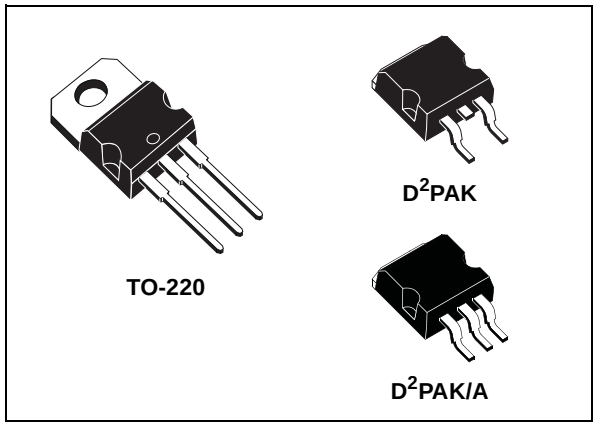
LD1084 SERIES

5A LOW DROP POSITIVE VOLTAGE REGULATOR ADJUSTABLE AND FIXED

- TYPICAL DROPOUT 1.3V (AT 5A)
- THREE TERMINAL ADJUSTABLE OR FIXED OUTPUT VOLTAGE 1.5, 1.8V, 2.5V, 2.85V, 3.3V, 3.6V, 5V, 8V, 9V, 12V.
- GUARANTEED OUTPUT CURRENT UP TO 5A
- OUPUT TOLERANCE ±1% AT 25°C AND ±2% IN FULL TEMPERATURE RANGE
- INTERNAL POWER AND THERMAL LIMIT
- WIDE OPERATING TEMPERATURE RANGE -40°C TO 125°C
- PACKAGE AVAILABLE : TO-220, D^2PAK, D^2PAK/A
- PINOUT COMPATIBILITY WITH STANDARD ADJUSTABLE VREG

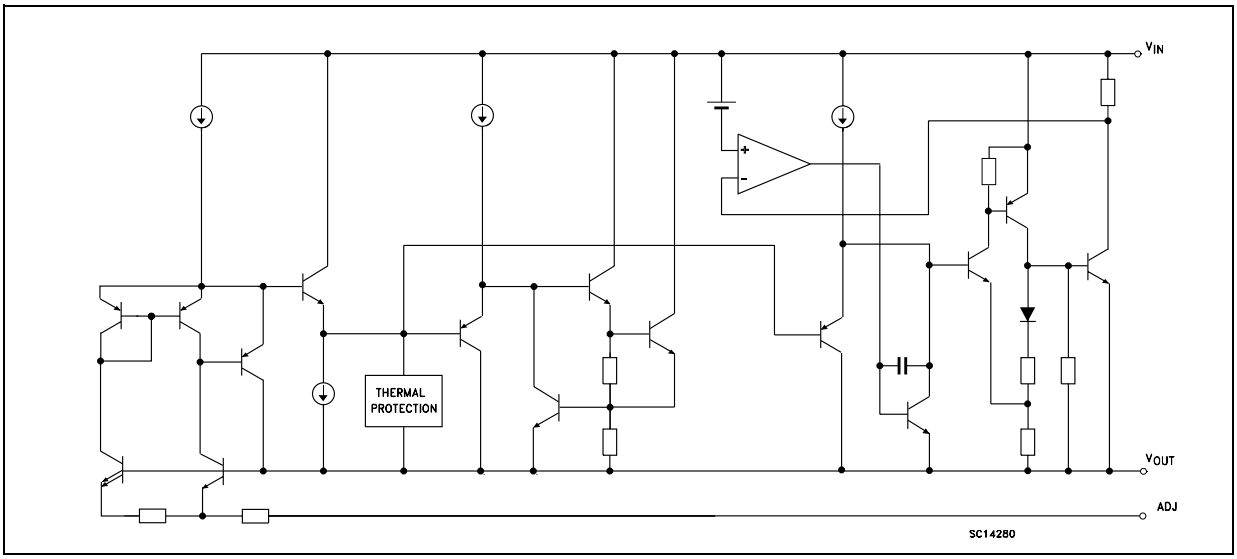


DESCRIPTION

The LD1084 is a LOW DROP Voltage Regulator able to provide up to 5A of Output Current. Dropout is guaranteed at a maximum of 1.5V at the maximum output current, decreasing at lower loads. The LD1084 is pin to pin compatible with the older 3-terminal adjustable regulators, but has better performances in term of drop and output tolerance .

A 2.85V output version is suitable for SCSI-2 active termination. Unlike PNP regulators, where a part of the output current is wasted as quiescent current, the LD1084 quiescent current flows into the load, so increase efficiency. Only a 10µF minimum capacitor is need for stability.
The device is supplied in TO-220, D^2PAK and D^2PAK/A. On chip trimming allows the regulator to reach a very tight output voltage tolerance, within ±1% at 25°C.

SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

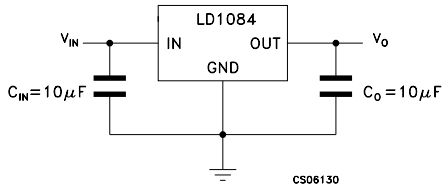
Symbol	Parameter[2]	Value	Unit
V_I	DC Input Voltage	30	V
I_O	Output Current	Internally Limited	mA
P_D	Power Dissipation	Internally Limited	mW
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Junction Temperature Range	-40 to +125	°C

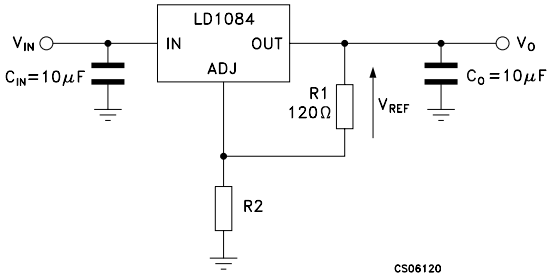
Absolute Maximum Ratings are those values beyond which damage to the device may occur. Functional operation under these condition is not implied.

