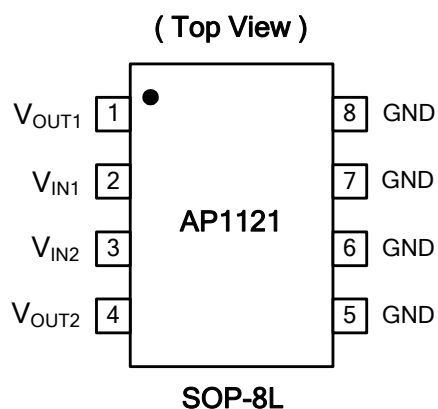


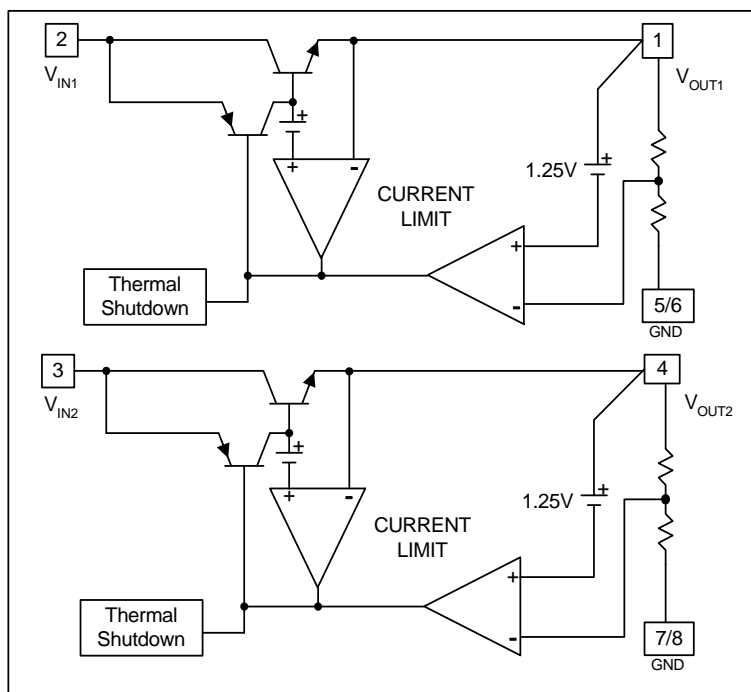
Pin Assignments



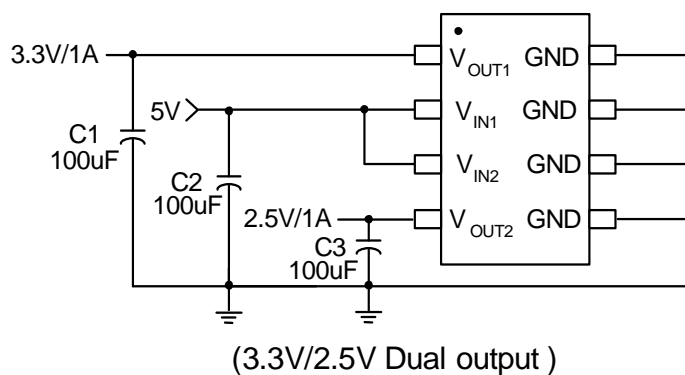
Pin Descriptions

Pin Name	Descriptions
GND	Ground
3.3V(V_{OUT1})	The output of the regulator. A minimum of 10uF capacitor ($0.15\Omega \leq ESR \leq 20\Omega$) must be connected from this pin to ground to insure stability.
2.5V/1.8V(V_{OUT2})	
V_{IN}	The input pin of regulator. Typically a large storage capacitor ($0.15\Omega \leq ESR \leq 20\Omega$) is connected from this pin to ground.

