LD1117A/B SERIES

## LOW DROP FIXED AND ADJUSTABLE POSITIVE VOLTAGE REGULATORS

- LOW DROPOUT VOLTAGE (1.15V TYP @ I_{OUT}=1.2A, 25 ^{o}C)
- VERY LOW QUIESCENT CURRENT (5mA TYP @ 25 ^{o}C)
- TYPE A: OUTPUT CURRENT UP TO 1000mA
- TYPE B: OUTPUT CURRENT UP TO 1200mA
- FIXED OUTPUT VOLTAGE OF: 1.8V, 2.5V, 2.85V, 3.3V, 5.0V
- ADJUSTABLE VERSION AVAILABILITY (V_{ref}=1.25V)
- INTERNAL CURRENT AND THERMAL LIMIT
- ONLY 10 µF FOR STABILITY
- AVAILABLE IN ± 2% (AT 25°C) AND 4% IN FULL TEMPERATURE RANGE
- HIGH SUPPLY VOLTAGE REJECTION : (80dB TYP)
- TEMPERATURE RANGE : 0°C TO 125°C

SOT-223   **TO-252 (DPAK)**

SOT-223 and DPAK surface mount packages optimize the thermal characteristics even offering a relevant space saving effect. High efficency is assured by NPN pass transistor. In fact in this case, unlike than PNP one, the Quiescent Current flows mostly into the load. Only a very common 10µF minimum capacitor is needed for stability. The ADJUSTABLE LD1117 is pin to pin compatible with the other standard Adjustable voltage regulators maintaining the better performances in terms of Drop and Tolerance.

DESCRIPTION

The LD1117A and LD1117B are two LOW DROP Voltage Regulator able to provide respectively up to 1000mA and 1200mA of Output Current, available even in adjustable version (V_{ref}=1.25V). Concerning fixed versions, are offered the following Output Voltages: 1.8V, 2.5V, 2.85V, 3.3V and 5.0V. The 2.85V type is ideal for SCSI-2 lines active termination. The device is supplied in: SOT-223, DPAK. The

BLOCK DIAGRAM
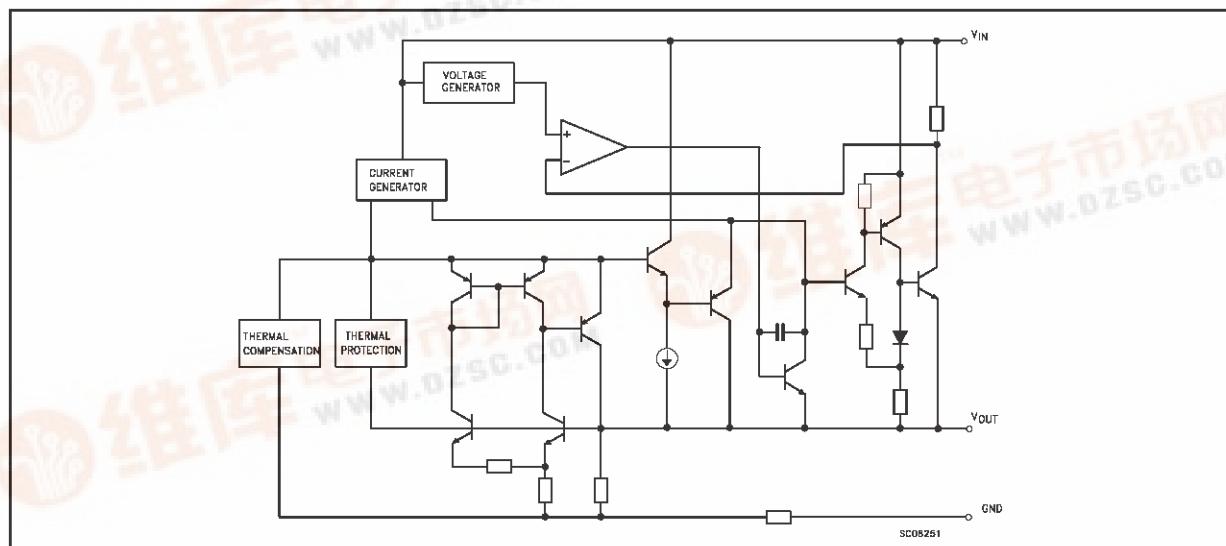
ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{IN}	DC Input Voltage	10	V
P_{tot}	Power Dissipation	12	W
T_{stg}	Storage Temperature Range	-40 to 150	^{o}C
T_{op}	Operating Junction Temperature Range	0 to 125	^{o}C

Absolute Maximum Ratings are those value beyond which damage to the device may occur. Functional operation under these condition is not implied. Over the above suggested Max Power Dissipation a Short Circuit could definetively damage the device.

