



DESCRIPTION

Three-terminal negative voltage regulator.

The A79XX is available in TO220-3 Package.

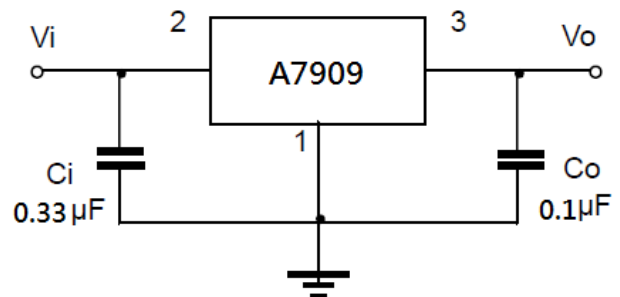
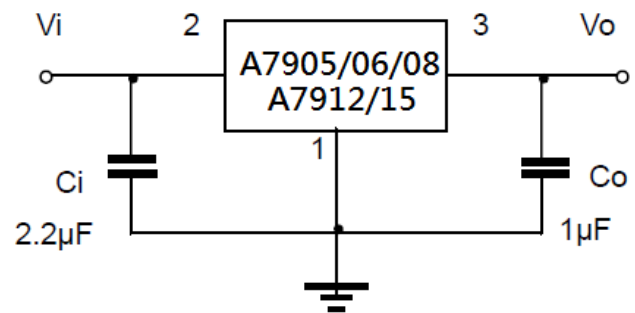
FEATURES

- Maximum Output current I_{OM} : 1.5A
- Output voltage V_O : -5V/-6V/-8V/-9V/-12V/-15V
- Continuous total dissipation
A7905/06/08/12/15
 P_D : 1.5W ($T_A=25^\circ\text{C}$)
15W ($T_C=25^\circ\text{C}$)
A7909
 P_D : 2.0W ($T_A=25^\circ\text{C}$)
15W ($T_C=25^\circ\text{C}$)
- Available in TO220-3 Package

ORDERING INFORMATION

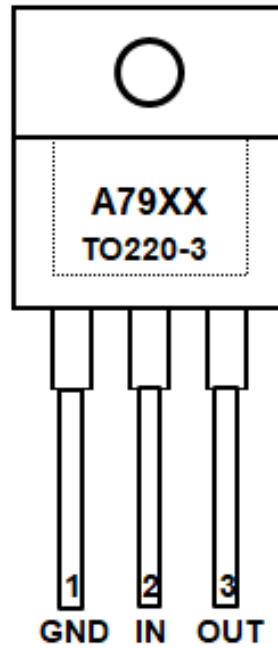
Package Type	Part Number	
TO220-3 SPQ: 50pcs/Tube	T3	A79XXT3U
		A79XXT3VU
Note	XX: Output Voltage 05=5V, 15=15V V: Halogen free Package U: Tube	
AiT provides all RoHS products		

TYPICAL APPLICATION





PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	GND	Ground
2	IN	Input
3	OUT	Output



ABSOLUTE MAXIMUM RATINGS

Operating temperature range applies unless otherwise specified

V_{IN} , Input Voltage	-35V
$R_{\theta JA}$, Thermal resistance junction-air (A7905/06/08/09/12)	65°C/W
(A7915)	83.3°C/W
$R_{\theta JC}$, Thermal resistance junction-cases (A7905/06/08/09/12)	5°C/W
(A7915)	8.33°C/W
T_{OPR} , Operating Junction Temperature Range (A7905/06/08/12)	0°C ~ +125°C
(A7909/15)	0°C ~ +150°C
T_{STG} , Storage Temperature Range (A7905/06/08/12)	-65°C ~ +150°C
(A7909/15)	-55°C ~ +150°C

Stresses above may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL CHARACTERISTICS

$V_I = -10V$ (A7905), $V_I = -11V$ (A7906), $V_I = -14V$ (A7908), $V_I = -19V$ (A7912), $V_I = -23V$ (A7915), $I_o = 500mA$,
 $C_I = 2.2\mu F$, $C_O = 1\mu F$
 $V_I = -15V$ (A7909), $I_o = 500mA$, $0^\circ C < T_J < 125^\circ C$, $C_I = 0.33\mu F$, $C_O = 1\mu F$, unless otherwise specified