THERMAL DATA

Symbol	Parameter	TO-220	D^2PAK	Unit
$R_{thj\text{-}case}$	Thermal Resistance Junction-case	3	3	°C/W
$R_{thj\text{-}amb}$	Thermal Resistance Junction-ambient	50	62.5	°C/W

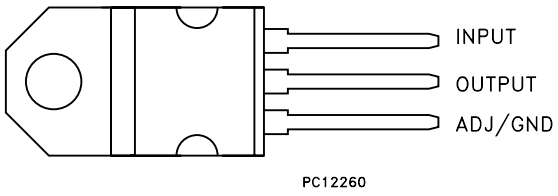
APPLICATION CIRCUITS



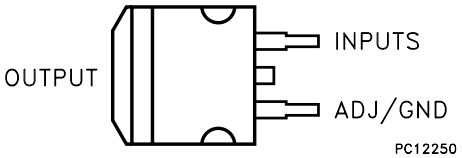


$$V_O = V_{REF}\left(1 + \frac{R_2}{R_1}\right)$$

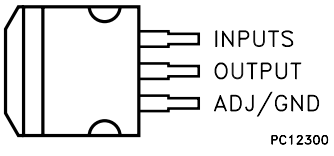
CONNECTION DIAGRAM (top view)



TO-220



D^2PAK



D^2PAK/A

ORDERING CODES

TYPE	D^2PAK (*)	D^2PAK/A	OUTPUT VOLTAGE
LD1084V15	LD1084D2T15	LD1084D2M15	1.5 V
LD1084V18	LD1084D2T18	LD1084D2M18	1.8 V
LD1084V25	LD1084D2T25	LD1084D2M25	2.5 V
LD1084V28	LD1084D2T28	LD1084D2M28	2.85 V
LD1084V33	LD1084D2T33	LD1084D2M33	3.3 V
LD1084V36	LD1084D2T36	LD1084D2M36	3.6 V
LD1084V50	LD1084D2T50	LD1084D2M50	5.0 V
LD1084V80	LD1084D2T80	LD1084D2M80	8.0 V
LD1084V90	LD1084D2T90	LD1084D2M90	9.0 V
LD1084V120	LD1084D2T120	LD1084D2M120	12.0 V
LD1084V	LD1084D2T	LD1084D2M	ADJ

(*) Available in Tape & Reel with the suffix "R" for fixed versions and "-R" for adjustable version

LECTRICAL CHARACTERISTICS OF LD1084#15 (V_I=4.5V, $C_I = C_O$ =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	1.485	1.5	1.515	V
		I_O = 0 to 5A V_I = 3.1 to 30V (note 1)	1.47	1.5	1.53	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 3.1 to 18V T_J = 25°C		0.5	6	mV
		I_O = 0 mA V_I = 3.1 to 15V		0.1	6	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	$V_I - V_O$ = 5V	5.5	6.5		A
		$V_I - V_O$ = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 6.8 ± 3V	60	75		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#18 (V_I=4.8V, $C_I = C_O$ =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	1.782	1.8	1.818	V
		I_O = 0 to 5A V_I = 3.4 to 30V (note 1)	1.764	1.8	1.836	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 3.4 to 18V T_J = 25°C		0.5	6	mV
		I_O = 0 mA V_I = 3.4 to 15V		0.1	6	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	$V_I - V_O$ = 5V	5.5	6.5		A
		$V_I - V_O$ = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 6.8 ± 3V	60	75		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#25 (V_I=5.5V, $C_I = C_O$ =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	2.475	2.5	2.525	V
		I_O = 0 to 5A V_I = 4.1 to 30V (note 1)	2.45	2.5	2.55	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 4.1 to 18V T_J = 25°C		0.5	6	mV
		I_O = 0 mA V_I = 4.1 to 18V		0.1	6	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	$V_I - V_O$ = 5V	5.5	6.5		A
		$V_I - V_O$ = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 7.5 ± 3V	60	72		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#285 (V_I=5.85V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	2.821	2.85	2.879	V
		I_O = 0 to 5A V_I = 4.5 to 30V (note 1)	2.793	2.85	2.907	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 4.5 to 18V T_J = 25°C		0.5	6	mV
		I_O = 0 mA V_I = 4.5 to 18V		0.1	6	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 7.85 ± 3V	60	72		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#33 (V_I=6.3V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	3.267	3.3	3.333	V
		I_O = 0 to 5A V_I = 4.9 to 30V (note 1)	3.234	3.35	3.366	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 4.9 to 18V T_J = 25°C		0.5	6	mV
		I_O = 0 mA V_I = 4.9 to 18V		0.1	6	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 8.3 ± 3V	60	72		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#36 (V_I=6.6V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	3.564	3.6	3.636	V
		I_O = 0 to 5A V_I = 5.2 to 30V (note 1)	3.528	3.6	3.672	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 5.2 to 18V T_J = 25°C		0.5	10	mV
		I_O = 0 mA V_I = 5.2 to 18V		0.1	10	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		3	15	mV
		I_O = 0 to 5A		7	20	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 8.6 ± 3V	60	72		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#5 (V_I=8V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	4.95	5	5.05	V
		I_O = 0 to 5A V_I = 6.6 to 30V (note 1)	4.9	5	5.1	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 6.6 to 20V T_J = 25°C		0.5	10	mV
		I_O = 0 mA V_I = 6.6 to 20V		1	10	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		5	20	mV
		I_O = 0 to 5A		10	35	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 10 ± 3V	60	72		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#8 (V_I=11V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	7.92	8	8.08	V
		I_O = 0 to 5A V_I = 9.6 to 30V (note 1)	7.84	8	8.16	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 9.6 to 20V T_J = 25°C		1	18	mV
		I_O = 0 mA V_I = 9.6 to 20V		2	18	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		8	30	mV
		I_O = 0 to 5A		12	60	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 13 ± 3V	54	71		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#9 (V_I=12V, C_I = C_O =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	8.91	9	9.09	V
		I_O = 0 to 5A V_I = 10.6 to 30V (note 1)	8.82	9	9.18	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 10.6 to 20V T_J = 25°C		1	20	mV
		I_O = 0 mA V_I = 10.6 to 20V		2	20	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		8	30	mV
		I_O = 0 to 5A		12	60	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	V_I - V_O = 5V	5.5	6.5		A
		V_I - V_O = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 14 ± 3V	54	70		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084#120 (V_I=15V, $C_I = C_O$ =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 0 mA T_J = 25°C	11.88	12	12.12	V
		I_O = 0 to 5A V_I = 13.6 to 30V (note 1)	11.76	12	12.24	V
ΔV_O	Line Regulation	I_O = 0 mA V_I = 13.6 to 25V T_J = 25°C		2	25	mV
		I_O = 0 mA V_I = 13.6 to 25V		4	25	mV
ΔV_O	Load Regulation	I_O = 0 to 5A T_J = 25°C		12	36	mV
		I_O = 0 to 5A		24	72	V
V_d	Dropout Voltage	I_O =5 A		1.3	1.5	V
I_q	Quiescent Current	$V_I \leq$ 30V		5	10	mA
I_{sc}	Short Circuit Current	$V_I - V_O$ = 5V	5.5	6.5		A
		$V_I - V_O$ = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, I_O = 5A V_I = 17 ± 3V	54	66		dB
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

