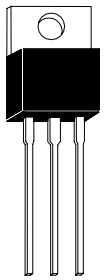
3-TERMINAL NEGATIVE VOLTAGE REGULATOR

PL7915XE3



TO-220AB

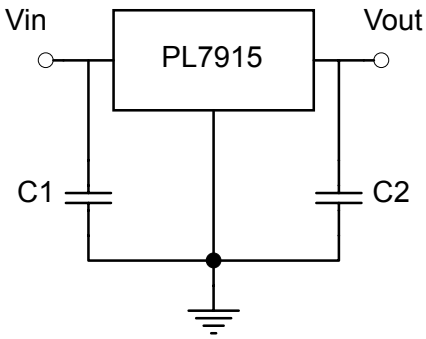
Description

The PL7915XE3 series of three-terminal negative regulators are available in the TO-220AB package. These regulators can provide local on-card regulation, eliminating the distribution problems associated with single point regulation. Each employs internal current limiting, thermal shutdown and safe operating area protection, making it essentially indestructible. If adequate heat sinking is provided, they can deliver over 1A output current. Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltages and currents.
PL7915XE3 is characterized for operation from 0°C to +125°C, and if operating temperature is always high, please refer to the power dissipation curve.

Absolute Maximum Ratings (Ta=25°C)

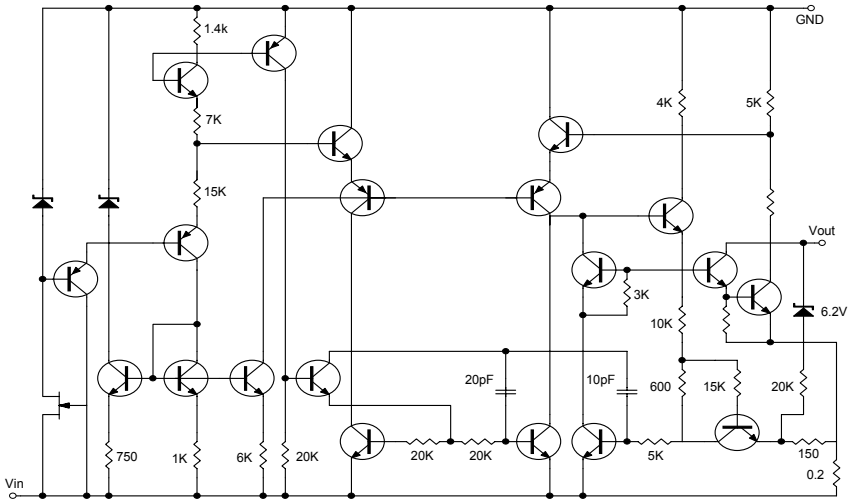
- Input Voltage ..... -35 V
- Total Power Dissipation ..... Internally limited
- Operating Junction Temperature ..... 0 °C to +125 °C
- Maximum Junction Temperature ..... 125 °C
- Storage Temperature Range ..... -55 °C to +150 °C
- Lead Temperature (Soldering 10S) ..... 230 °C

Typical Application



Note:
Bypass Capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulator.

