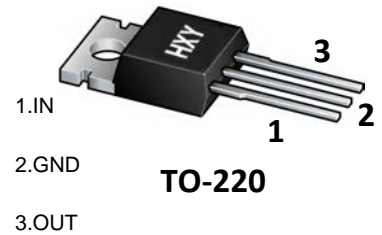




FEATURES

- Maximum output current I_{om} : 1A
- Output voltage V_o : 12 V
- Continuous total dissipation P_D : 1.5W ($T_a = 25^\circ\text{C}$)



ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

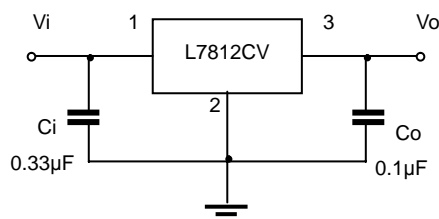
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	66.7	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	-25~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=19\text{V}$, $I_o=500\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output Voltage	V_o	25°C	11.5	12.0	12.5	V	
		$I_o = 5\text{mA} - 1\text{A}$, $14.5\text{V} \leq V_i \leq 27\text{V}$	-25-125 $^\circ\text{C}$	11.4	12.0	12.6	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$	25°C		10	240	mV
		$I_o = 250\text{mA} - 750\text{mA}$	25°C		3	120	mV
Line Regulation	ΔV_o	$14.5\text{V} \leq V_i \leq 30\text{V}$	25°C		12	240	mV
		$16\text{V} \leq V_i \leq 22\text{V}$	25°C		4	120	mV
Quiescent Current	I_q		25°C		4.3	8	mA
Quiescent Current Change	ΔI_q	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$	-25-125 $^\circ\text{C}$			0.5	mA
		$14.5\text{V} \leq V_i \leq 30\text{V}$	-25-125 $^\circ\text{C}$			1.0	mA
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$	-25-125 $^\circ\text{C}$		-1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$f = 10\text{Hz} \text{ to } 100\text{KHz}$	25°C		75		$\mu\text{V}/V_o$
Ripple Rejection	RR	$f = 120\text{Hz}$, $15\text{V} \leq V_i \leq 25\text{V}$	-25-125 $^\circ\text{C}$	55	71		dB
Dropout Voltage	V_d	$I_o = 1.0\text{A}$	25°C		2		V
Output Resistance	R_o	$f = 1\text{KHz}$	-25-125 $^\circ\text{C}$		18		m Ω
Short Circuit Current	I_{sc}		25°C		350		mA
Peak Current	I_{pk}		25°C		2.2		A

* Pulse test.

