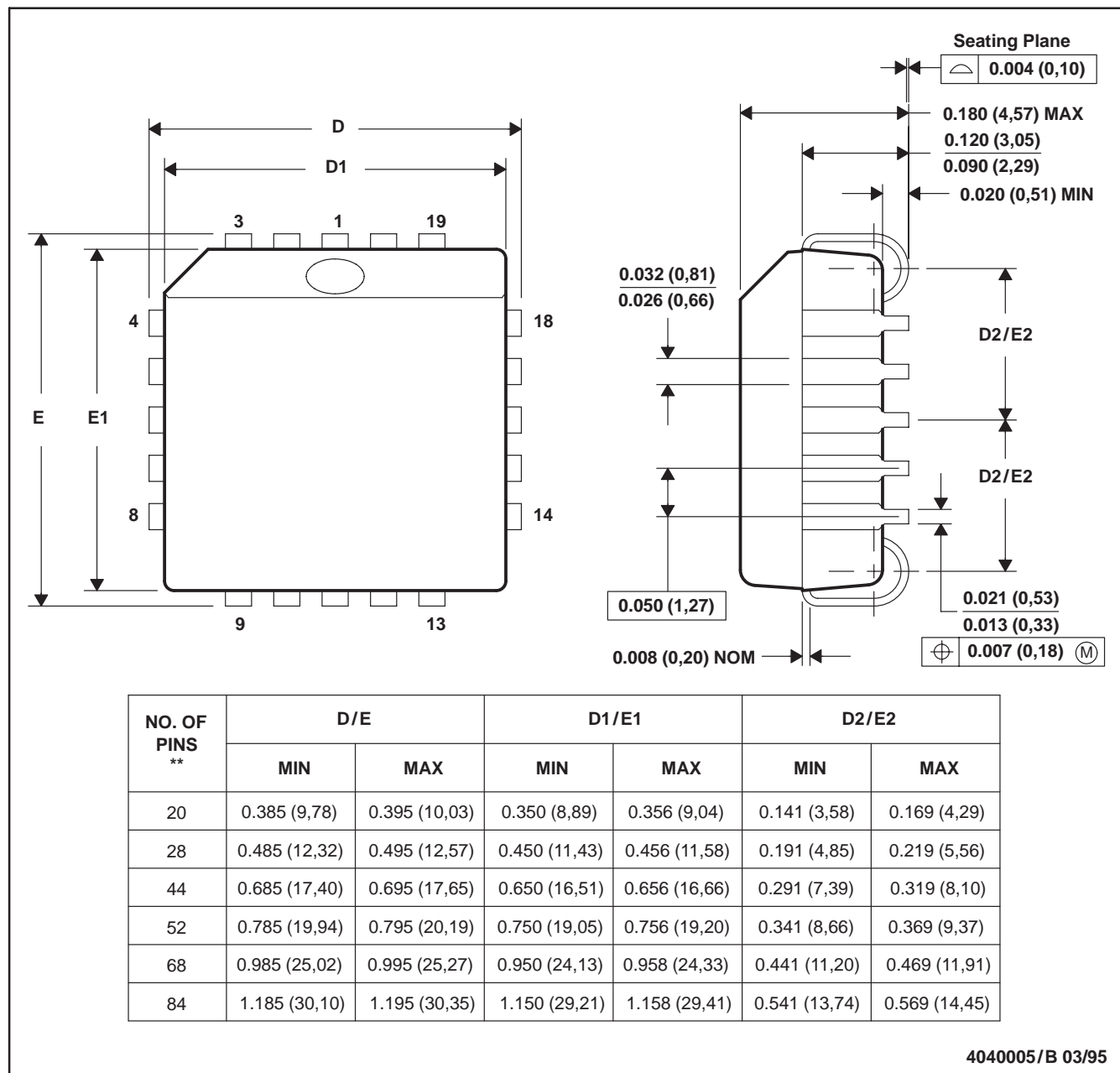


- NOTES:
- A. All linear dimensions are in inches (millimeters).
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion not to exceed 0.006 (0,15).
 - D. Falls within JEDEC MS-012 variation AB.

