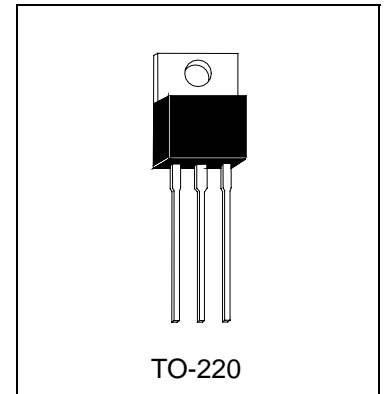




H7905AE

H7905BE

3-TERMINAL NEGATIVE VOLTAGE REGULATOR



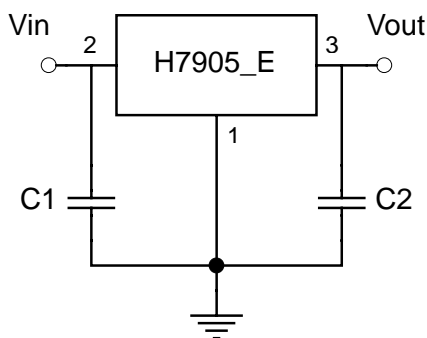
Description

The H7905_E series of three-terminal negative regulators are available in the TO-220AB package. They can provide local on-card regulation, eliminating the distribution problems associated with single point regulation; furthermore, having the same voltage options as the H7905_E positive standard series, they are particularly suited for split power supplies. If adequate heat sinking is provided, the H7905_E series can deliver an output current in excess of 1A although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltage and currents.

Absolute Maximum Ratings (Ta=25°C)

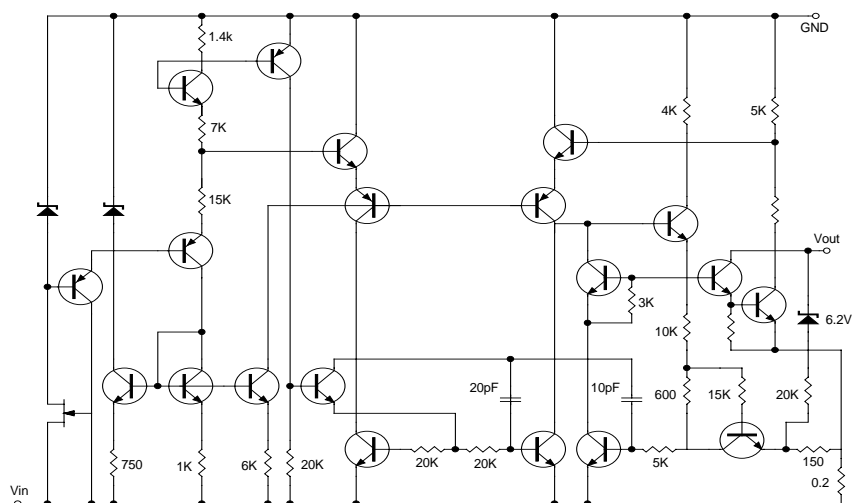
- Input Voltage..... -35 V
- Total Power Dissipation..... Internally limited
- Operating Junction Temperature..... 0 °C to +125 °C
- Maximum Junction Temperature..... 125 °C
- Storage Temperature Range..... -55 °C to +150 °C
- Lead Temperature (Soldering 10S)..... 230 °C