Schematic Diagram



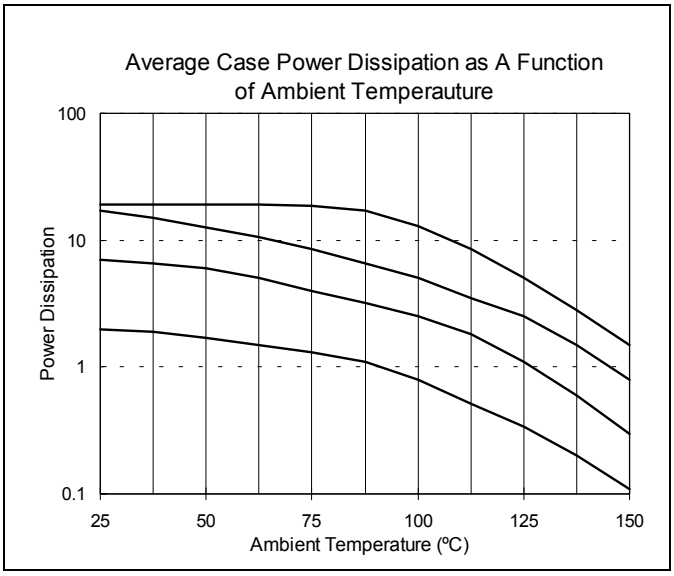
Electrical Characteristics

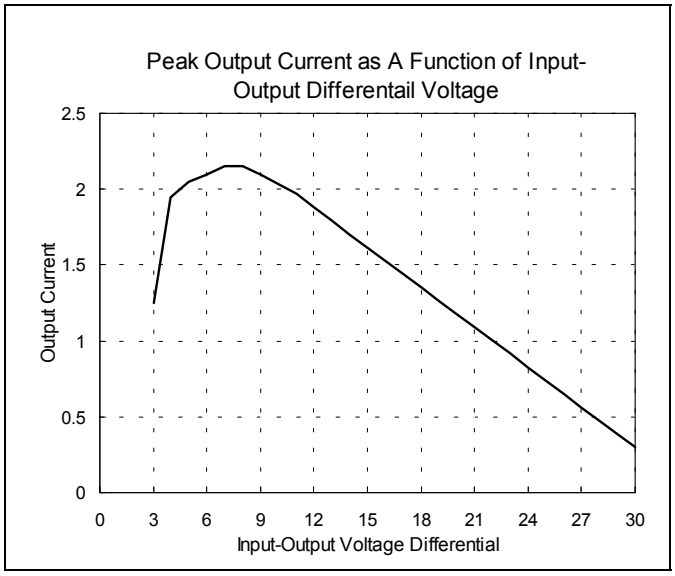
Vin=-23V, Io=500mA, Cin=2.2uF, Cout=1uF, 0°C≤Tj≤125°C (unless otherwise noted)

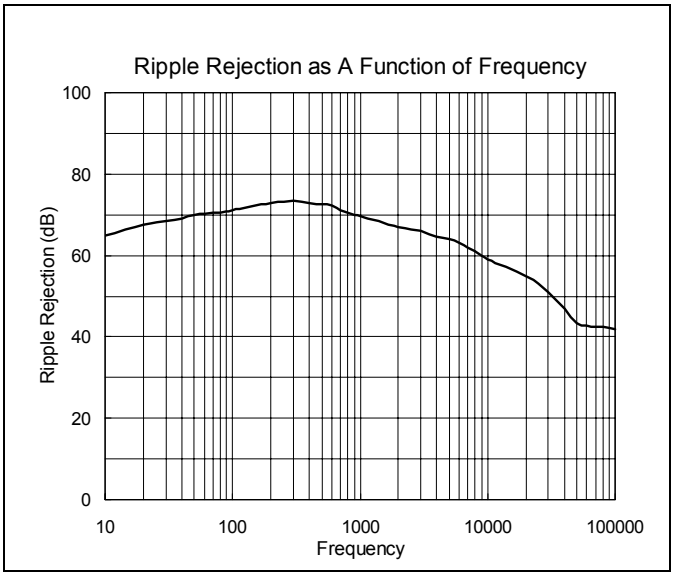
Symbol	Parameter	Conditions	PL7915A			Units
			Min	Typ	Max	
Vo	Output Voltage	Tj=25°C	-14.7	-15	-15.3	V
		P_D≤15W, 5mA≤ I_O≤ 1A -18.5V≥Vin≥ -30V	-14.55	-15	-15.45	
ΔVo	Line Regulation	Tj=25°C, -17.5V ≥ Vin≥-30V	-	-	300	mV
		Tj=25°C, -20V≥Vin≥-26V	-	-	150	
ΔVo	Load Regulation	5mA≤ I_O≤1.5A	-	-	300	mV
		250mA≤ I_O≤750mA	-	-	150	
IQ	Quiescent Current	I_O≤1A, Tj=25°C	-	3	8	mA
ΔIQ	Quiescent Current Change	5mA≤ I_O≤1A	-	-	0.5	mA
		-18.5V≥Vin≥-30V	-	-	1.0	
ΔVo / ΔT	Output Voltage Drift	Io=5mA	-	-0.9	-	mV/°C
Vn	Output Noise Voltage	Ta=25°C, 10Hz≤ f ≤100KHz	-	250	-	μV
RR	Ripple Rejection	ΔVi=10V, f=120Hz	54	68	-	dB
VD	Dropout Voltage	Tj=25°C, I_O=1A	-	2	-	V
Isc	Short Circuit Current	Tj=25°C, V_{in}=-35V	-	2.2	-	A
Ipk	Peak Output Current	Tj=25°C	1.3	2.2	-	A

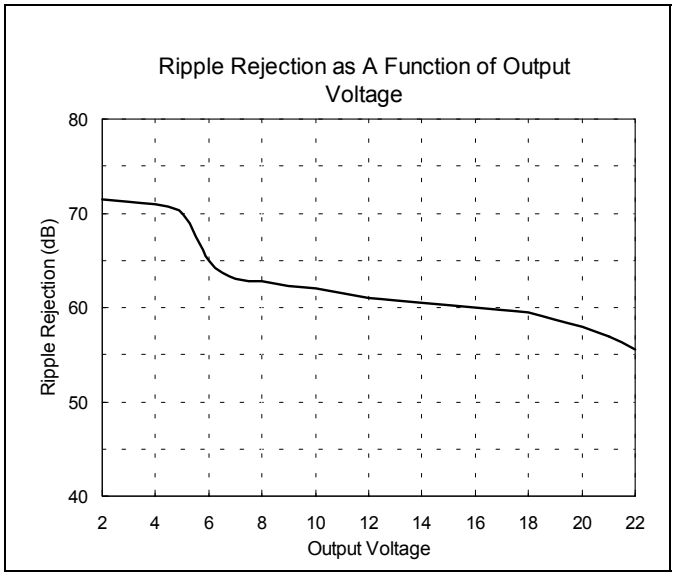
Symbol	Parameter	Conditions	PL7915B			Units
			Min	Typ	Max	
Vo	Output Voltage	Tj=25°C	-14.4	-15	-15.6	V
		P_D≤15W, 5mA≤ I_O≤ 1A -18.5V≥Vin≥ -30V	-14.25	-15	-15.75	
ΔVo	Line Regulation	Tj=25°C, -17.5V ≥ Vin≥-30V	-	-	300	mV
		Tj=25°C, -20V≥Vin≥-26V	-	-	150	
ΔVo	Load Regulation	5mA≤ I_O≤1.5A	-	-	300	mV
		250mA≤ I_O≤750mA	-	-	150	
IQ	Quiescent Current	I_O≤1A, Tj=25°C	-	3	8	mA
ΔIQ	Quiescent Current Change	5mA≤ I_O≤1A	-	-	0.5	mA
		-18.5V≥Vin≥-30V	-	-	1.0	
ΔVo / ΔT	Output Voltage Drift	Io=5mA	-	-0.9	-	mV/°C
Vn	Output Noise Voltage	Ta=25°C, 10Hz≤ f ≤100KHz	-	250	-	μV
RR	Ripple Rejection	ΔVi=10V, f=120Hz	54	68	-	dB
VD	Dropout Voltage	Tj=25°C, I_O=1A	-	2	-	V
Isc	Short Circuit Current	Tj=25°C, V_{in}=-35V	-	2.2	-	A
Ipk	Peak Output Current	Tj=25°C	1.3	2.2	-	A