ELECTRICAL CHARACTERISTICS OF LD1084 (V_I=4.25V, $C_I = C_O$ =10µF, T_A = -40 to 125°C, unless otherwise specified.)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	I_O = 10mA T_J = 25°C	1.237	1.25	1.263	V
		I_O = 10mA to 5A V_I = 2.85 to 30V (note 1)	1.225	1.25	1.275	V
ΔV_O	Line Regulation	I_O = 10mA V_I = 2.85 to 16.5V T_J = 25°C		0.015	0.2	%
		I_O = 10mA V_I = 2.85 to 16.5V		0.035	0.2	%
ΔV_O	Load Regulation	I_O = 10mA to 5A T_J = 25°C		0.1	0.3	%
		I_O = 10mA to 5A		0.2	0.4	%
V_d	Dropout Voltage	I_O = 5A		1.3	1.5	V
$I_{O(min)}$	Minimum Load Current	V_I = 30V		3	10	mA
I_{sc}	Short Circuit Current	$V_I - V_O$ = 5V	5.5	6.5		A
		$V_I - V_O$ = 25V	0.5	0.7		A
	Termal Regulation	T_A = 25°C, 30ms pulse		0.003	0.015	%/W
SVR	Supply Voltage Rejection	f = 120 Hz, C_O = 25 µF, C_{ADJ} = 25 µF, I_O = 5A V_I = 6.25 ± 3V	60	72		dB
I_{ADJ}	Adjust Pin Current	V_I = 4.25V I_O = 10 mA		55	120	µA
ΔI_{ADJ}	Adjust Pin Current Change	I_O = 10mA to 5A V_I = 2.85 to 16.5V (note 1)		0.2	5	µA
eN	RMS Output Noise Voltage (% of V_O)	T_A = 25°C f =10Hz to 10KHz		0.003		%
S	Temperature Stability			0.5		%
S	Long Term Stability	T_A = 125°C 1000Hrs		0.5		%

NOTE 1: See short-circuit current curve for available output current at fixed dropout.

TYPICAL CHARACTERISTICS (unless otherwise specified T_j = 25°C, C_I=10µF (tant.), C_O=22µF (tant.)