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit		
Output Voltage	V_o		5V	25°C	-4.8	-5	-5.2	V	
			6V		-5.75	-6	-6.25		
			8V		-7.7	-8	-8.3		
			9V		-8.64	-9	-9.36		
			12V		-11.5	-12	-12.5		
			15V		-14.4	-15	-15.6		
		$-7V \leq V_I \leq -20V$ $I_o = 5mA \sim 1A, P \leq 15W$		5V	0~ 125°C	-4.75	-5		-5.25
		$-8V \leq V_I \leq -21V$, $I_o = 5mA \sim 1A, P \leq 15W$		6V		-5.7	-6		-6.3
		$-10.5V \leq V_I \leq -23V$, $I_o = 5mA \sim 1A, P \leq 15W$		8V		-7.6	-8		-8.4
		$-11.5V \leq V_I \leq -24V$, $I_o = 5mA \sim 1A, P \leq 15W$		9V		-8.55	-9		-9.45
		$-14.5V \leq V_I \leq -27V$, $I_o = 5mA \sim 1A, P \leq 15W$		12V		-11.4	-12		-12.6
		$-17.5V \leq V_I \leq -30V$, $I_o = 5mA \sim 1A, P \leq 15W$		15V		-14.25	-15		-15.75
Load Regulation	ΔV_o	$I_o = 5mA \sim 1.5A$	5V	25°C	-	15	100	mV	
			6V				120		
			8V				160		
			9V				180		
			12V				200		
			15V						
			$I_o = 250mA \sim 750mA$				5V		-
		6V			60				
		8V			80				
		9V			80				
		12V			75				
		15V							



Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit	
Line Regulation	ΔV_o	$-7V \leq V_i \leq -25V$	5V	25°C	-	12.5	50	mV
		$-8V \leq V_i \leq -25V$	6V				120	
		$-10.5V \leq V_i \leq -25V$	8V				160	
		$-11.5V \leq V_i \leq -26V$	9V				140	
		$-14.5V \leq V_i \leq -30V$	12V			5	80	
		$-17.5V \leq V_i \leq -30V$	15V				100	
		$-8V \leq V_i \leq -12V$	5V			4	15	
		$-9V \leq V_i \leq -13V$	6V				60	
		$-11V \leq V_i \leq -17V$	8V				80	
		$-13V \leq V_i \leq -19V$	9V			3	70	
		$-16V \leq V_i \leq -22V$	12V				30	
		$-20V \leq V_i \leq -26V$	15V				50	
		Quiescent Current	I_q				5V	
	6V							
	8V							
	9V			1.6	2.6			
	12V			2	3			
	15V							
Quiescent Current Change	ΔI_q	$-7V \leq V_i \leq -25V$	5V	0~ 125°C	-	-	0.5	mA
		$-8V \leq V_i \leq -25V$	6V				1.3	
		$-10.5V \leq V_i \leq -25V$	8V				1	
		$-11.5V \leq V_i \leq -26V$	9V					
		$-14.5V \leq V_i \leq -30V$	12V				0.5	
		$-17.5V \leq V_i \leq -30V$	15V				0.5	
		$5mA \leq I_o \leq 1A$						
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	5V	25°C	-	-	125	μV
			6V				150	
			8V				200	
			12V				300	
			15V				375	
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5mA$	5V	0~ 125°C	-	-	-0.4	mV/°C
			6V					
			8V				-0.6	
			12V				-0.8	
			15V				-1	

