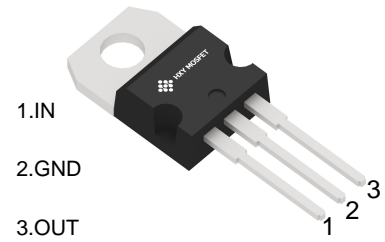




Features

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



Maximum Ratings ($T_a = 25^\circ C$ unless otherwise noted)

TO-220S

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

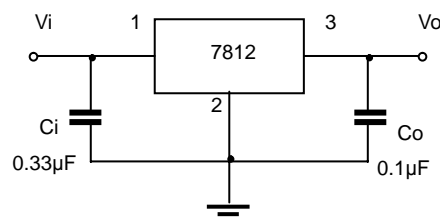
Electrical Characteristics ($T_a = 25^\circ C$ unless otherwise specified)

($V_i = -19V$, $I_o = 500mA$, $C_i = 2.2\mu F$, $C_o = 1\mu F$, unless otherwise specified)

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

* Pulse test.

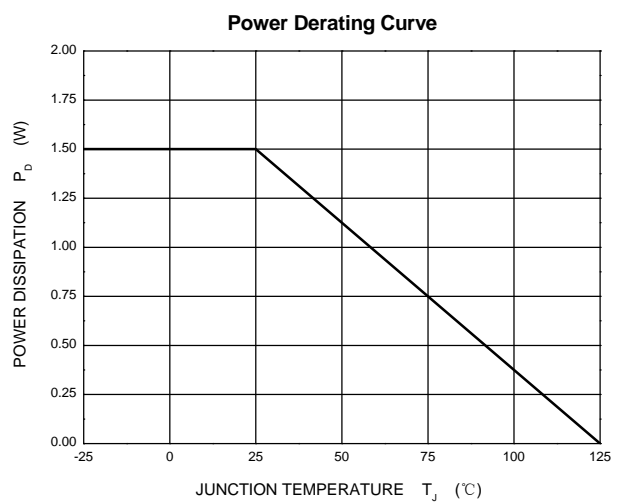
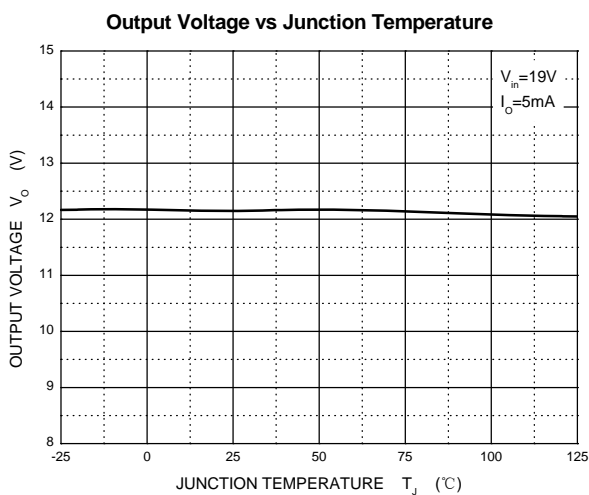
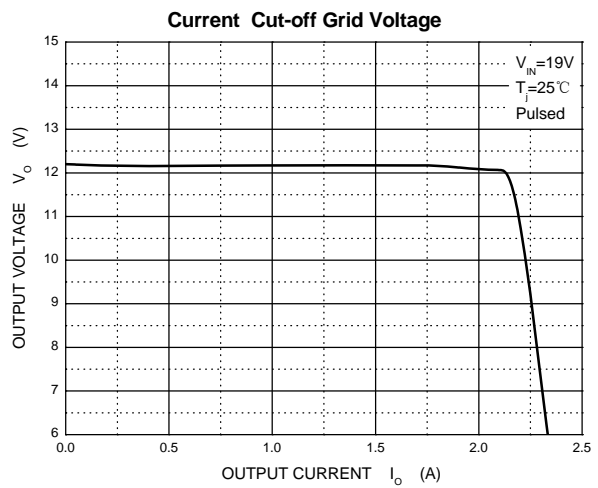
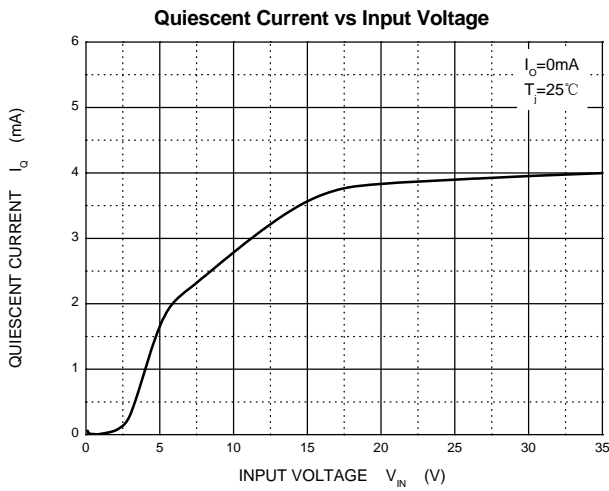
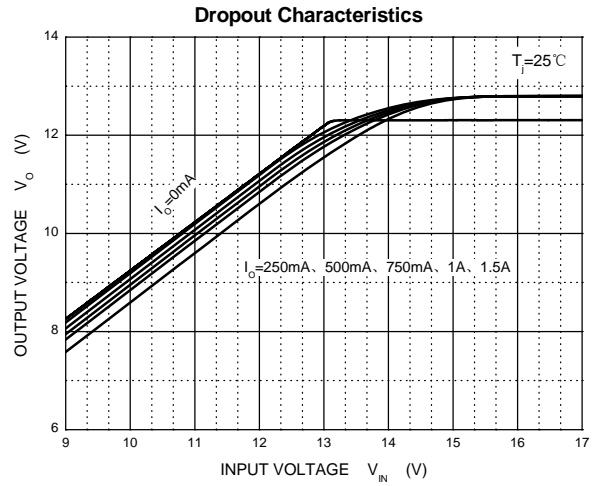
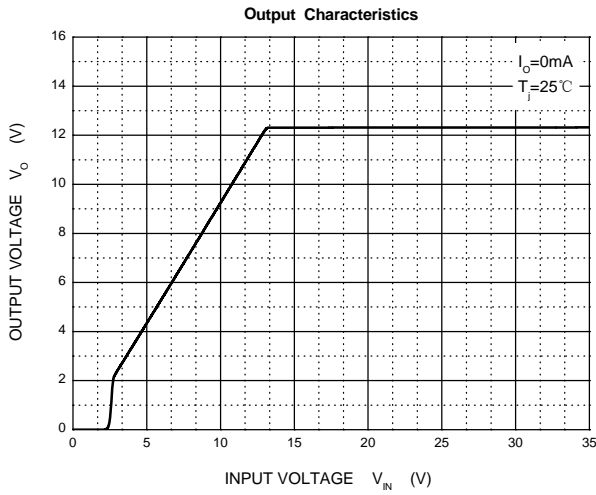
Typical Application