Figure 1 : Short Circuit Current vs Dropout Voltage

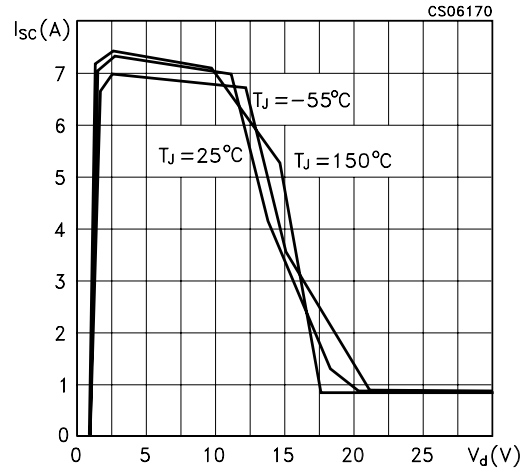


Figure 2 : Line Regulation vs Temperature

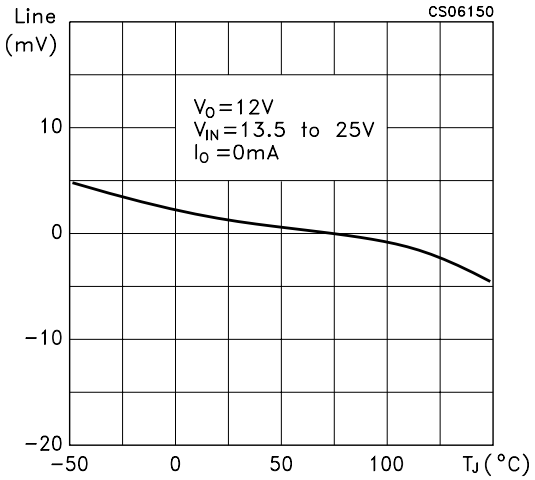


Figure 3 : Quiescent Current vs Temperature

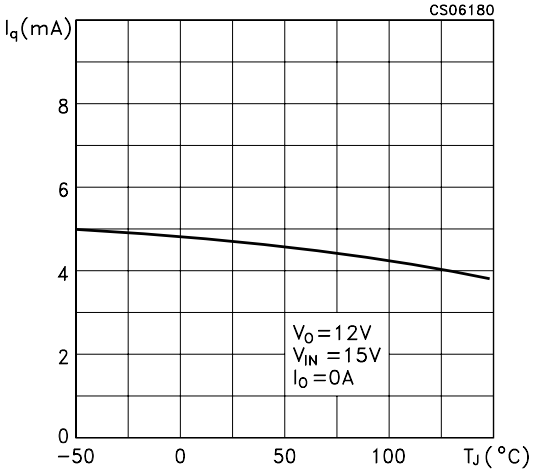


Figure 4 : Output Voltage vs Temperature

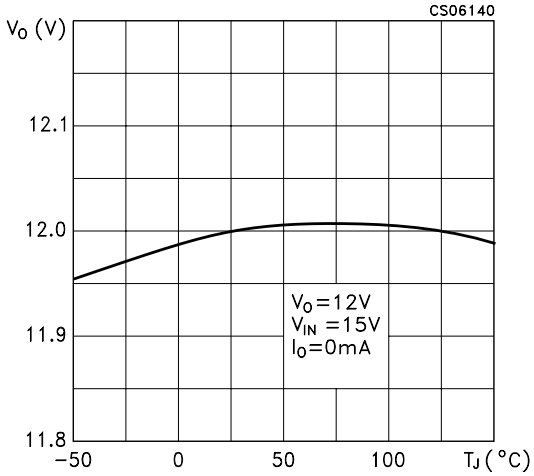


Figure 5 : Load Regulation vs Temperature

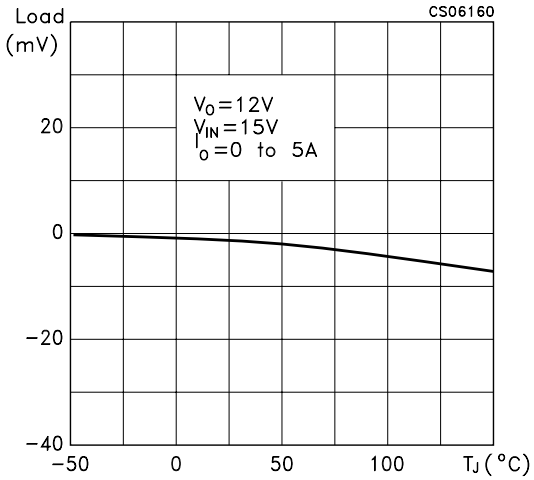


Figure 6 : Quiescent Current vs Output Voltage

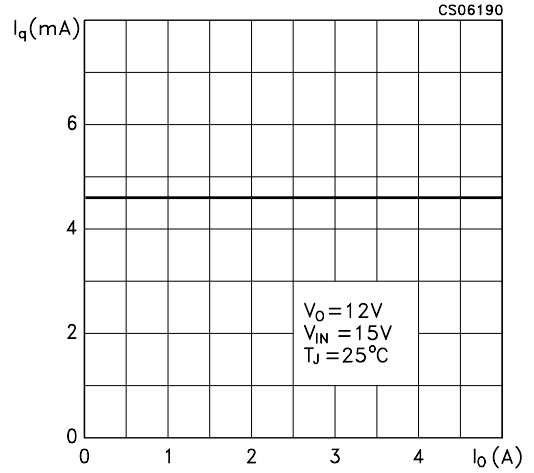


Figure 7 : Quiescent Current vs Input Voltage

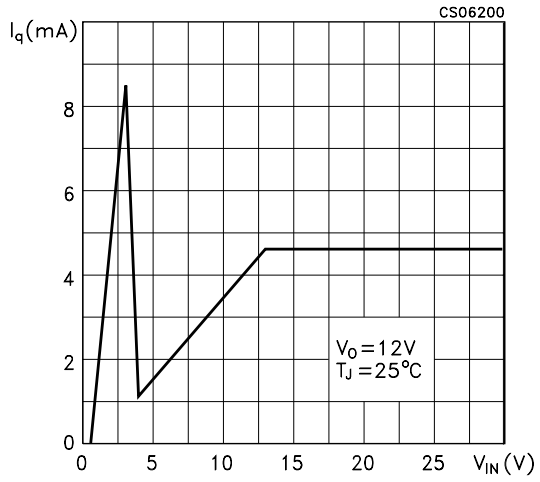


Figure 8 : Dropout Voltage vs Output Current

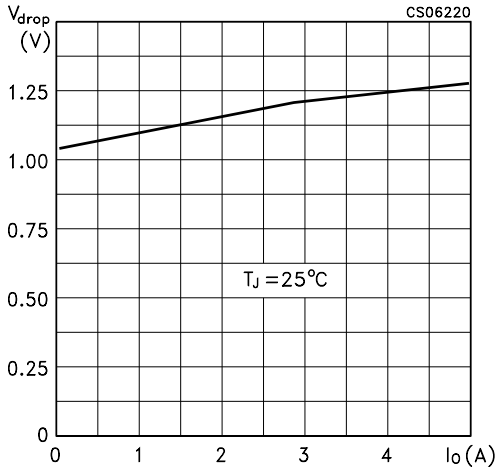


Figure 9 : Supply Voltage Rejection vs Output Current

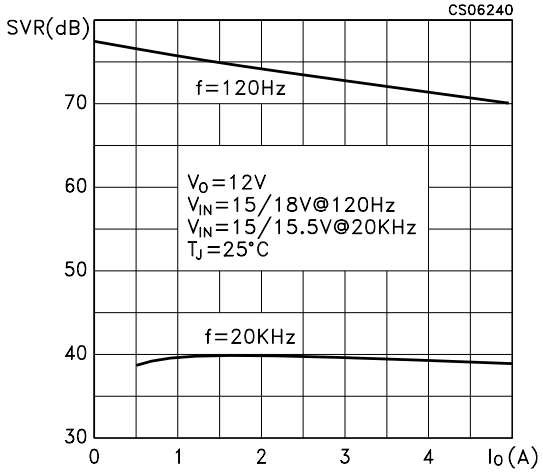


Figure 10 : Dropout Voltage vs Temperature

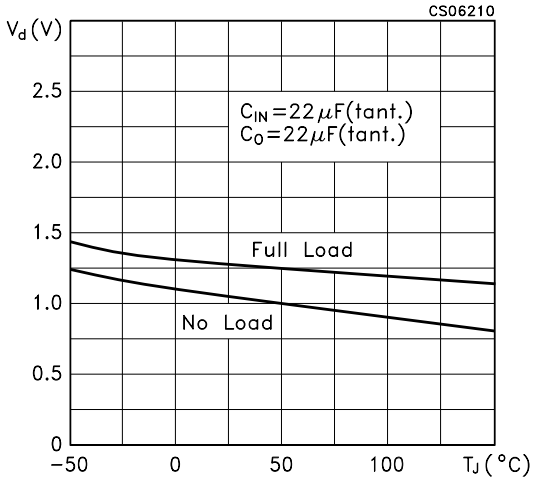