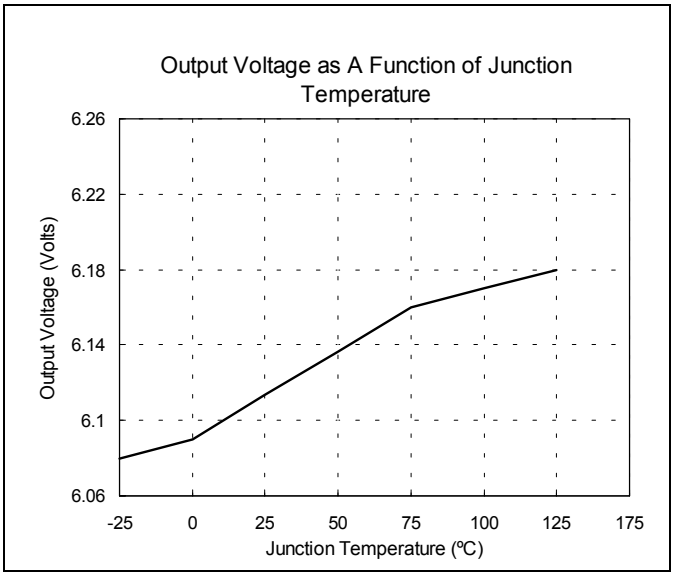
Characteristic Curves



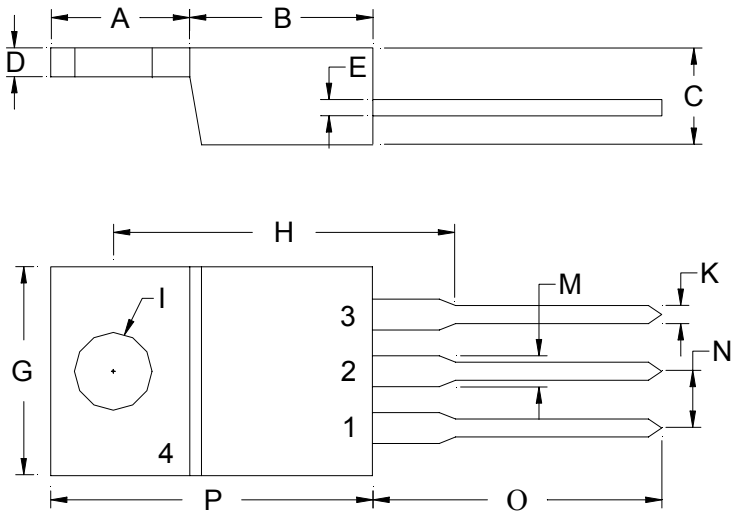




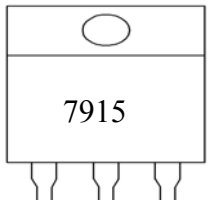




TO-220AB Dimension



Marking:



Style: Pin 1.Gnd 2.Vin 3.Vout
4.Vin

3-Lead TO-220AB Plastic Package
CYStek Package Code: E3

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.2197	0.2949	5.58	7.49	I	-	*0.1508	-	*3.83
B	0.3299	0.3504	8.38	8.90	K	0.0295	0.0374	0.75	0.95
C	0.1732	0.185	4.40	4.70	M	0.0449	0.0551	1.14	1.40
D	0.0453	0.0547	1.15	1.39	N	-	*0.1000	-	*2.54
E	0.0138	0.0236	0.35	0.60	O	0.5000	0.5618	12.70	14.27
G	0.3803	0.4047	9.66	10.28	P	0.5701	0.6248	14.48	15.87
H	-	*0.6398	-	*16.25					

Notes: 1.Controlling dimension: millimeters.
2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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