THERMAL DATA

Symbol	Parameter	SOT-223	DPAK	Unit
$R_{thj-case}$	Thermal Resistance Junction-case	15	8	^{o}C/W

APPLICATION CIRCUIT
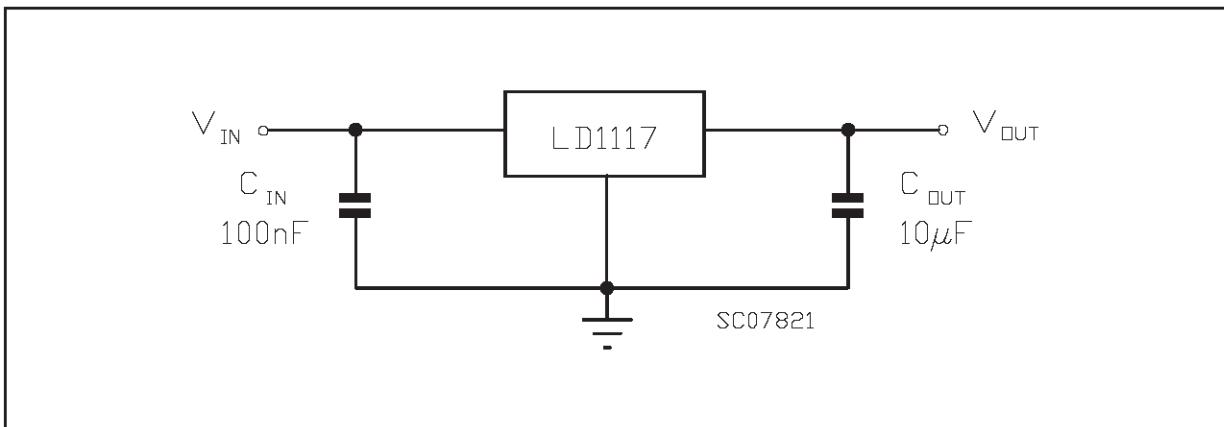
CONNECTION DIAGRAM AND ORDERING NUMBERS (top view)
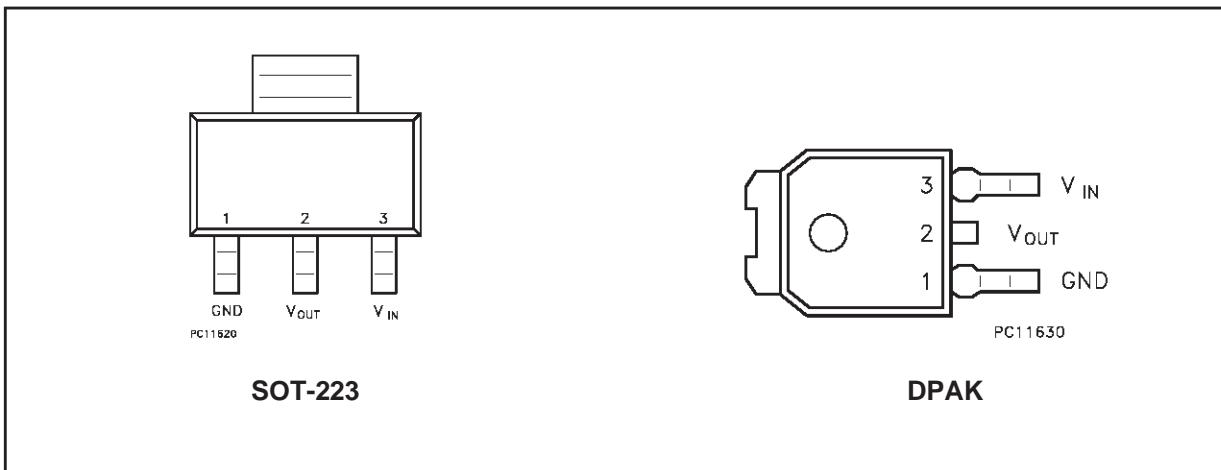
SOT-223   **DPAK**

SOT-223	DPAK	Output Voltage
LD1117AS18TR	LD1117ADT18TR	1.8V
LD1117BS18TR	LD1117BDT18TR	1.8V
LD1117AS25TR	LD1117ADT25TR	2.5V
LD1117BS25TR	LD1117BDT25TR	2.5V
LD1117AS28TR	LD1117ADT28TR	2.85V
LD1117BS28TR	LD1117BDT28TR	2.85V
LD1117AS33TR	LD1117ADT33TR	3.3V
LD1117BS33TR	LD1117BDT33TR	3.3V
LD1117AS50TR	LD1117ADT50TR	5V
LD1117BS50TR	LD1117BDT50TR	5V
LD1117AST-R	LD1117ADT-R	ADJUSTABLE
LD1117BST-R	LD1117BDT-R	FROM 1.25 TO 15V

