

■ Features

Maximum Output current

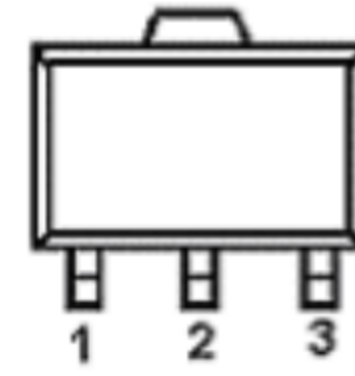
$I_{OM}: 0.1\text{ A}$

Output voltage

$V_o: 12\text{ V}$

Continuous total dissipation

$P_D: 0.50\text{ W}$



1.OUT  
2.GND  
3.IN

Marking:78L12

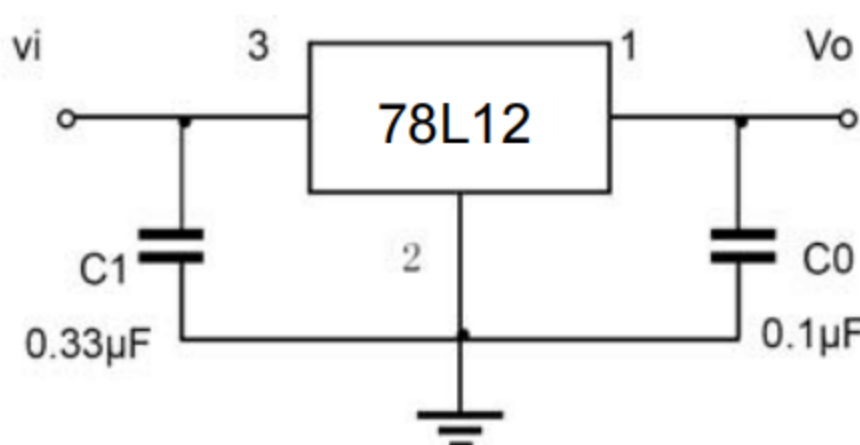
■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^\circ\text{C}$