TYPICAL APPLICATION

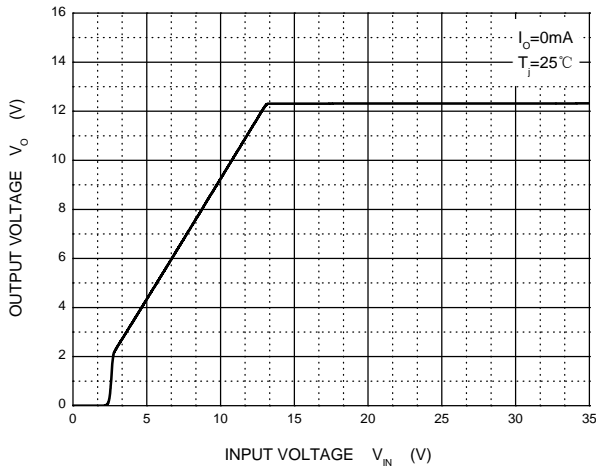


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

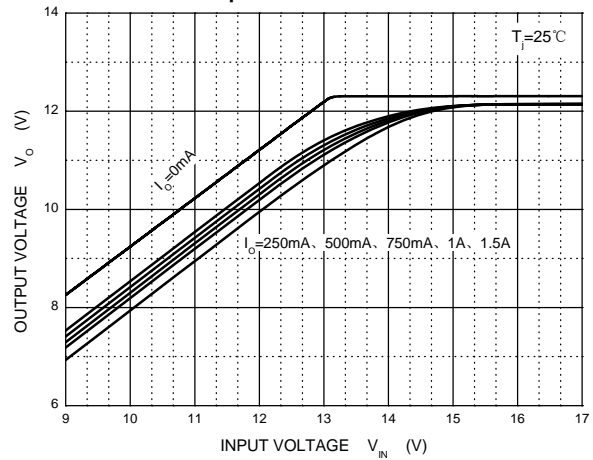


Typical Characteristics

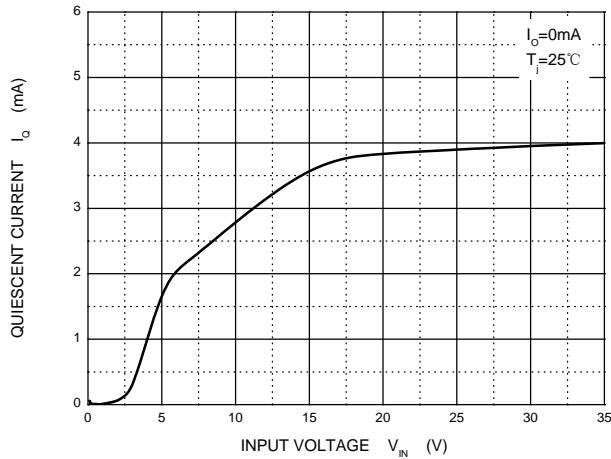
Output Characteristics



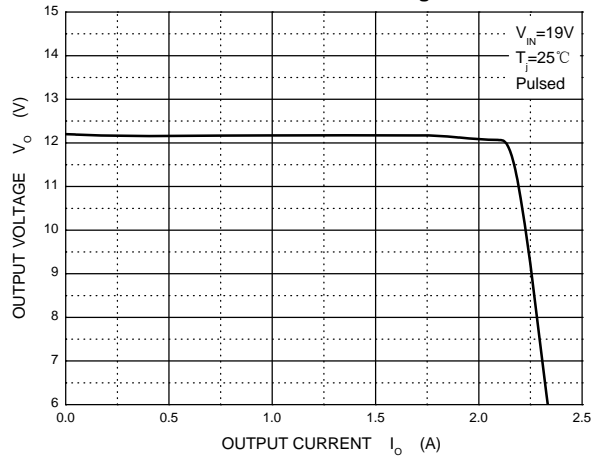
Dropout Characteristics



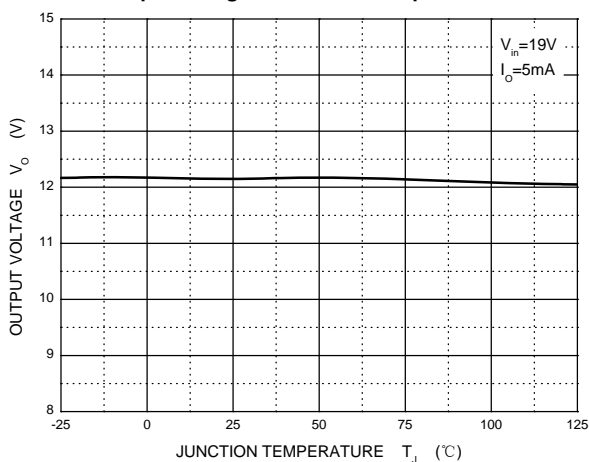
Quiescent Current vs Input Voltage



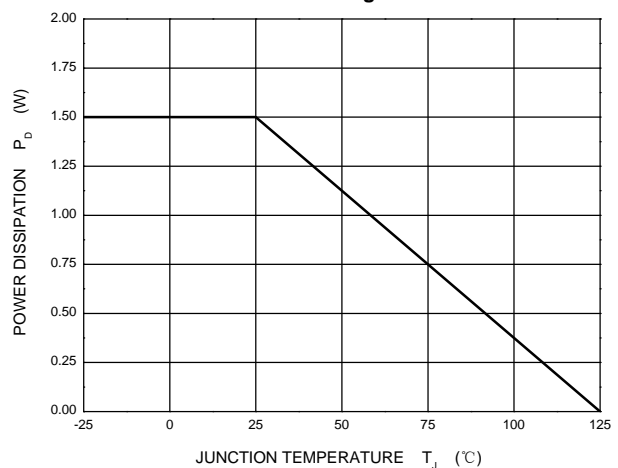
Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