ELECTRICAL CHARACTERISTICS FOR LD1117A#18 (refer to the test circuits,
T_j = 0 to 125 $^{\circ}$C, C_O = 10 μF, C_I = 10 μF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 3.8 V I_O = 10 mA T_j = 25 $^{\circ}$C	1.764	1.8	1.836	V
V_O	Output Voltage	I_O = 0 to 1000 mA V_I = 3.3 to 8 V	1.728		1.872	V
ΔV_O	Line Regulation	V_I = 3.3 to 8 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 3.3 V I_O = 0 to 1000 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 8 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 $^{\circ}$C	1000	1200		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1000 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 $^{\circ}$C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117B#18 (refer to the test circuits,
T_j = 0 to 125 $^{\circ}$C, C_O = 10 μF, C_I = 10 μF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 3.8 V I_O = 10 mA T_j = 25 $^{\circ}$C	1.764	1.8	1.836	V
V_O	Output Voltage	I_O = 0 to 1200 mA V_I = 3.3 to 8 V	1.728		1.872	V
ΔV_O	Line Regulation	V_I = 3.3 to 8 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 3.3 V I_O = 0 to 1200 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 8 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 $^{\circ}$C	1200	1500		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1200 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 $^{\circ}$C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117A#25 (refer to the test circuits,
$T_j = 0$ to 125 ^oC, $C_O = 10$ µF, $C_I = 10$ µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	$V_I = 4.5$ V $I_O = 10$ mA $T_j = 25\ ^oC$	2.45	2.5	2.55	V
V_O	Output Voltage	$I_O = 0$ to 1000 mA $V_I = 3.9$ to 8 V	2.4		2.6	V
ΔV_O	Line Regulation	$V_I = 3.9$ to 8 V $I_O = 0$ mA		1	6	mV
ΔV_O	Load Regulation	$V_I = 3.9$ V $I_O = 0$ to 1000 mA		1	10	mV
V_I	Operating Input Voltage	$I_O = 100$ mA			10	V
I_d	Quiescent Current	$V_I \leq 10$ V $I_O = 0$ mA		5	10	mA
I_O	Output Current	$V_I - V_O = 5$ V $T_j = 25\ ^oC$	1000	1200		mA
SVR	Supply Voltage Rejection	$I_O = 40$ mA f = 120 Hz $V_I - V_O = 3$ V $V_{ripple} = 1$ Vpp	60	80		dB
V_D	Dropout Voltage	$I_O = 100$ mA $I_O = 500$ mA $I_O = 1000$ mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	$T_a = 25\ ^oC$ 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117B#25 (refer to the test circuits,
$T_j = 0$ to 125 ^oC, $C_O = 10$ µF, $C_I = 10$ µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	$V_I = 4.5$ V $I_O = 10$ mA $T_j = 25\ ^oC$	2.45	2.5	2.55	V
V_O	Output Voltage	$I_O = 0$ to 1200 mA $V_I = 3.9$ to 8 V	2.4		2.6	V
ΔV_O	Line Regulation	$V_I = 3.9$ to 8 V $I_O = 0$ mA		1	6	mV
ΔV_O	Load Regulation	$V_I = 3.9$ V $I_O = 0$ to 1200 mA		1	10	mV
V_I	Operating Input Voltage	$I_O = 100$ mA			10	V
I_d	Quiescent Current	$V_I \leq 10$ V $I_O = 0$ mA		5	10	mA
I_O	Output Current	$V_I - V_O = 5$ V $T_j = 25\ ^oC$	1200	1500		mA
SVR	Supply Voltage Rejection	$I_O = 40$ mA f = 120 Hz $V_I - V_O = 3$ V $V_{ripple} = 1$ Vpp	60	80		dB
V_D	Dropout Voltage	$I_O = 100$ mA $I_O = 500$ mA $I_O = 1200$ mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	$T_a = 25\ ^oC$ 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117A#28 (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 4.85 V I_O = 10 mA T_j = 25 ^{o}C	2.793	2.85	2.907	V
V_O	Output Voltage	I_O = 0 to 1000 mA V_I = 4.25 to 10 V	2.736		2.964	V
ΔV_O	Line Regulation	V_I = 4.25 to 8 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 4.25 V I_O = 0 to 1000 mA		2	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 10 V I_O = 0 mA		4.5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1000	1200		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	75		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1000 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117B#28 (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 4.85 V I_O = 10 mA T_j = 25 ^{o}C	2.793	2.85	2.907	V
V_O	Output Voltage	I_O = 0 to 1200 mA V_I = 4.25 to 10 V	2.736		2.964	V
ΔV_O	Line Regulation	V_I = 4.25 to 10 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 4.25 V I_O = 0 to 1200 mA		2	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 10 V I_O = 0 mA		4.5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1200	1500		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	75		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1200 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117A#33 (refer to the test circuits,
T_j = 0 to 125 ^oC, C_O = 10 μF, C_I = 10 μF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 5.3 V I_O = 10 mA T_j = 25 ^oC	3.234	3.3	3.366	V
V_O	Output Voltage	I_O = 0 to 1000 mA V_I = 4.75 to 10 V	3.168		3.432	V
ΔV_O	Line Regulation	V_I = 4.75 to 8 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 4.75 V I_O = 0 to 1000 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 10 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^oC	1000	1200		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	75		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1000 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^oC 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117B#33 (refer to the test circuits,
T_j = 0 to 125 ^oC, C_O = 10 μF, C_I = 10 μF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 5.3 V I_O = 10 mA T_j = 25 ^oC	3.234	3.3	3.366	V
V_O	Output Voltage	I_O = 0 to 1200 mA V_I = 4.75 to 10 V	3.168		3.432	V
ΔV_O	Line Regulation	V_I = 4.75 to 10 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 4.75 V I_O = 0 to 1200 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 10 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^oC	1200	1500		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	75		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1200 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^oC 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117A#50 (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 7 V I_O = 10 mA T_j = 25 ^{o}C	4.9	5	5.1	V
V_O	Output Voltage	I_O = 0 to 1000 mA V_I = 6.4 to 10 V	4.8		5.2	V
ΔV_O	Line Regulation	V_I = 6.4 to 8 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 6.4 V I_O = 0 to 1000 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	V_I ≤ 10 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1000	1200		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1000 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117B#50 (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 7 V I_O = 10 mA T_j = 25 ^{o}C	4.9	5	5.1	V
V_O	Output Voltage	I_O = 0 to 1200 mA V_I = 6.4 to 10 V	4.8		5.2	V
ΔV_O	Line Regulation	V_I = 6.4 to 10 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 6.4 V I_O = 0 to 1200 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	V_I ≤ 10 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1200	1500		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1200 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117ADJ (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 5.3 V I_O = 10 mA T_j = 25 ^{o}C	1.225	1.25	1.275	V
V_O	Output Voltage	I_O = 0 to 1000 mA V_I = 2.75 to 10 V	1.2		1.3	V
ΔV_O	Line Regulation	V_I = 2.75 to 10 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 2.75 V I_O = 0 to 1000 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 8 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1000	1200		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1000 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