Figure 11 : Supply Voltage Rejection vs Temperature

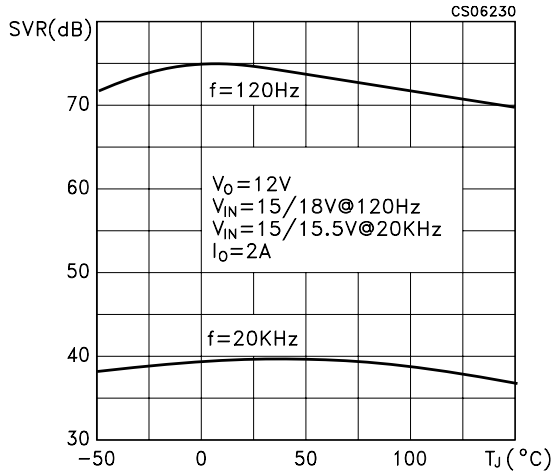


Figure 12 : Supply Voltage Rejection vs Frequency

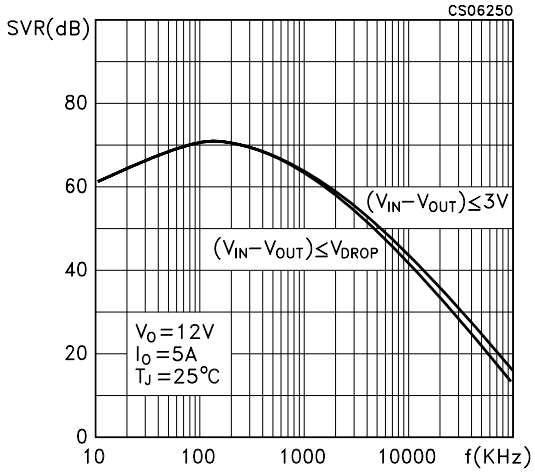


Figure 13 : Adjust Pin Current vs Output Current

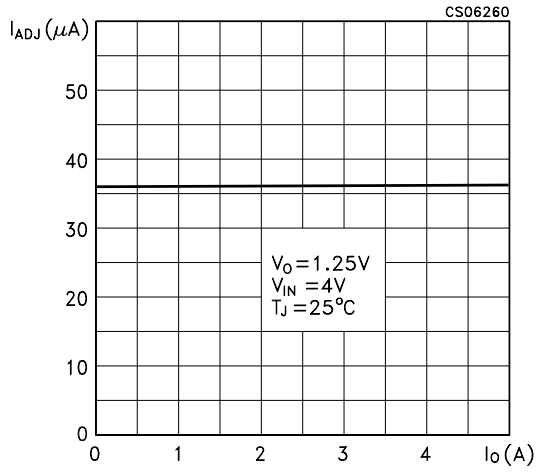


Figure 14 : Reference Voltage vs Temperature

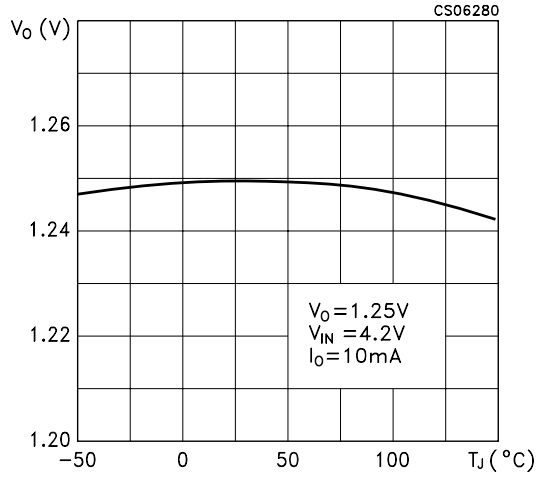


Figure 15 : Load Regulation vs Temperature

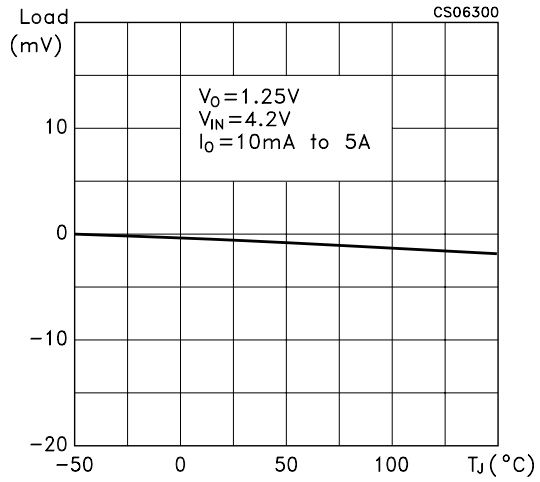


Figure 16 : Adjust Pin Current vs Temperature

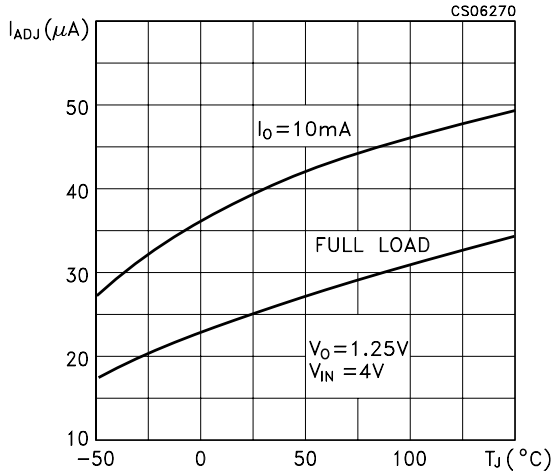


Figure 17 : Line Regulation vs Temperature

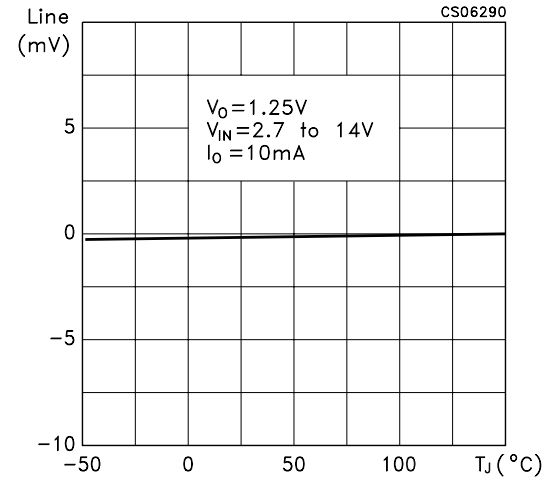


Figure 18 : Minimum Load Currennt vs Temperature

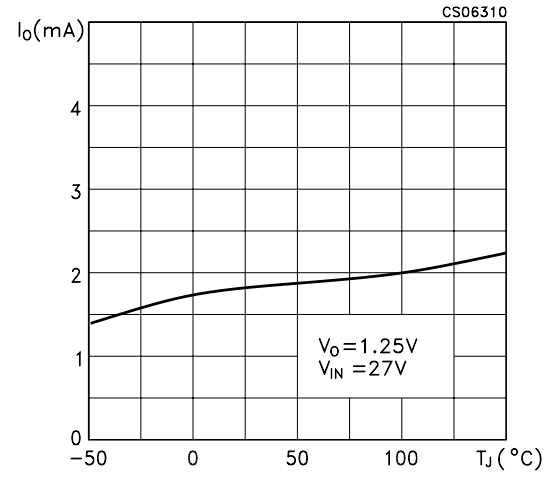


Figure 19 : Supply Voltage Rejection vs Temperature

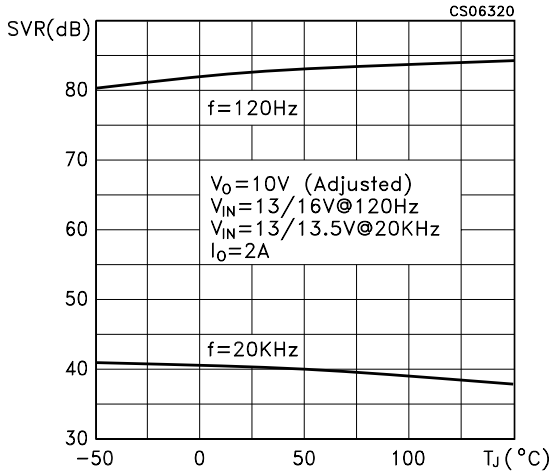


Figure 20 : Supply Voltage Rejection vs Frequency

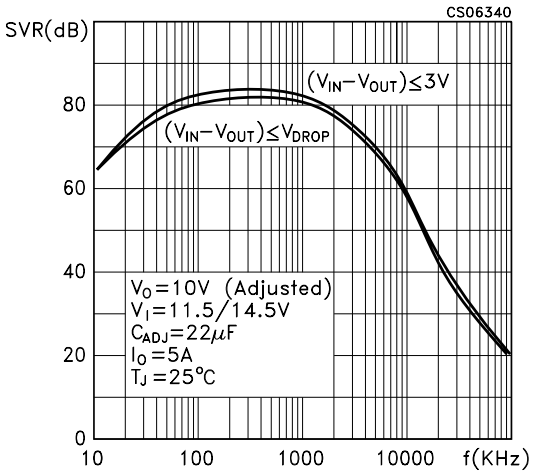


