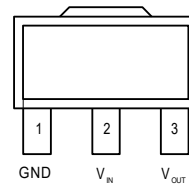


500mA Low Dropout Linear Regulator of Adjustable and Fixed Voltages

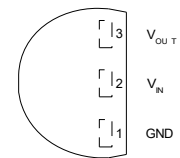
- Low Dropout Voltage of 1.3V at 500mA
- Output Voltage Accuracy – 2.0%
- Line Regulation - 3mV (typ.)
- Load Regulation - 13mV (typ.)
- Input Voltage Range up to 9V
- Internal Current Limiting and Thermal Shutdown Protections
- Available Output Voltages -ADJ, 1.8V, 2.5V, 3.3V
- Various SOT-89 and TO-92 Packages Available

The APL5885 is a 3-pin low dropout linear regulator with 2.0% accuracy of output voltage over line, load and temperature variations. Dropout voltage at 500mA output current is less than 1.3V. Both output current limiting and thermal shutdown are built in to provide maximal protection to the APL5885 against fault conditions. The over current and thermal shutdown circuits become active when the current exceed 500mA, or the junction temperature reach 150 C. Normal operation is recovered when junction temperature drops below 130 C.

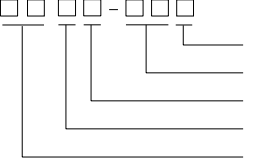
- Voltage Regulator for CD-ROM Drivers
- Voltage Regulator for LAN Cards
- Wireless Communication Systems
- Portable Instrument
- Portable Consumer Equipment
- Low Voltage Systems



SOT-89 (Top View)



TO-92 (Top View)

<p>APL5885-□□□□-□□□□</p>  <p>Lead Free Code Handling Code Temp. Range Package Code Voltage Code</p>	<p>Package Code D : SOT-89 E : TO-92 Temp. Range C : 0 to 70 C Handling Code TU : Tube TR : Tape & Reel Voltage Code 18 : 1.8V 25 : 2.5V 33 : 3.3V Blank : Adjustable Version Lead Free Code L : Lead Free Device Blank : Original Device</p>
APL5885 D : APL5885 XXXXXX XXXXX - Date Code	APL5885 E : APL 5885 XXXXXX XXXXX - Date Code
APL5885 -18 D : APL5885 XXXXXX18 XXXXX - Date Code	APL5885 -18 E : APL 5885 XXXXXX18 XXXXX - Date Code
APL5885 -25 D : APL5885 XXXXXX25 XXXXX - Date Code	APL5885 -25 E : APL 5885 XXXXXX25 XXXXX - Date Code
APL5885 -33 D : APL5885 XXXXXX33 XXXXX - Date Code	APL5885 -33 E : APL 5885 XXXXXX33 XXXXX - Date Code

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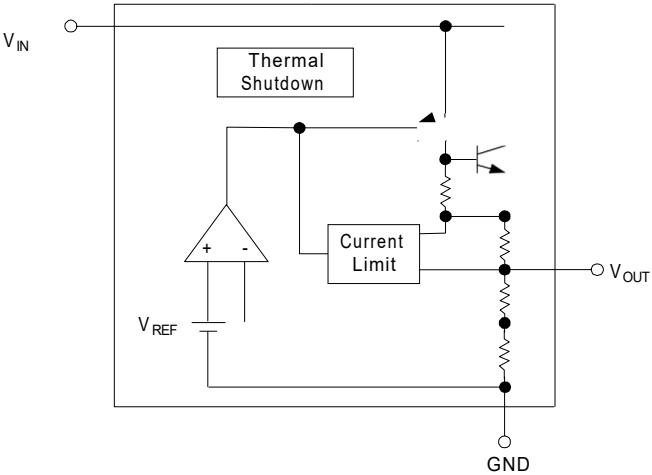
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Symbol	Parameter	Rating	Unit
V_{IN}	Input Voltage	9	V
I_{OUT}	Output Current	500	mA
T_A	Operating Ambient Temperature Range	0 to 70	C
T_J	Operating Ambient Temperature Range	-40 to +150	C
T_{STG}	Storage Temperature Range	-65 to +150	C
P_D	Power Dissipation Package	Interanl Limited	
θ_{JA}	Thermal Resistance	SOT-89	180
		TO-92	180