ELECTRICAL CHARACTERISTICS FOR LD1117BDJ (refer to the test circuits,
T_j = 0 to 125 ^{o}C, C_O = 10 µF, C_I = 10 µF unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
V_O	Output Voltage	V_I = 5.3 V I_O = 10 mA T_j = 25 ^{o}C	1.225	1.25	1.275	V
V_O	Output Voltage	I_O = 0 to 1200 mA V_I = 2.75 to 10 V	1.2		1.3	V
ΔV_O	Line Regulation	V_I = 2.75 to 10 V I_O = 0 mA		1	6	mV
ΔV_O	Load Regulation	V_I = 2.75 V I_O = 0 to 1200 mA		1	10	mV
V_I	Operating Input Voltage	I_O = 100 mA			10	V
I_d	Quiescent Current	$V_I \leq$ 8 V I_O = 0 mA		5	10	mA
I_O	Output Current	V_I - V_O = 5 V T_j = 25 ^{o}C	1200	1500		mA
SVR	Supply Voltage Rejection	I_O = 40 mA f = 120 Hz V_I - V_O = 3 V V_{ripple} = 1 Vpp	60	80		dB
V_D	Dropout Voltage	I_O = 100 mA I_O = 500 mA I_O = 1200 mA		1 1.05 1.15	1.10 1.15 1.30	V V V
$\Delta V_{O(pwr)}$	Thermal Regulation	T_a = 25 ^{o}C 30ms Pulse		0.08	0.2	%/W

TYPICAL APPLICATIONS:

FIGURE 1: Negative Supply

FLOATING INPUT

SC08321
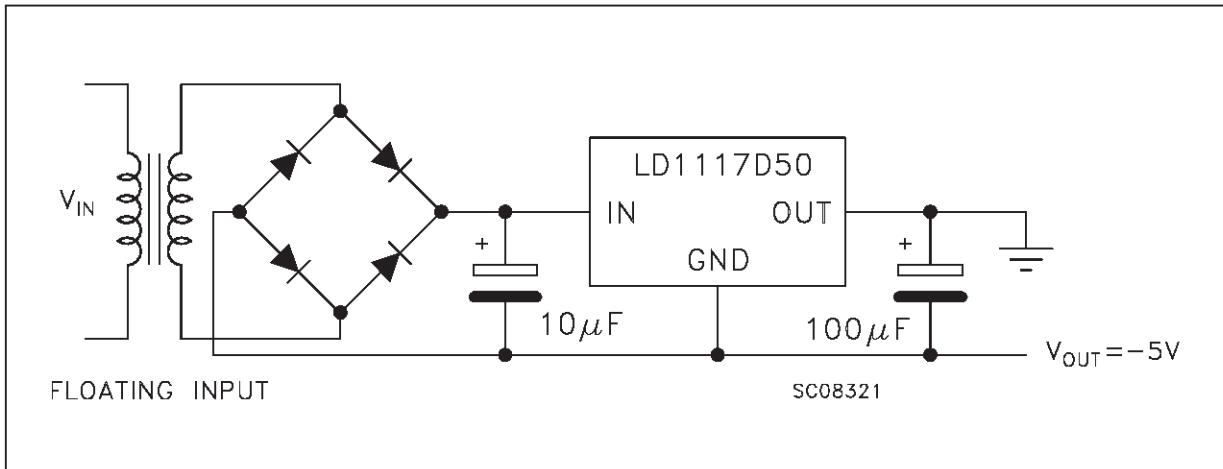
FIGURE 2: Active Terminator for SCSI-2 BUS

SC08331
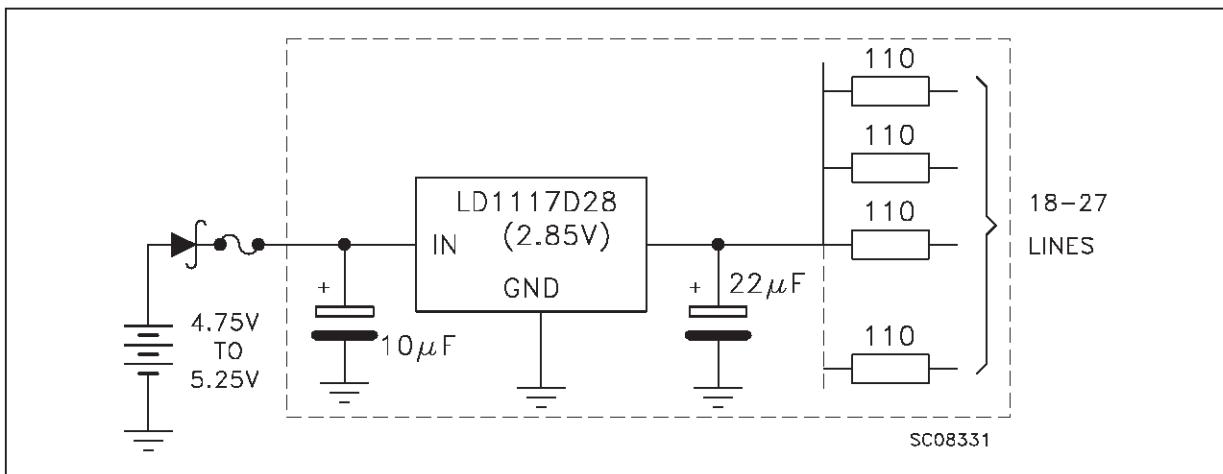
FIGURE 3: Circuit for Increasing Output Voltage