Block Diagram



Typical Application Circuit



Absolute Maximum Ratings

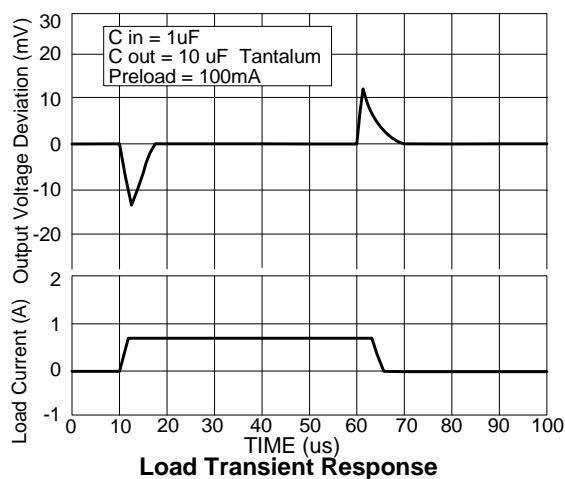
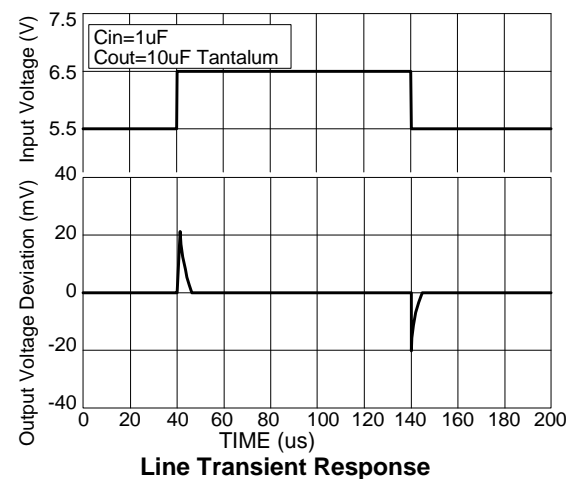
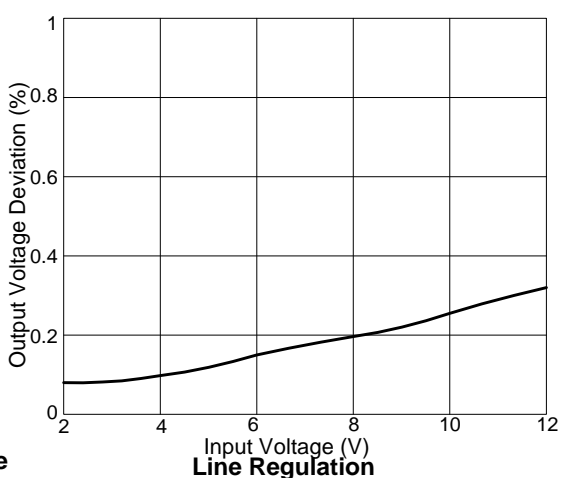
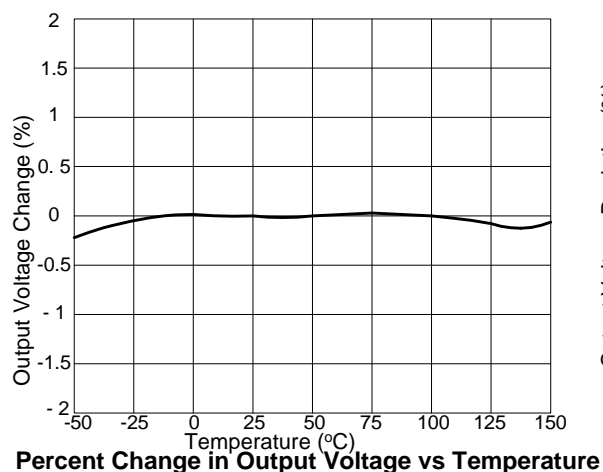
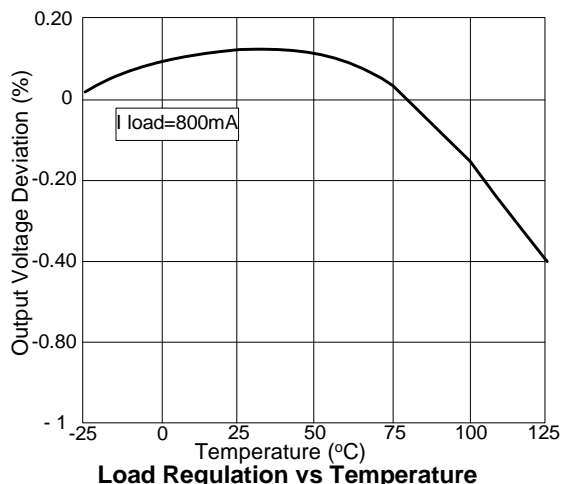
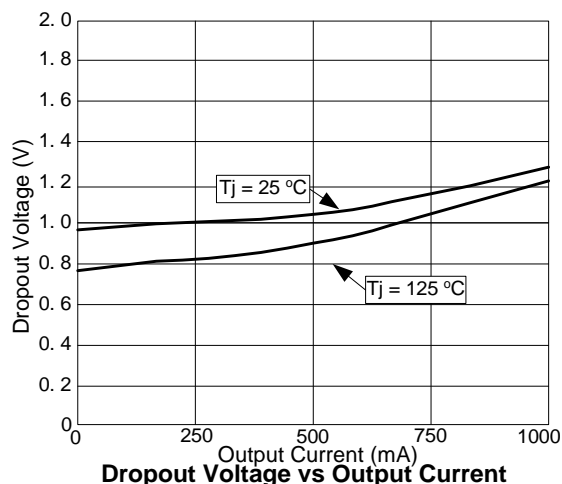
Symbol	Parameter	Rating	Unit
V_{IN}	DC Supply Voltage	-0.3 to 18 V	V
T_{ST}	Storage Temperature	-65 to +150	°C
T_{OP}	Operating Junction Temperature Range	0 to +125	°C
T_M	Maximum Junction Temperature	150	°C

Electrical Characteristics (Under Operating Conditions)