Figure 21 : Stability

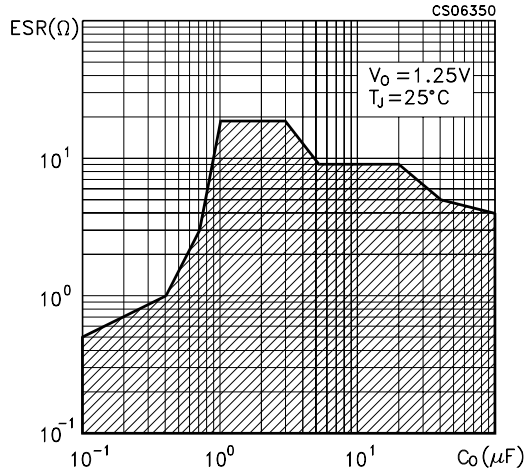


Figure 22 : Supply Voltage Rejection vs Output Current

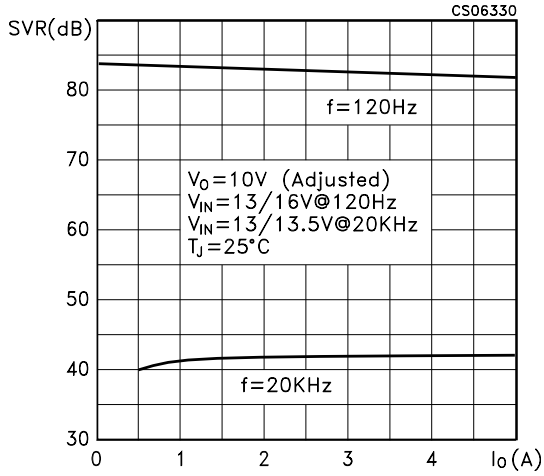


Figure 23 : Stability

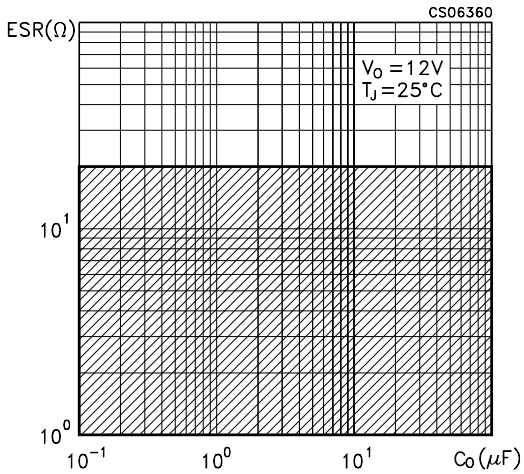
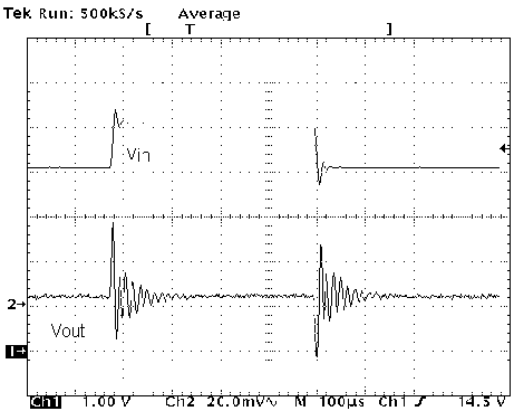
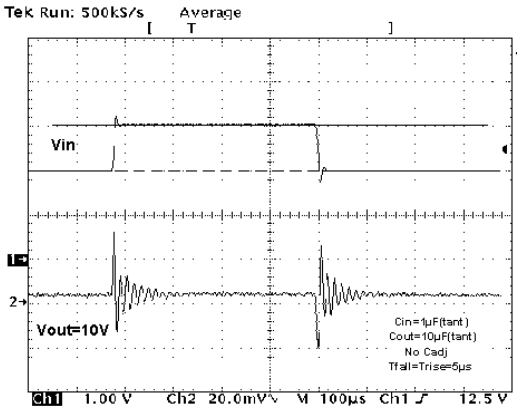


Figure 24 : Line Transient



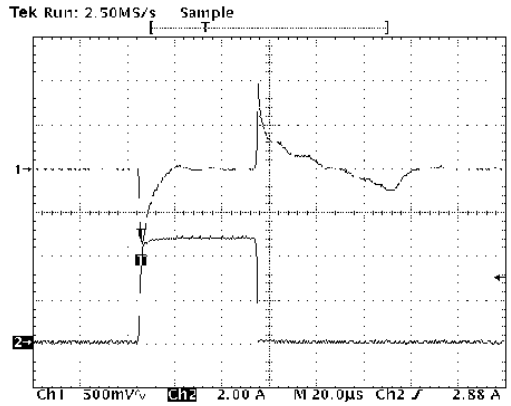
V_I=14 to 15V, I_O=200mA,C_I = 1μF(tant), C_O=10μF(tant), t_s=t_f=5μs

Figure 25 : Line Transient



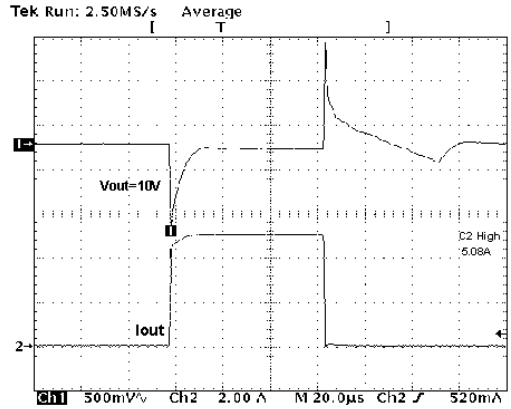
V_I=12 to 13V, I_O=200mA, C_I = 1µF(tant), C_O=10µF(tant), No C_{ADJ}
t_S=t_f=5µs

Figure 26 : Load Transient



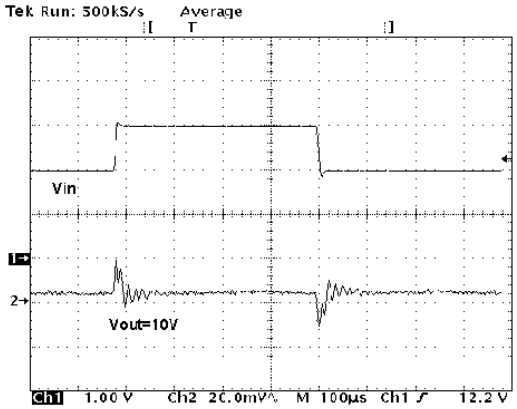
V_I=15 V, I_O=0.1 to 5 A, C_I = 1µF(tant), C_O=10µF(tant)

Figure 27 : Load Transient



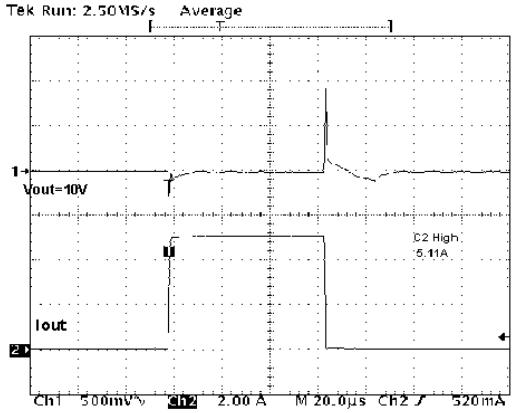
V_I=15 V, I_O=0.1 to 5 A, C_I = 1µF(tant), C_O=10µF(tant), No C_{ADJ}