SC08281
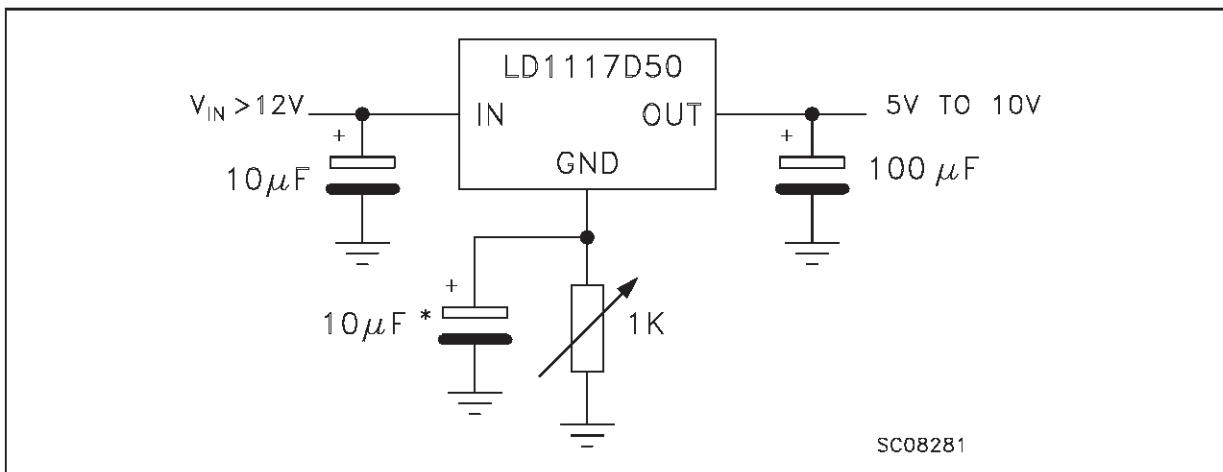
TYPICAL APPLICATIONS (continued)**:**