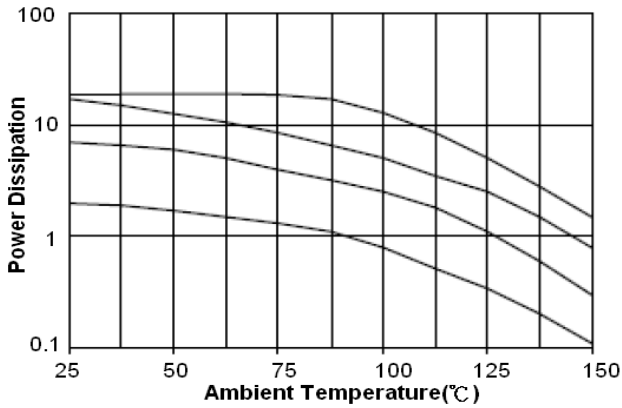


Parameter	Symbol	Conditions		Min.	Typ.	Max.	Unit	
Ripple Rejection	RR	$-8V \leq V_I \leq -18V, f=120Hz$	5V	0~ 125°C	54	60	-	dB
		$-9V \leq V_I \leq -19V, f=120Hz$	6V					
		$-11.5V \leq V_I \leq -21.5V, f=120Hz$	8V					
		$-12.5V \leq V_I \leq -22.5V, f=120Hz$	9V					
		$-15V \leq V_I \leq -25V, f=120Hz$	12V					
		$-18.5V \leq V_I \leq -28.5V, f=120Hz$	15V					
Dropout Voltage	V_D	$I_O=1A$		25°C	-	1.1	-	V
Peak Current	I_{PK}			25°C	-	2.1	-	A

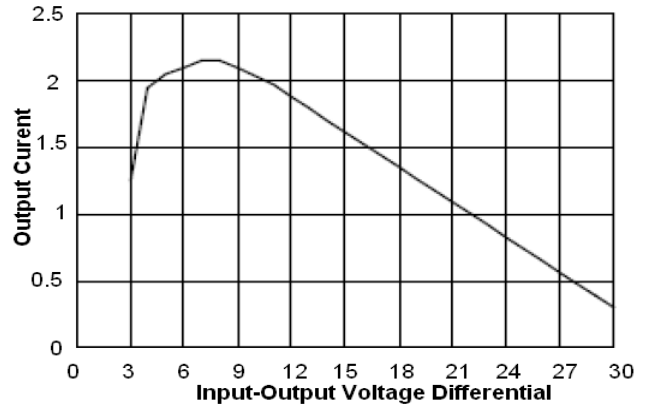


TYPICAL CHARACTERISTICS

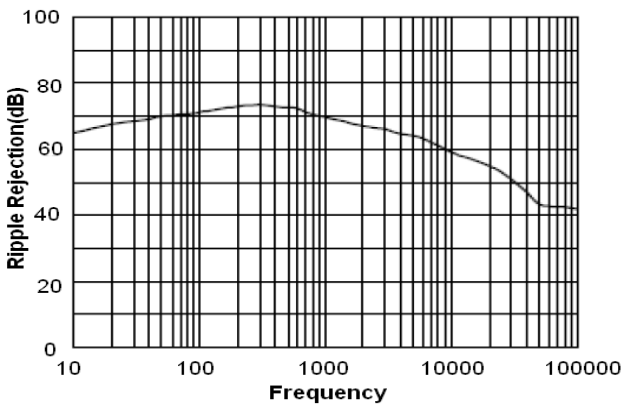
1. Average Case Power Dissipation as A Function of Ambient Temperature



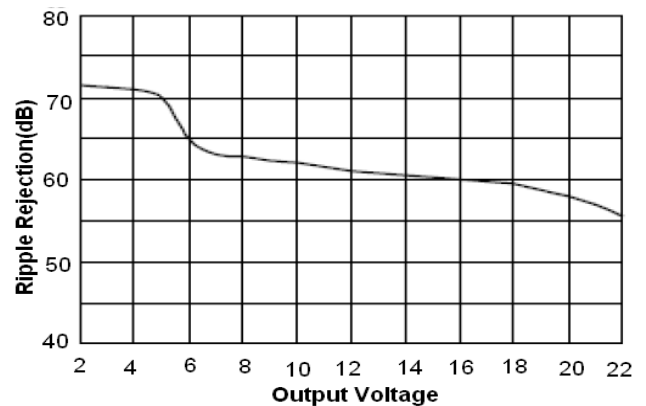
2. Peak Output Current as A Function of Input Output Differential Voltage