FN (S-PQCC-J**)

PLASTIC J-LEADED CHIP CARRIER

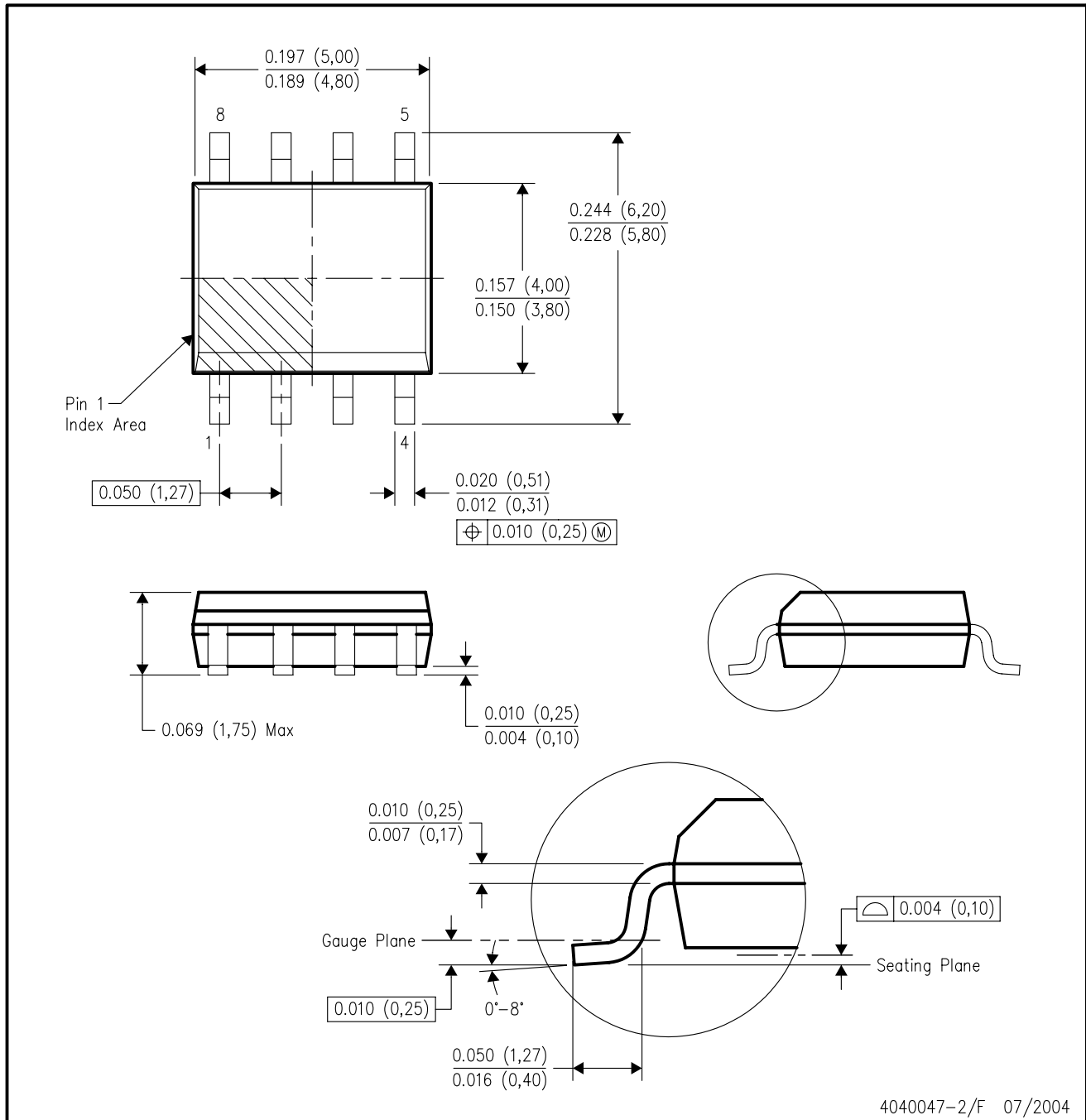
20 PIN SHOWN



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

D (R-PDSO-G8)