FIGURE 4: Voltage Regulator With Reference
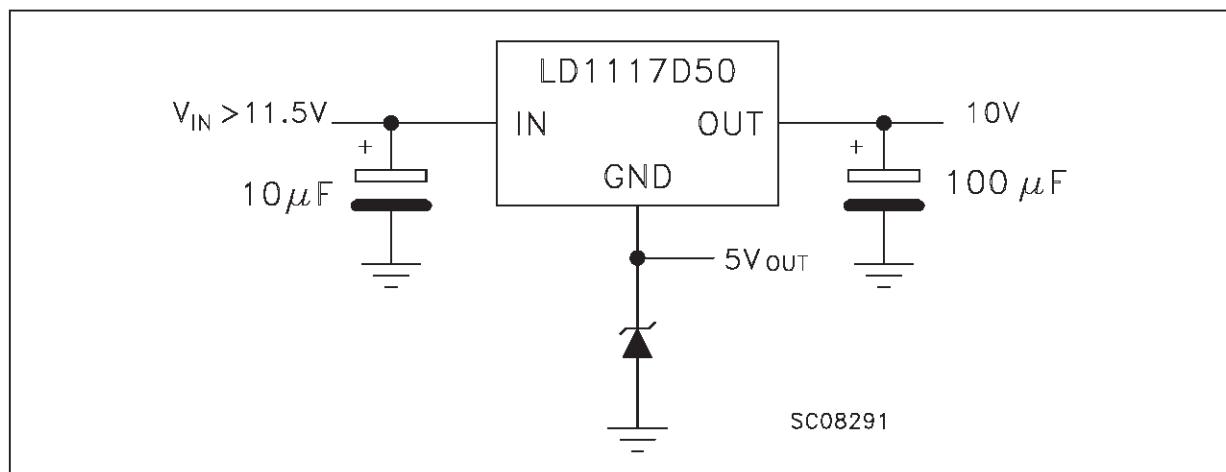
FIGURE 5: Battery Backed-up Regulated Supply
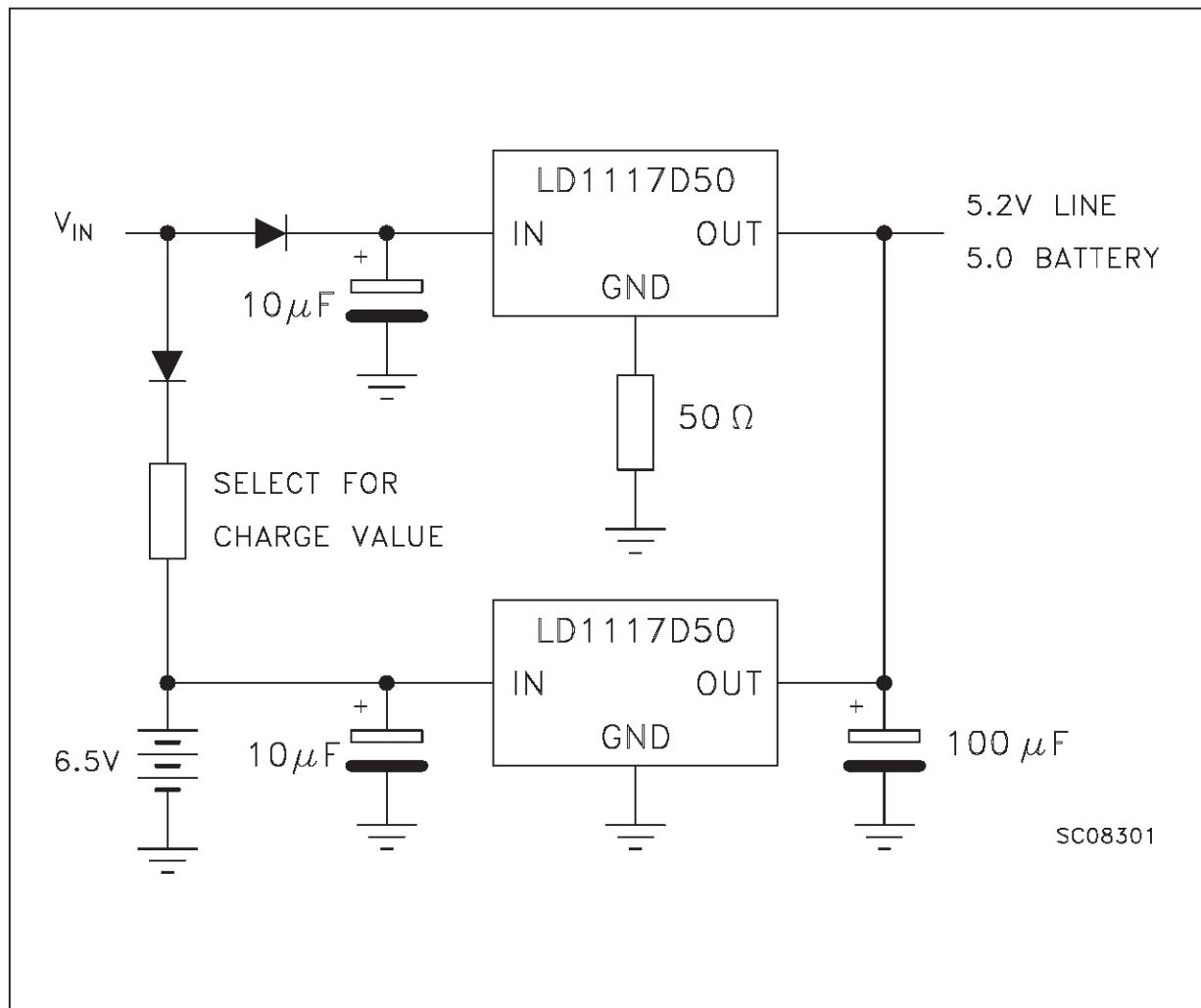
TYPICAL APPLICATIONS (continued)**:**

FIGURE 6: Post-Regulated Dual Supply
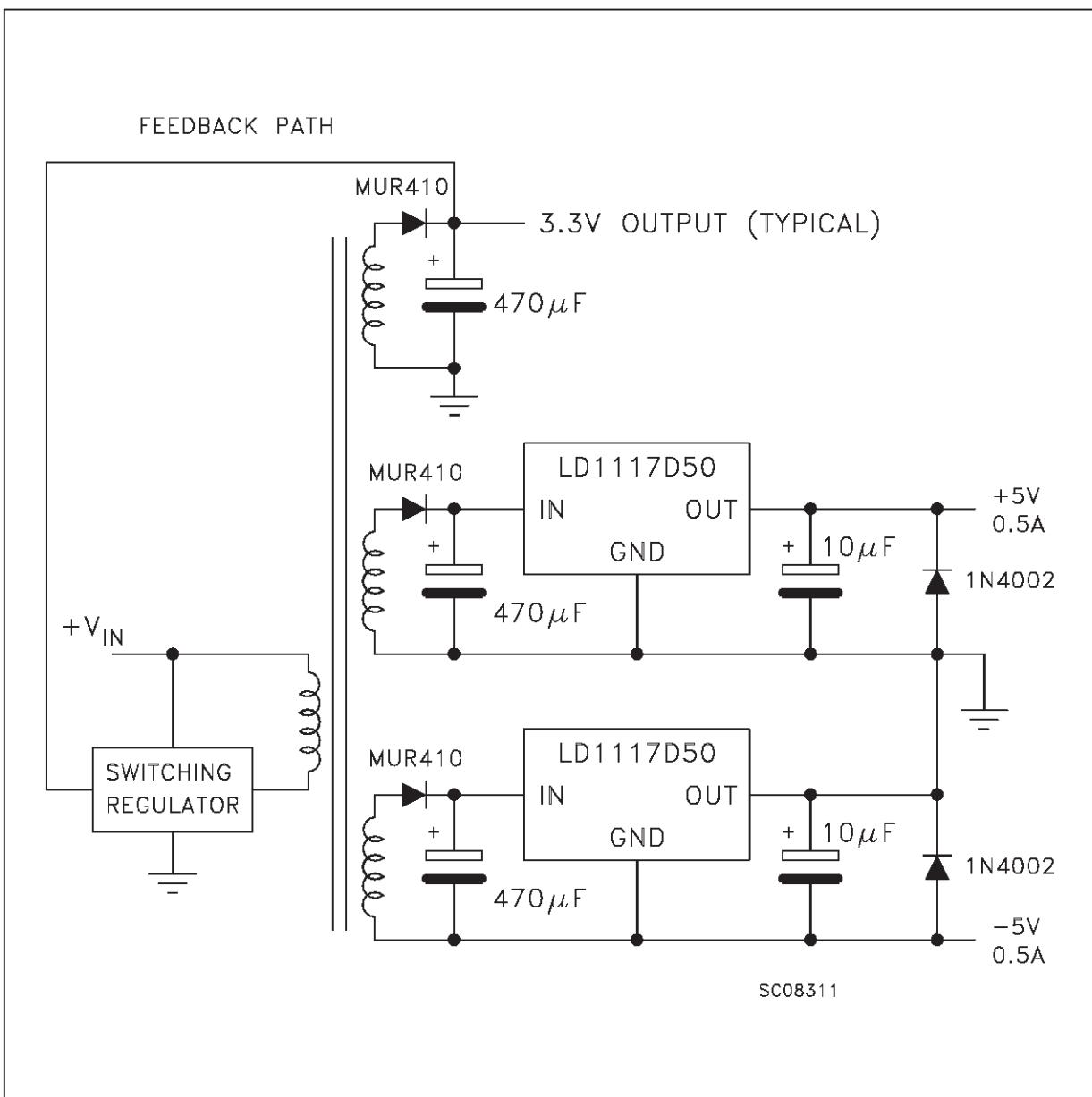
LD1117 ADJUSTABLE: APPLICATION NOTE