($T_A=25$ C, unless otherwise noted)

Symbol	Parameter	Test Condition	APL5885			Unit
			Min.	Typ.	Max.	
V_N	Input Voltage		$V_{OUT}+1.45V$		8	V
V_{OUT}	Output Voltage	$I_{OUT}=10mA$	$0.9 V_{OUT}$		$1.02 V_{OUT}$	V
I_{OUT}	Output Current Capability	$DV_{OUT}=2\%$	500			mA
I_{SC}	Short Circuit Current	$V_{OUT}<0.4V$		800		mA
I_Q	Quiescent Current	$V_{IN}=5V, NoLoad$		6	10	mA
REG_{LINE}	Line Regulation	$T_J=0\sim 125^\circ C$				
	APL5885	$I_{OUT}=10mA, V_{OUT}+1.7V \leq V_{IN} \leq 8V$				
	APL5885-18	$I_{OUT}=0A, 3.5V \leq V_{IN} \leq 8V$		3	6	mV
	APL5885-25	$I_{OUT}=0A, 4.2V \leq V_{IN} \leq 8V$				
REG_{LOAD}	Load Regulation	$T_J=0\sim 125^\circ C$				
	APL5885	$(V_{IN}-V_{OUT})=1.7V, 0 \leq I_{OUT} \leq 0.5A$				
	APL5885-18	$V_{IN}=3.5V, 0 \leq I_{OUT} \leq 0.5A$		0.4	0.6	%
	APL5885-25	$V_{IN}=4.2V, 0 \leq I_{OUT} \leq 0.5A$				
$V_{DROPOUT}$	Dropout Voltage	$I_{OUT}=500mA, DV_{OUT}=1\%$		1300	1450	mV
PSRR	Power Supply Rejection Ratio	at 1kHz		55		dB
OTS	Over Temperature Shutdown			150		C
E_N	Output Noise			100		mVrms
TC	Output Voltage Temperature Coefficient			100		ppm/ C