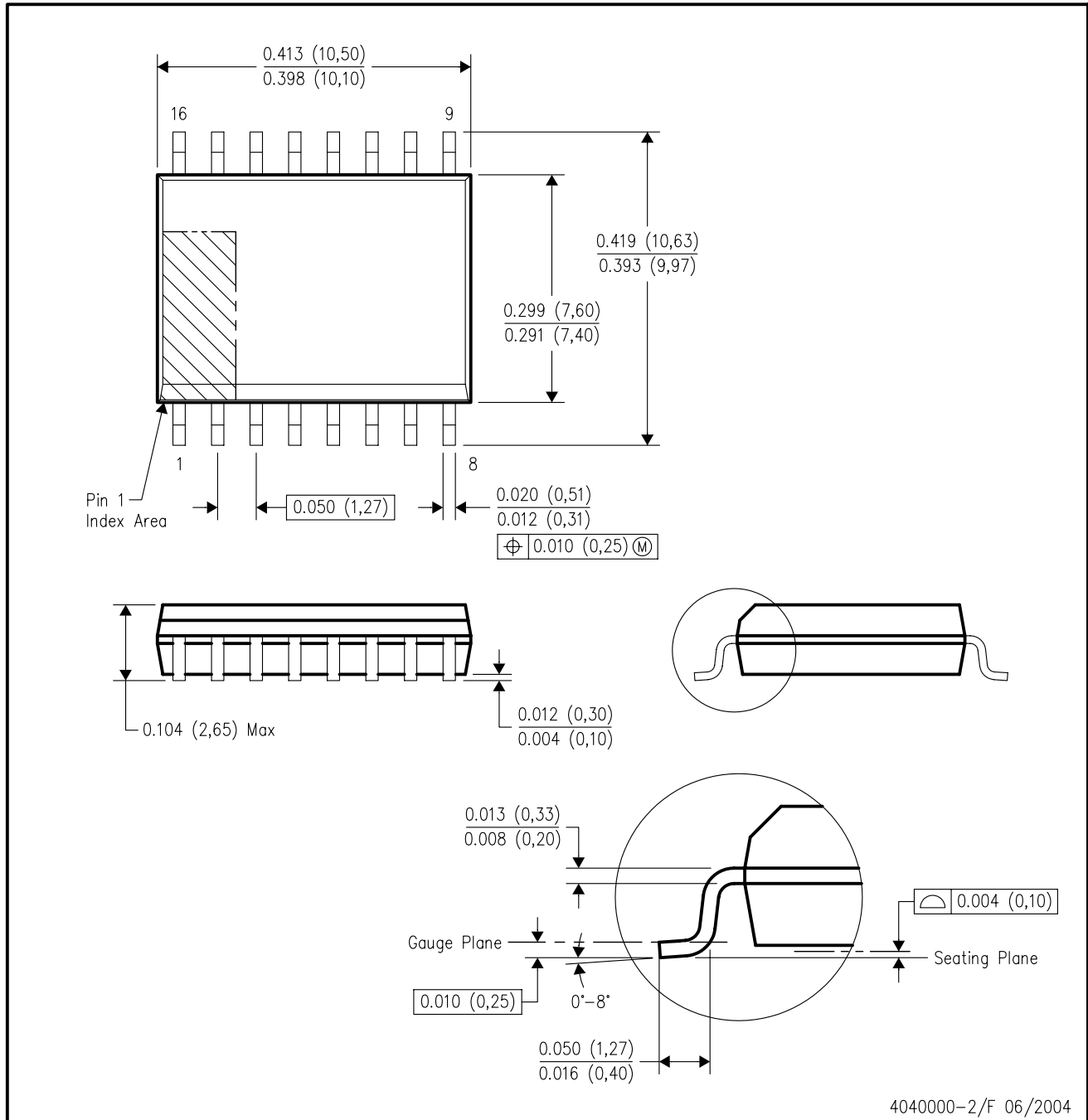
PLASTIC SMALL-OUTLINE PACKAGE



- 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-012 variation AA.