Figure 28 : Line Transient



V_I=12 to 13V, I_O=200mA, C_I = 1µF(tant), C_O=10µF(tant),
C_{ADJ} = 1µF t_S=t_f=5µs

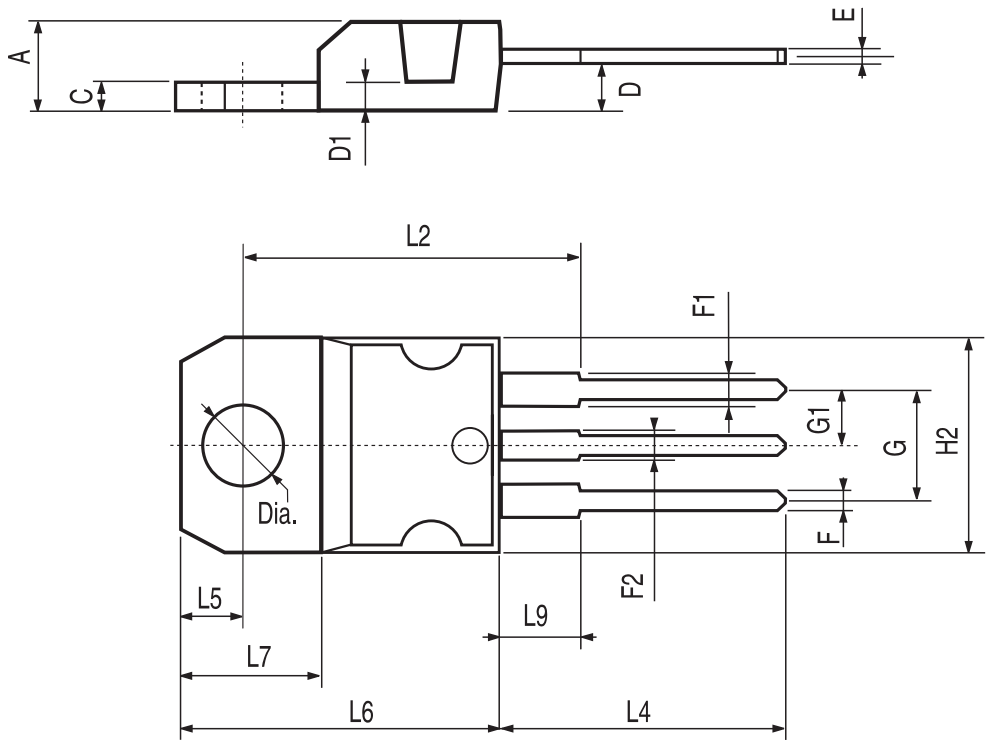
Figure 29 : Load Transient



V_I=13 V, I_O=0.1 to 5 A, C_I = 1µF(tant), C_O=10µF(tant)

TO-220 MECHANICAL DATA

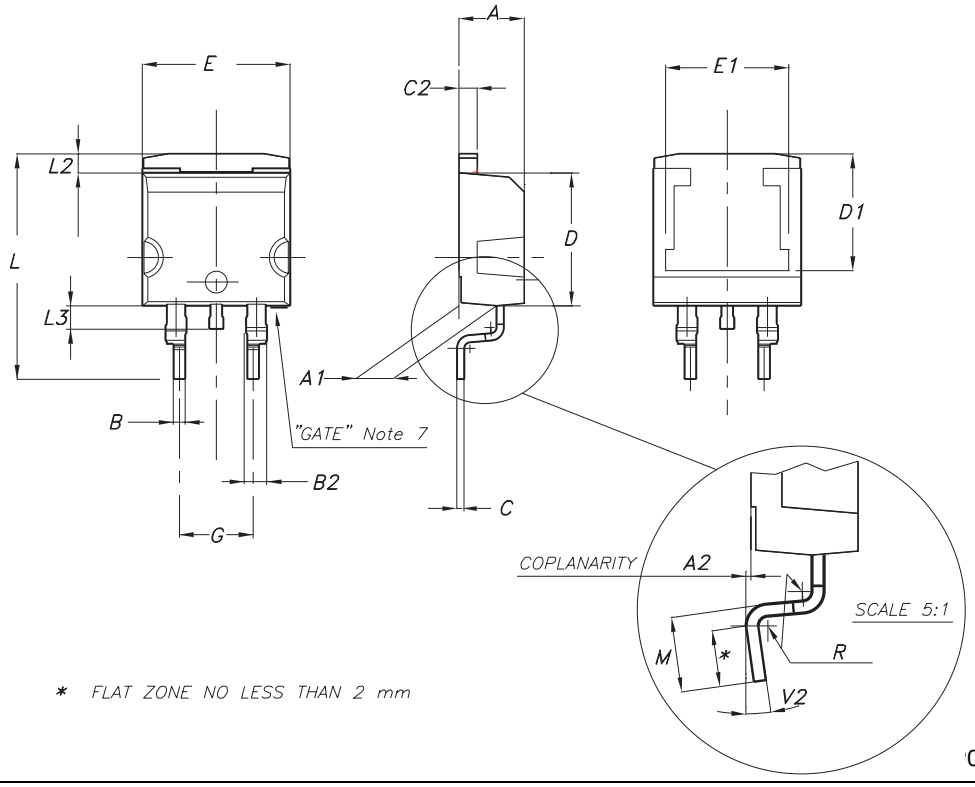
DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
C	1.23		1.32	0.048		0.051
D	2.40		2.72	0.094		0.107
D1		1.27			0.050	
E	0.49		0.70	0.019		0.027
F	0.61		0.88	0.024		0.034
F1	1.14		1.70	0.044		0.067
F2	1.14		1.70	0.044		0.067
G	4.95		5.15	0.194		0.203
G1	2.4		2.7	0.094		0.106
H2	10.0		10.40	0.393		0.409
L2		16.4			0.645	
L4	13.0		14.0	0.511		0.551
L5	2.65		2.95	0.104		0.116
L6	15.25		15.75	0.600		0.620
L7	6.2		6.6	0.244		0.260
L9	3.5		3.93	0.137		0.154
DIA.	3.75		3.85	0.147		0.151