Typical Application



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

Schematic Diagram





Electrical Characteristics

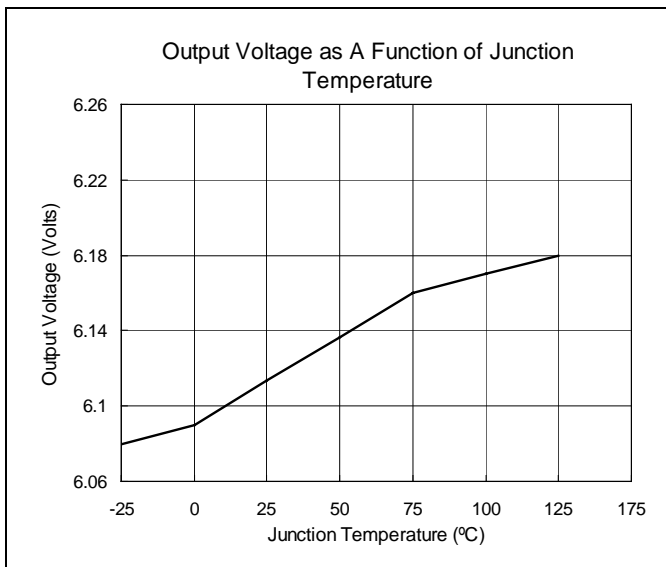
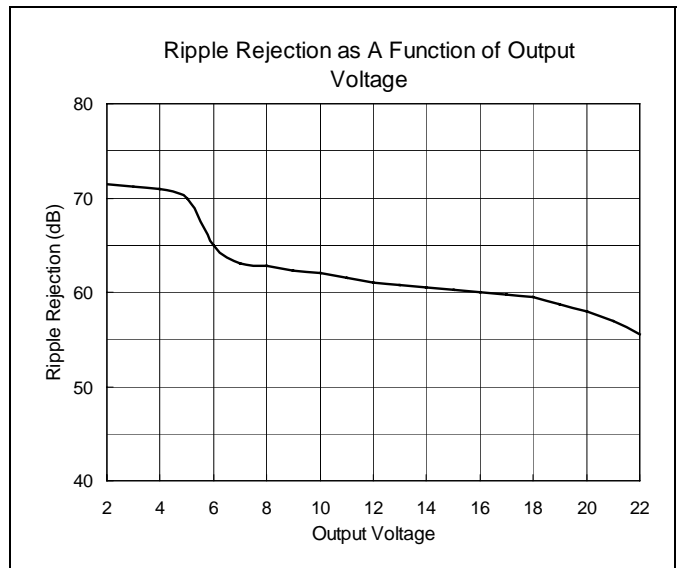
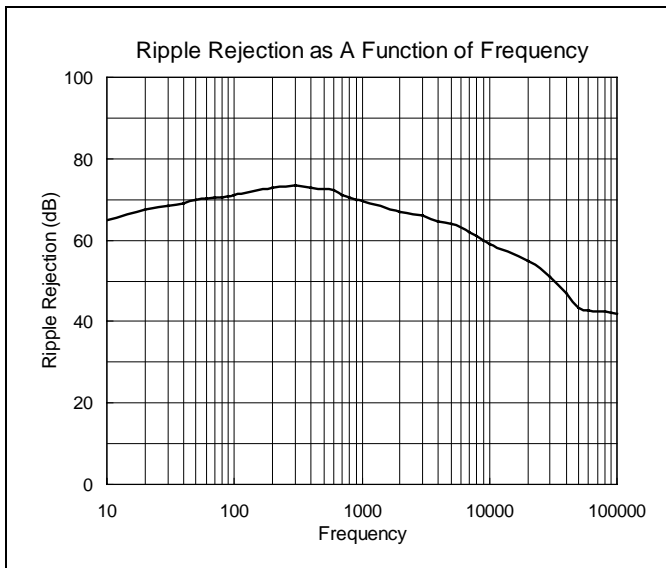
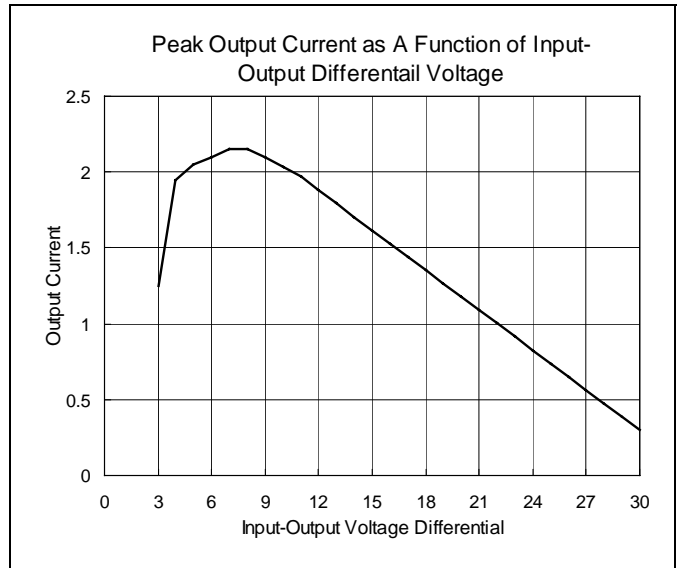
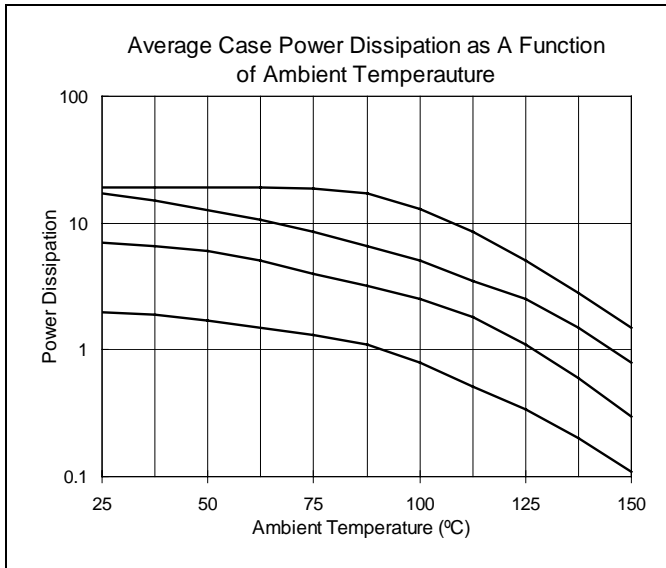
$V_{in} = -10V$, $I_o = 500mA$, $C_{in} = 2.2\mu F$, $C_{out} = 1\mu F$, $0^\circ C \leq T_j \leq 125^\circ C$ (unless otherwise noted)