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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UC1844, Status: ACTIVE

Current Mode 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 Selection

- Selection Guides
- Analog & Mixed-Signal Power Supply Controller

Support

- KnowledgeBase
- Contact Technical Support
- TI Cross Reference
- Training
- Part Marking Lookup

Datasheet

[Download Datasheet](#) **Current Mode PWM Controller (Rev. A)** (uc1844.pdf, 1350 KB)
10 Jun 2002 [Download](#)

	UC1844	UC2844	UC3844
Topology	Boost, Flyback, Forward	Boost, Flyback, Forward	Boost, Buck, Flyback, Forward
Control Method	Current Mode	Current Mode	Current Mode
Duty Cycle(Max)(%)	50	50	50
PWM Outputs(#)	1	1	1
Frequency(Max)(kHz)	450	450	450
UVLO Thresholds On/Off(V)	16/10	16/10	16/10
Pin/Package	14CFP,20LCCC,8CDIP	14SOIC,8PDIP,8SOIC	14SOIC,8CDIP,8PDIP,8SOIC
Approx. 1KU Price (US\$)	2.7	.9	.8
	Samples	Samples	Samples
	Inventory	Inventory	Inventory

Product Information

[Features](#) [Save this to your personal library](#)

- Optimized For Off-line And DC To DC Converters
- Low Start Up Current (<1mA)
- Automatic Feed Forward Compensation
- Pulse-by-pulse Current Limiting
- Enhanced Load Response Characteristics
- Under-voltage Lockout With Hysteresis
- Double Pulse Suppression
- High Current Totem Pole Output
- Internally Trimmed Bandgap Reference
- 500khz Operation
- Low RO Error Amp

Description

The UC1842/3/4/5 family of control ICs provides the necessary features to implement off-line or DC to DC fixed frequency current mode control schemes with a minimal external parts count. Internally implemented circuits include under-voltage lockout featuring start up current less than 1mA, a precision reference trimmed for accuracy at the error amp input, logic to insure latched operation, a PWM comparator which also provides current limit control, and a totem pole output stage designed to source or sink high peak current. The output stage, suitable for driving N Channel MOSFETs, is low in the off state.

Differences between members of this family are the under-voltage lockout thresholds and maximum duty cycle ranges. The UC1842 and UC1844 have UVLO thresholds of 16V (on) and 10V (off), ideally suited to off-line applications. The corresponding thresholds for the UC1843 and UC1845 are 8.4V and 7.6V. The UC1842 and UC1843 can operate to duty cycles approaching 100%. A range of zero to 50% is obtained by the UC1844 and UC1845 by the addition of an internal toggle flip flop which blanks the output off every other clock cycle.

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	Top Side Marking	Standard Pack Quantity	Symbols	Footprints	Samples
5962-8670403PA	ACTIVE	-55 to 125		4.50 1KU	CDIP (JG) 8	View	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
5962-8670403VPA	ACTIVE	-55 to 125		62.87 1KU	CDIP (JG) 8	View	1	<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
5962-8670403VXA	ACTIVE	-55 to 125		101.23 1KU	LCCC (FK) 20		1	<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
5962-8670403XA	ACTIVE	-55 to 125		9.50 1KU	LCCC (FK) 20		1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1844J	ACTIVE	-55 to 125		2.70 1KU	CDIP (JG) 8	View	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1844J883B	ACTIVE	-55 to 125	5962-8670403PA	4.50 1KU	CDIP (JG) 8	View	1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1844JQMLV	ACTIVE	-55 to 125			CDIP (JG) 8	View		<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
UC1844L	ACTIVE	-55 to 125		6.82 1KU	LCCC (FK) 20		1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1844L883B	ACTIVE	-55 to 125	5962-8670403XA	9.50 1KU	LCCC (FK) 20		1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples
UC1844LQMLV	ACTIVE	-55 to 125			LCCC (FK) 20			<input type="checkbox"/>	<input type="checkbox"/>	Purchase Samples
UC1844W	ACTIVE	-55 to 125		6.82 1KU	CFP (W) 14		1	<input type="checkbox"/>	<input type="checkbox"/>	Request Military Samples