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

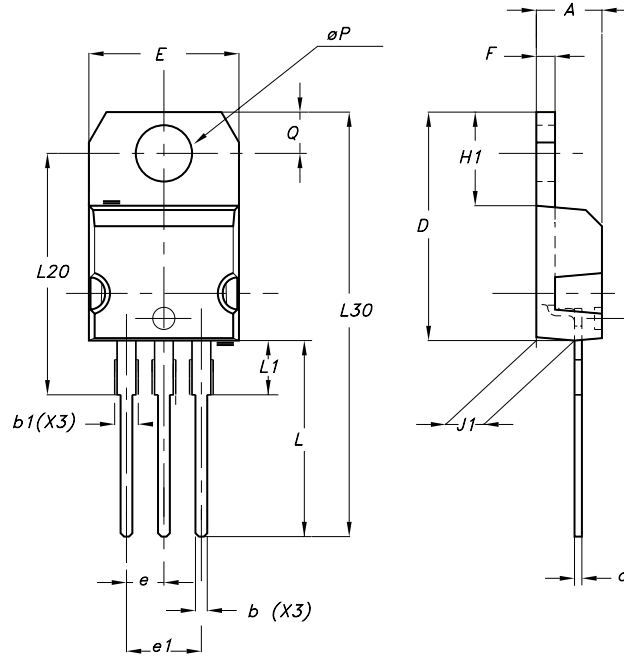


Typical Characteristics





Package Information
TO-220S



DIM.	mm.			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
b	0.61		0.88	0.024		0.034
b1	1.15		1.70	0.045		0.066
c	0.49		0.70	0.019		0.027
D	15.25		15.75	0.60		0.620
E	10		10.40	0.393		0.409
e	2.40		2.70	0.094		0.106
e1	4.95		5.15	0.194		0.202
F	1.23		1.32	0.048		0.052
H1	6.20		6.60	0.244		0.256
J1	2.40		2.72	0.094		0.107
L	13		14	0.511		0.551
L1	3.50		3.93	0.137		0.154
L20		16.40			0.645	
L30		28.90			1.137	
ϕP	3.75		3.85	0.147		0.151
Q	2.65		2.95	0.104		0.116



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