The LD1117 ADJUSTABLE has a thermal stabilized 1.25 ± 0.012V reference voltage between the OUT and ADJ pins. I_{ADJ} is 60µA typ. (120µA max.) and ΔI_{ADJ} is 1µA typ. (5µA max.).

R1 is normally fixed to 120Ω. From figure 7 we obtain:

$V_{OUT} = V_{REF} + R2\ (I_{ADJ} + I_{R1}) = V_{REF} + R_2\ (I_{ADJ} + V_{REF}\ /\ R1) = V_{REF}\ (1 + R2\ /\ R1) + R2\ x\ I_{ADJ}.$

In normal application R2 value is in the range of few Kohm, so the R2 x I_{DJ} product could not be considered in the V_{OUT} calculation; then the above expression becomes:

$V_{OUT} = V_{REF}\ (1 + R2\ /\ R1).$

In order to have the better load regulation it is important to realize a good Kelvin connection of R1 and R2 resistors. In particular R1 connection must be realized very close to OUT and ADJ pin, while R2 ground connection must be placed as near as possible to the negative Load pin. Ripple rejection can be improved by introducing a 10µF electrolitic capacitor placed in parallel to the R2 resistor (see Fig.8)

**FIGURE 7:** Adjustable Output Voltage Application Circuit
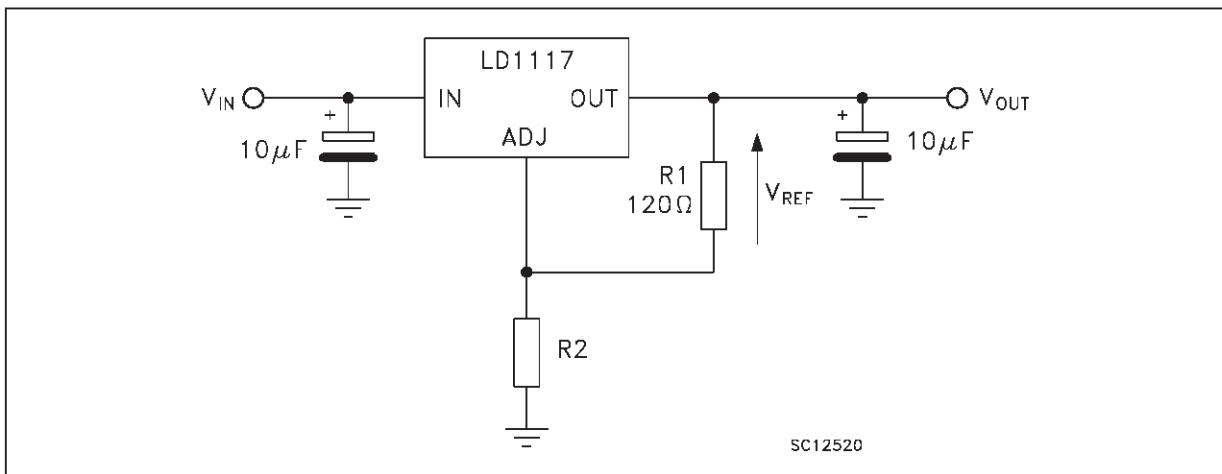
FIGURE 8: Adjustable Output Voltage Application with improved Ripple Rejection
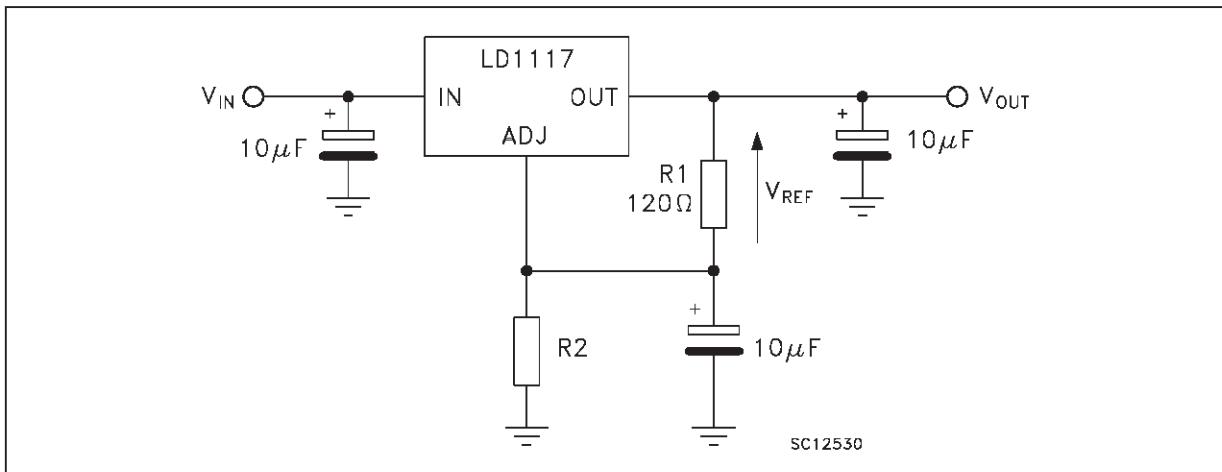
SOT-223 MECHANICAL DATA