Inventory

TI Inventory Status								Reported Distributor Inventory			
5962-8670403PA				As of 8:27 AM GMT, 25 Nov 2005				As of 8:27 AM GMT, 25 Nov 2005			
In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase					
610*	>10k 28 Dec	8 Weeks	Europe	EBV Elektronik	1	<input type="text"/>					
5962-8670403VPA				As of 8:27 AM GMT, 25 Nov 2005				As of 8:27 AM GMT, 25 Nov 2005			
In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase					
181*	1953 18 Jan	16 Weeks	None Reported View Distributors								
	1932 24 Jan										
	1953 31 Jan										
	1953 7 Feb										
	1953 13 Feb										
5962-8670403VXA				As of 8:27 AM GMT, 25 Nov 2005				As of 8:27 AM GMT, 25 Nov 2005			
In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase					
0*	427 13 Feb	20 Weeks	None Reported View Distributors								
	427 20 Feb										
	427 27 Feb										
	427 6 Mar										
	427 13 Mar										
5962-8670403XA				As of 8:27 AM GMT, 25 Nov 2005				As of 8:27 AM GMT, 25 Nov 2005			
In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase					
257*		8 Weeks	Americas	Avnet	126	<input type="text"/>					
UC1844J				As of 8:27 AM GMT, 25 Nov 2005				As of 8:27 AM GMT, 25 Nov 2005			
In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase					

View all Distributors

Choose a Region



	1064*	>10k 28 Dec	8 Weeks	Americas	Avnet	330	<input type="text"/>
				Europe	Arrow Southern Europe	14	<input type="text"/>
					Avnet-SILICA	31	<input type="text"/>
					EBV Elektronik	53	<input type="text"/>
					Spoerle	87	<input type="text"/>
UC1844J883B	As of 8:27 AM GMT, 25 Nov 2005			As of 8:27 AM GMT, 25 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	610*	>10k 28 Dec	8 Weeks	Europe	EBV Elektronik	8	<input type="text"/>
UC1844L	As of 8:27 AM GMT, 25 Nov 2005			As of 8:27 AM GMT, 25 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*		8 Weeks	None Reported View Distributors			
UC1844L883B	As of 8:27 AM GMT, 25 Nov 2005			As of 8:27 AM GMT, 25 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	257*		8 Weeks	None Reported View Distributors			
UC1844W	As of 8:27 AM GMT, 25 Nov 2005			As of 8:27 AM GMT, 25 Nov 2005			
	In Stock	In Progress QTY Date	Lead Time	Region	Company	In Stock	Purchase
	0*		8 Weeks	None Reported View Distributors			

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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	
5962-8670403PA	TBD	A42 SNPB	Level-NC-NC-NC	View	View	
5962-8670403VPA	TBD	A42	Level-NC-NC-NC	View		
5962-8670403VXA	TBD	Call TI	Level-NC-NC-NC	View	View	
5962-8670403XA	TBD	POST-PLATE	Level-NC-NC-NC	View	View	
UC1844J	TBD	A42 SNPB	Level-NC-NC-NC	View	View	
UC1844J883B	TBD	A42 SNPB	Level-NC-NC-NC	View	View	
UC1844L	TBD	POST-PLATE	Level-NC-NC-NC	View	View	
UC1844L883B	TBD	POST-PLATE	Level-NC-NC-NC	View	View	
UC1844W	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

<input type="checkbox"/> Datasheets	Keep track of what's new <input type="text"/>
Current Mode PWM Controller (Rev. A) (uc1844.pdf, 1350 KB)	
10 Jun 2002 Download	
<input type="checkbox"/> Application Notes	

DN-65 Considerations in Powering BiCMOS ICs (slua081.htm, 9 KB)

05 Sep 1999 [Abstract](#)

U-100A UC3842/3/4/5 Provides Low-Cost Current-Mode Control (slua143.htm, 9 KB)

05 Sep 1999 [Abstract](#)

DN-40 The Effects of Oscillator Discharge Current Variations on Maximum Duty (slua173.htm, 9 KB)

05 Sep 1999 [Abstract](#)

DN-27 UC1842/UC1842A Family - Summary of Functional Differences (slua163.htm, 9 KB)

05 Sep 1999 [Abstract](#)

DN-26 UC3842A Low-Cost Start-up and Fault Protection Circuit (slua162.htm, 9 KB)

05 Sep 1999 [Abstract](#)

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