Symbol	Parameter	Conditions	H7905AE			Units
			Min	Typ	Max	
Vo	Output Voltage	Tj=25°C	-4.9	-5	-5.1	V
		PD≤15W, 5mA≤Io≤1A Vi=-8V to -20V	-4.85	-5	-5.15	
ΔVo	Line Regulation	Tj=25°C, -7V≤Vin≤-25V	-	-	50	mV
		Tj=25°C, -8V≤Vin≤12V	-	-	25	
ΔVo	Load Regulation	5mA≤Io≤1.5A	-	-	100	mV
		250mA≤Io≤750mA	-	-	50	
IQ	Quiescent Current	Io≤1A, Tj=25°C	-	3	8	mA
ΔIQ	Quiescent Current Change	5mA≤Io≤1A	-	-	0.5	mA
		-8V≤Vin≤-25V	-	-	1.3	
ΔVo / ΔT	Output Voltage Drift	Io=5mA	-	-0.4	-	mV/°C
Vn	Output Noise Voltage	Ta=25°C, 10Hz to 100KHz	-	100	-	uV
RR	Ripple Rejection	ΔVi=10V, f=120Hz	54	68	-	dB
VD	Dropout Voltage	Tj=25°C, Io=1A	-	2	-	V
Isc	Short Circuit Current	Tj=25°C, Vi=-35V	-	2.2	-	A
Ipk	Peak Output Current	Tj=25°C	1.3	2.2	-	A