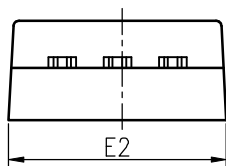
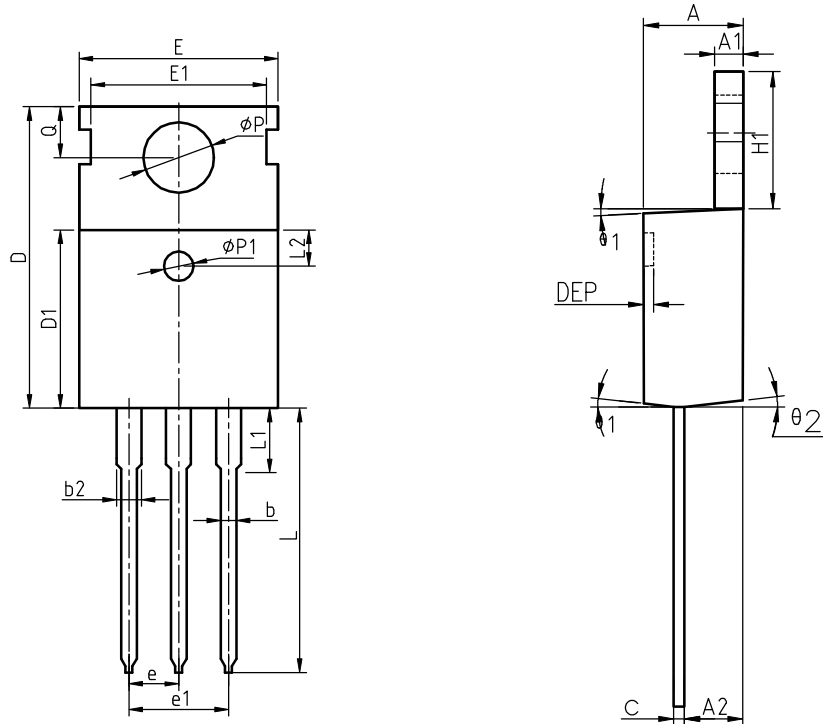
Power Derating Curve





Package Information

TO-220



COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	MIN	NOM	MAX
A	4.40	4.57	4.70	0.173	0.180	0.185
A1	1.27	1.30	1.33	0.050	0.051	0.052
A2	2.35	2.40	2.50	0.093	0.094	0.098
b	0.77	0.80	0.90	0.030	0.031	0.035
b2	1.17	1.27	1.36	0.046	0.050	0.054
c	0.48	0.50	0.56	0.019	0.020	0.022
D	15.40	15.60	15.80	0.606	0.614	0.622
D1	9.00	9.10	9.20	0.354	0.358	0.362
DEP	0.05	0.10	0.20	0.002	0.004	0.008
E	9.80	10.00	10.20	0.386	0.394	0.402
E1	-	8.70	-	-	0.343	-
E2	9.80	10.00	10.20	0.386	0.394	0.402
e		2.54	BSC		0.100	BSC
e1		5.08	BSC		0.200	BSC
H1	6.40	6.50	6.60	0.252	0.256	0.260
L	12.75	13.50	13.65	0.502	0.531	0.537
L1	-	3.10	3.30	-	0.122	0.130
L2		2.50	REF		0.098	REF
P	3.50	3.60	3.63	0.138	0.142	0.143
P1	3.50	3.60	3.63	0.138	0.142	0.143
Q	2.73	2.80	2.87	0.107	0.110	0.113
theta 1	5°	7°	9°	5°	7°	9°
theta 2	1°	3°	5°	1°	3°	5°
theta 3	1°	3°	5°	1°	3°	5°



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