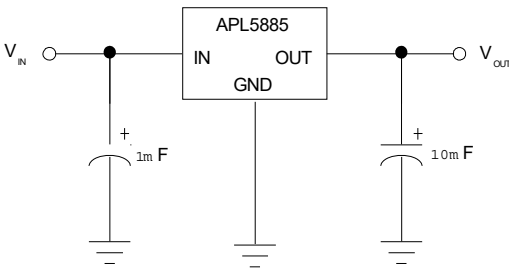
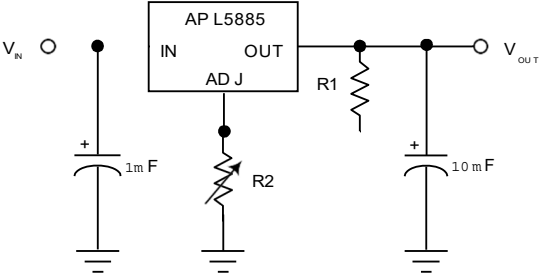
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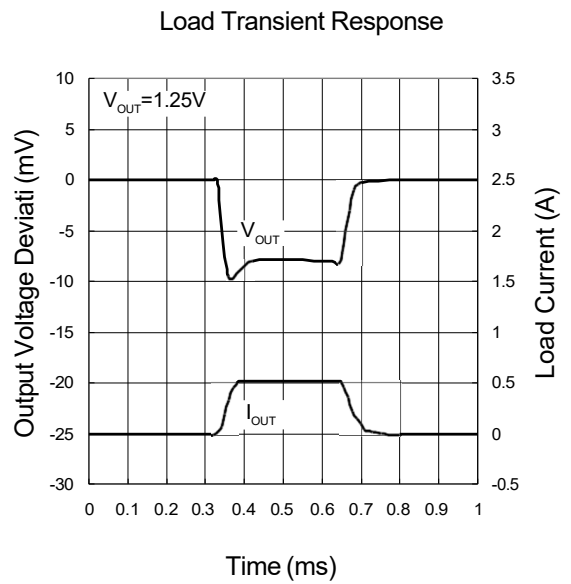
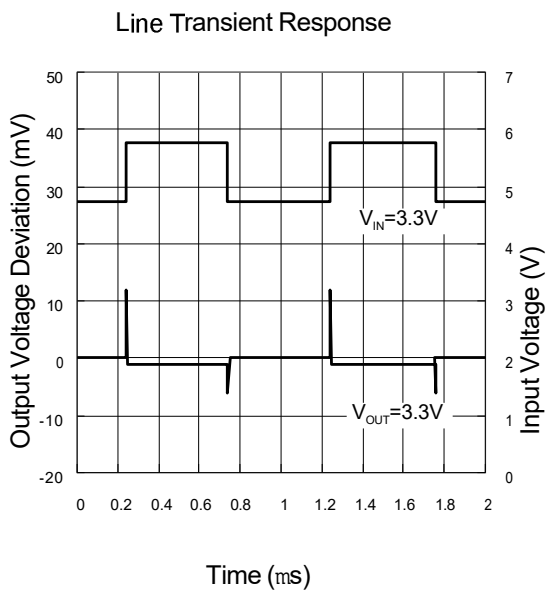
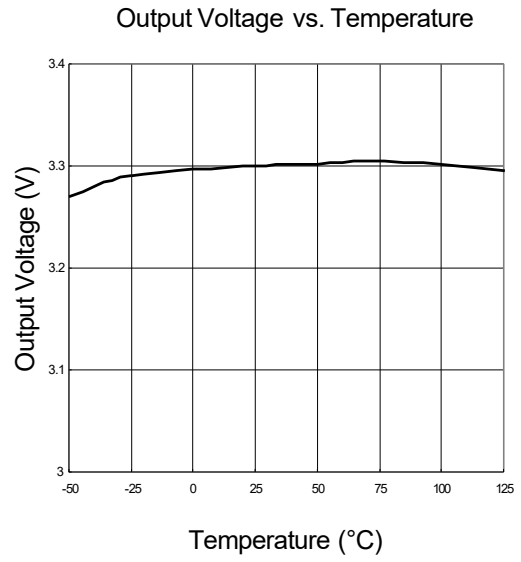
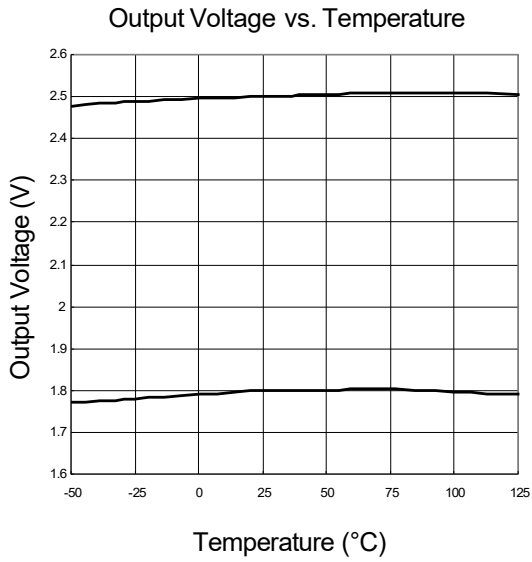
1.25V to 7V Adjustable Regulator

Fixed 1.8V, 2.5V and 3.3V Regulator



$$V_{OUT} = 1.250V \cdot \frac{R1+R2}{R1}$$

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