Symbol	Parameter	Conditions	H7905BE			Units
			Min	Typ	Max	
Vo	Output Voltage	Tj=25°C	-4.8	-5	-5.2	V
		PD≤15W, 5mA≤Io≤1A Vi=-8V to -20V	-4.75	-5	-5.25	
ΔVo	Line Regulation	Tj=25°C, -7V≤Vin≤-25V	-	10	100	mV
		Tj=25°C, -8V≤Vin≤12V	-	5	50	
ΔVo	Load Regulation	5mA≤Io≤1.5A	-	-	100	mV
		250mA≤Io≤750mA	-	-	50	
IQ	Quiescent Current	Io≤1A, Tj=25°C	-	3	8	mA
ΔIQ	Quiescent Current Change	5mA≤Io≤1A	-	-	0.5	mA
		-8V≤Vin≤-25V	-	-	1.3	
ΔVo / ΔT	Output Voltage Drift	Io=5mA	-	-0.4	-	mV/°C
Vn	Output Noise Voltage	Ta=25°C, 10Hz to 100KHz	-	100	-	uV
RR	Ripple Rejection	ΔVi=10V, f=120Hz	54	68	-	dB
VD	Dropout Voltage	Tj=25°C, Io=1A	-	2	-	V
Isc	Short Circuit Current	Tj=25°C, Vi=-35V	-	2.2	-	A
Ipk	Peak Output Current	Tj=25°C	1.3	2.2	-	A

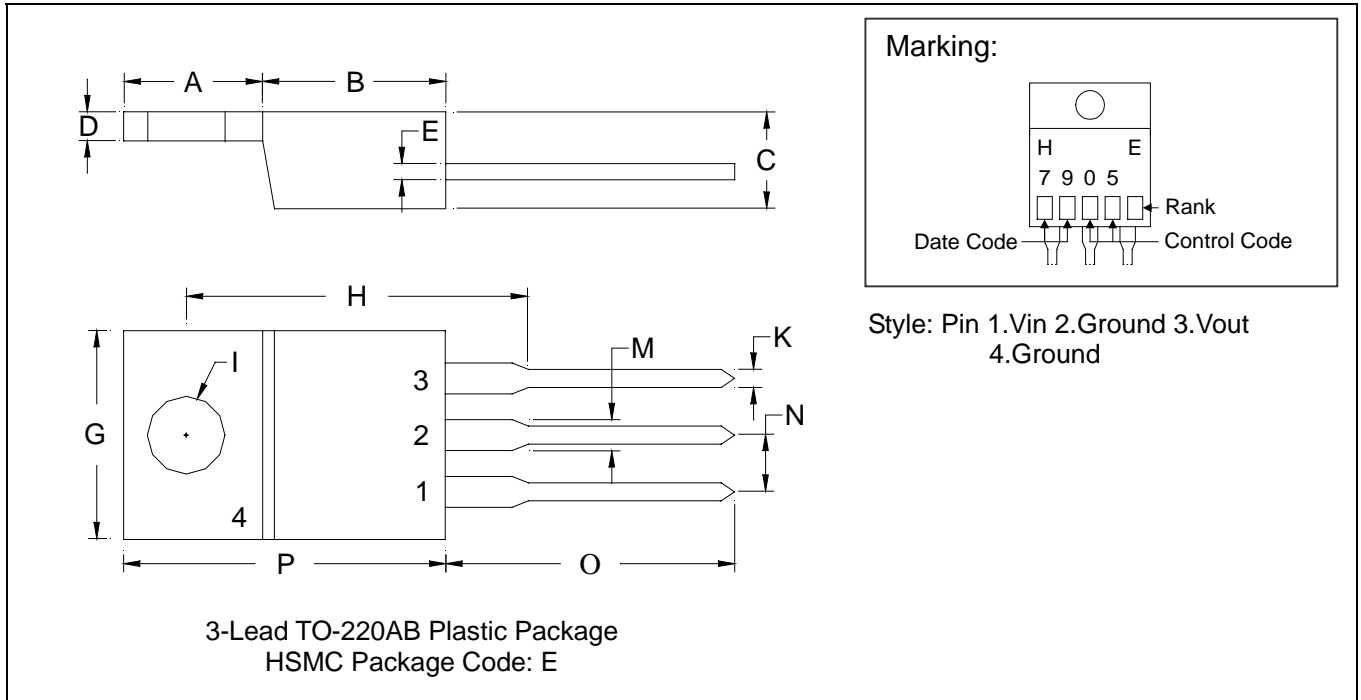


Characteristics Curve





TO-220AB Dimension



*: 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.Dimension and tolerance based on our Spec. dated Sep. 07,1997.
 - 2.Controlling dimension: millimeters.
 - 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 - 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

Material:

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

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