Parameter	Conditions	Min	Typ.	Max	Unit
Output Voltage	AP1121 - V_{OUT1} $I_{OUT} = 10mA, T_A = 25^\circ C, 4.8V \leq V_{IN} \leq 12V$	3.235	3.300	3.365	V
	AP1121A - V_{OUT2} $I_{OUT} = 10mA, T_A = 25^\circ C, 4V \leq V_{IN} \leq 12V$	2.450	2.500	2.550	V
	AP1121B - V_{OUT2} $I_{OUT} = 10mA, T_A = 25^\circ C, 4V \leq V_{IN} \leq 12V$	1.764	1.800	1.836	V
Line Regulation	$I_O = 10mA, V_{OUT} + 1.5V < V_{IN} < 12V, T_A = 25^\circ C$			0.2	%
Load Regulation	AP1121 series $V_{IN} = 5V, 0 \leq I_{OUT} \leq 1A, T_A = 25^\circ C$ (Note 3, 4) V_{OUT1}		26	33	mV
	AP1121 series $V_{IN} = 4V, 0mA < I_O < 1A, T_A = 25^\circ C$ (Note 4, 5) V_{OUT2}		20	25	mV
Dropout Voltage ($V_{IN} - V_{OUT}$)	$I_{OUT} = 1A, \Delta V_{OUT} = 0.1\% V_{OUT}$		1.3	1.4	V
Current Limit	($V_{IN} - V_{OUT}$) = 5V	1.1			A
Minimum Load Current	$0^\circ C \leq T_J \leq 125^\circ C$ (Note 5)		5	10	mA
Thermal Regulation	$T_A = 25^\circ C, 30ms$ pulse		0.008	0.04	%/W
Ripple Rejection	$F = 120Hz, C_{OUT} = 25\mu F$ Tantalum, $I_{OUT} = 1A$		60	70	dB
Temperature Stability	$I_O = 10mA$		0.5		%
θ_{JA} Thermal Resistance Junction-to-Ambient (No heat sink; No air flow)	SOP-8L: Control Circuitry/Power Transistor (Note 6) CH1 or CH2 only CH1 & CH2 and PD1 = PD2		177 158		°C/W
θ_{JC} Thermal Resistance Junction-to-Case	SOP-8L: Control Circuitry/Power Transistor (Note 6) CH1 or CH2 only CH1 & CH2 and PD1 = PD2		29 19		°C/W

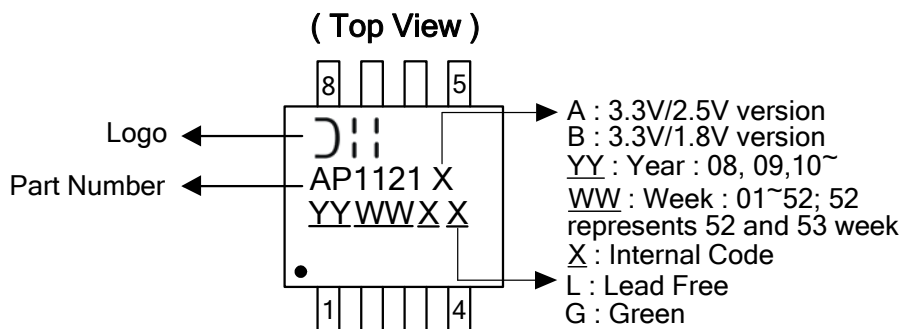
- Notes:
- See thermal regulation specifications for changes in output voltage due to heating effects. Line and load regulation are measured at a constant junction temperature by low duty cycle pulse testing. Load regulation is measured at the output lead = 1/18" from the package.
 - Line and load regulation are guaranteed up to the maximum power dissipation of 15W. Power dissipation is determined by the input/output differentially and the output current. Guaranteed maximum power dissipation will not be available over the full input/output range.
 - Quiescent current is defined as the minimum output current that requires maintaining regulation. At 12V input/output differential the device is guaranteed to regulate if the output current is greater than 10mA.
 - Vout1 and Vout2 are connected to the PCB copper area 5.5mm*5.5mm separately. If you need large PD or lower Tc & Tj, please connect to the large copper area >> 5.5mm*5.5mm (like 10mm*10mm).

Typical Performance Characteristics



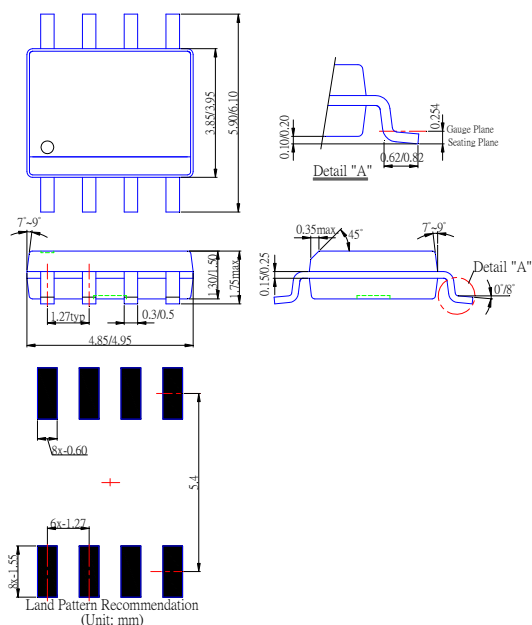
Marking Information

(1) SOP-8L



Package Information

(1) Package type: SOP-8L



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