P011C

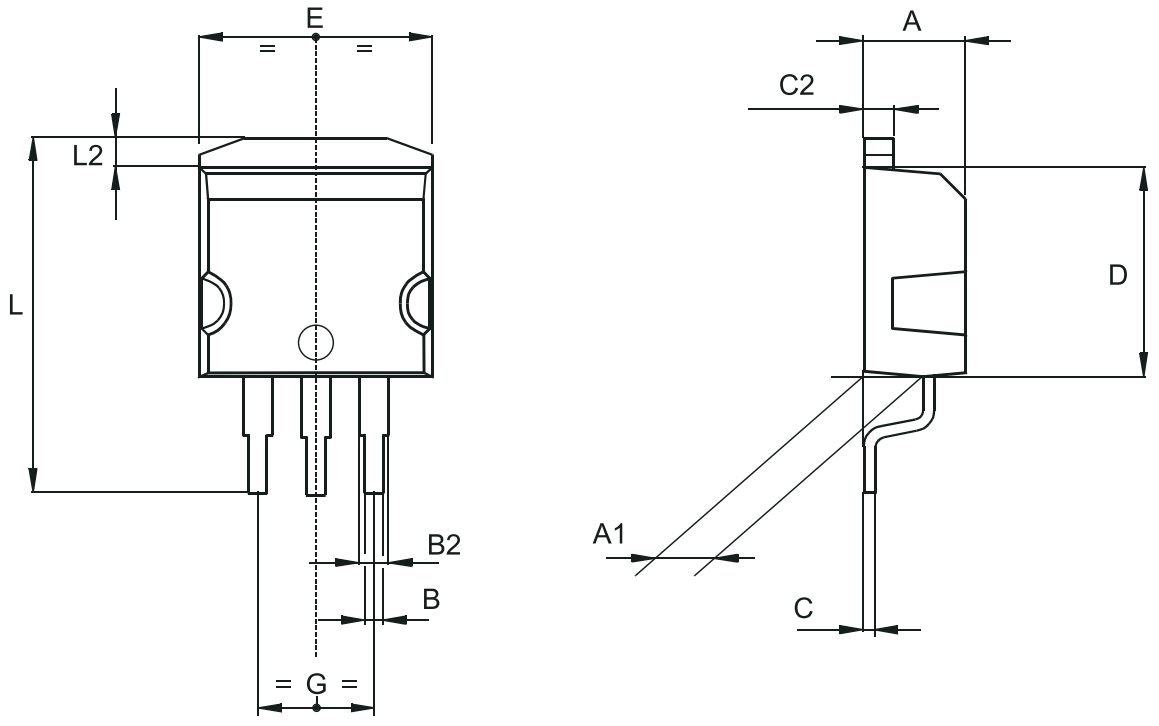
D²PAK MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.4		4.6	0.173		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.7		0.93	0.027		0.036
B2	1.14		1.7	0.044		0.067
C	0.45		0.6	0.017		0.023
C2	1.23		1.36	0.048		0.053
D	8.95		9.35	0.352		0.368
D1		8			0.315	
E	10		10.4	0.393		0.409
E1		8.5			0.335	
G	4.88		5.28	0.192		0.208
L	15		15.85	0.590		0.624
L2	1.27		1.4	0.050		0.055
L3	1.4		1.75	0.055		0.068
M	2.4		3.2	0.094		0.126
R		0.4			0.016	
V2	0°		8°	0°		8°



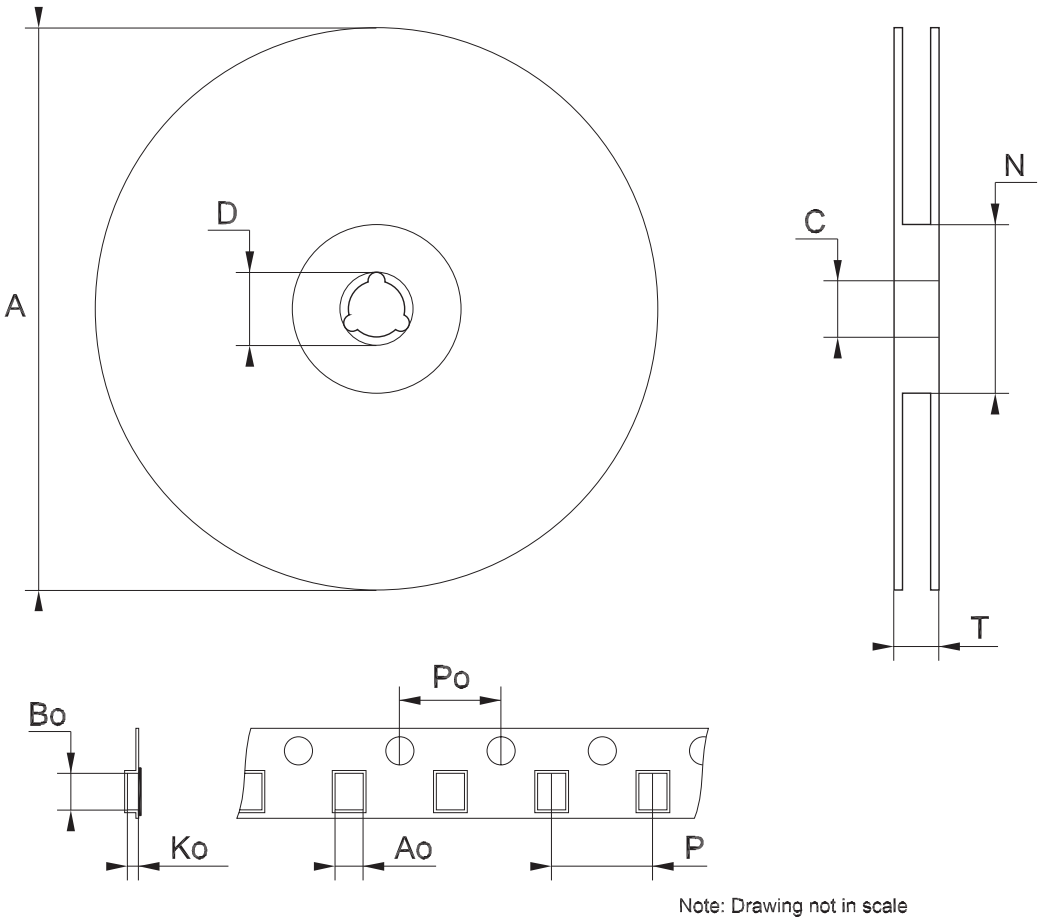
D^2PAK/A MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
A1	2.49		2.69	0.098		0.106
B	0.7		0.93	0.027		0.036
B2	1.14		1.7	0.044		0.067
C	0.45		0.60	0.017		0.023
C2	1.21		1.36	0.047		0.053
D	8.95		9.35	0.352		0.368
E	10		10.4	0.393		0.409
G	4.88		5.28	0.192		0.208
L	15		15.85	0.590		0.106
L2	1.27		1.4	0.050		0.055



Tape & Reel D^2PAK-P^2PAK-D^2PAK/A-P^2PAK/A MECHANICAL DATA

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A			180			7.086
C	12.8	13.0	13.2	0.504	0.512	0.519
D	20.2			0.795		
N	60			2.362		
T			14.4			0.567
Ao	10.50	10.6	10.70	0.413	0.417	0.421
Bo	15.70	15.80	15.90	0.618	0.622	0.626
Ko	4.80	4.90	5.00	0.189	0.193	0.197
Po	3.9	4.0	4.1	0.153	0.157	0.161
P	11.9	12.0	12.1	0.468	0.472	0.476



Note: Drawing not in scale