DIM.	mm			mils		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
a	2.27	2.3	2.33	89.4	90.6	91.7
b	4.57	4.6	4.63	179.9	181.1	182.3
c	0.2	0.4	0.6	7.9	15.7	23.6
d	0.63	0.65	0.67	24.8	25.6	26.4
e1	1.5	1.6	1.7	59.1	63	66.9
e4			0.32			12.6
f	2.9	3	3.1	114.2	118.1	122.1
g	0.67	0.7	0.73	26.4	27.6	28.7
l1	6.7	7	7.3	263.8	275.6	287.4
l2	3.5	3.5	3.7	137.8	137.8	145.7
L	6.3	6.5	6.7	248	255.9	263.8
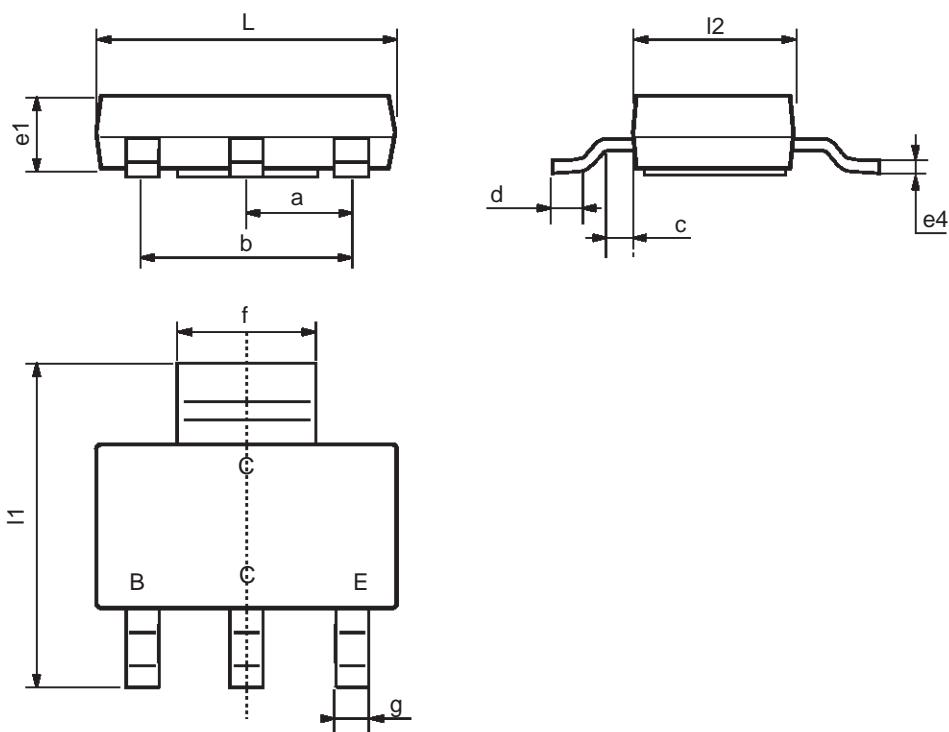
P008B

TO-252 (DPAK) MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.2		2.4	0.086		0.094
A1	0.9		1.1	0.035		0.043
A2	0.03		0.23	0.001		0.009
B	0.64		0.9	0.025		0.035
B2	5.2		5.4	0.204		0.212
C	0.45		0.6	0.017		0.023
C2	0.48		0.6	0.019		0.023
D	6		6.2	0.236		0.244
E	6.4		6.6	0.252		0.260
G	4.4		4.6	0.173		0.181
H	9.35		10.1	0.368		0.397
L2		0.8			0.031	
L4	0.6		1	0.023		0.039

0068772-B