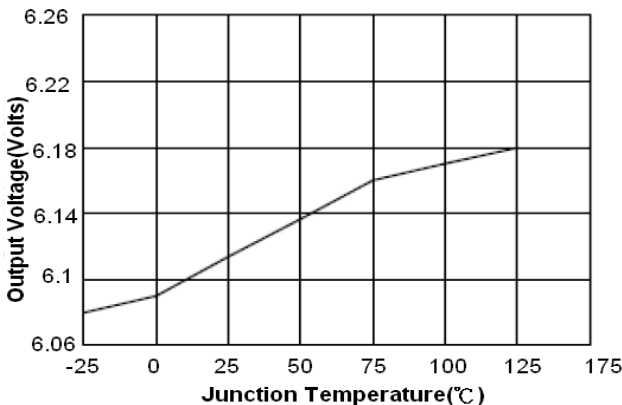
3. Ripple Rejection as A Function of Frequency



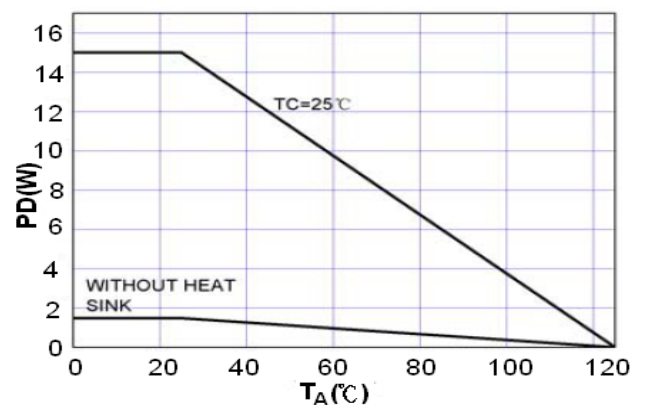
4. Ripple Rejection as A Function of Output Voltage



5. Output Voltage as A Function of Junction Temperature



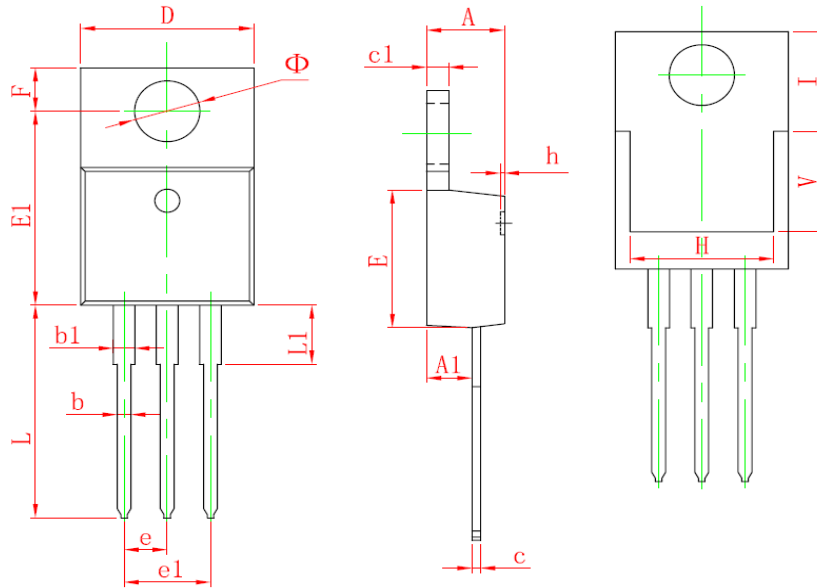
6. PD - T_A





PACKAGE INFORMATION

Dimension in TO220-3 (Unit: mm)



Symbol	Min	Max
A	4.470	4.670
A1	2.520	2.820
b	0.710	0.910
b1	1.170	1.370
c	0.330	0.650
c1	1.200	1.400
D	10.010	10.350
E	8.500	8.900
E1	12.060	12.460
e	2.540 TYP.	
e1	4.980	5.180
F	2.590	2.890
H	8.440 REF.	
h	0.000	0.300
L	13.400	13.800
L1	3.560	3.960
V	6.060 REF.	
I	6.600 REF.	
Φ	3.735	3.935



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