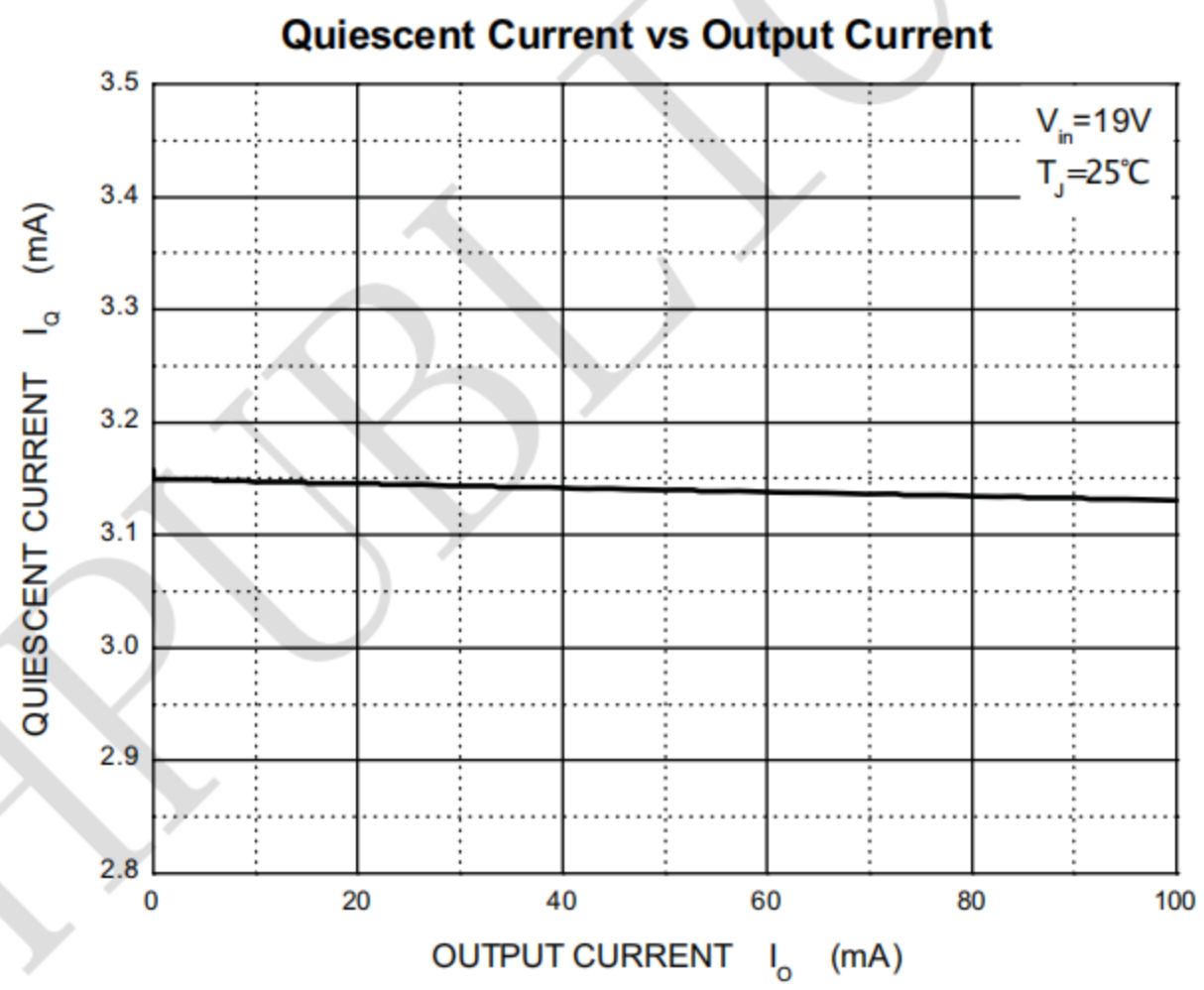
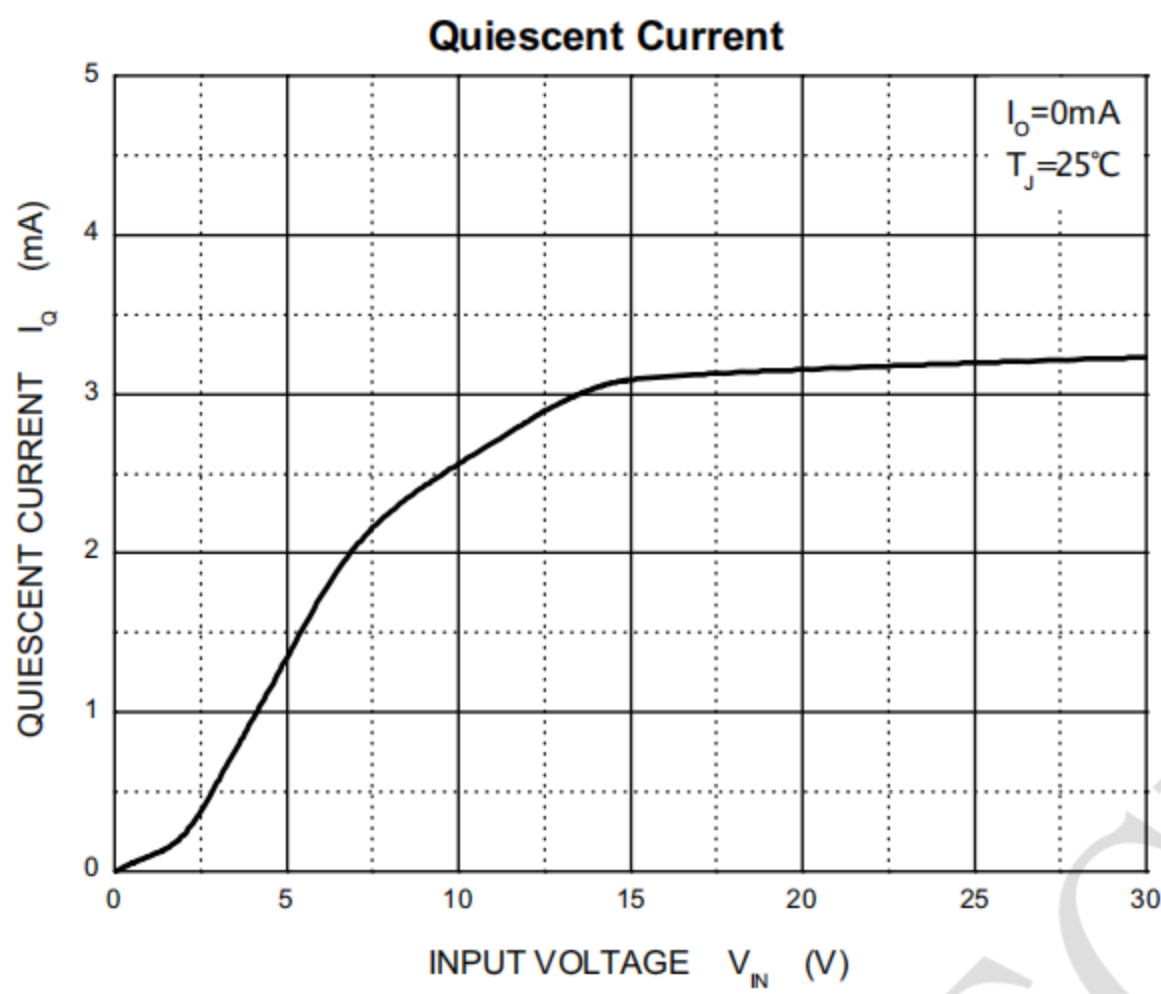
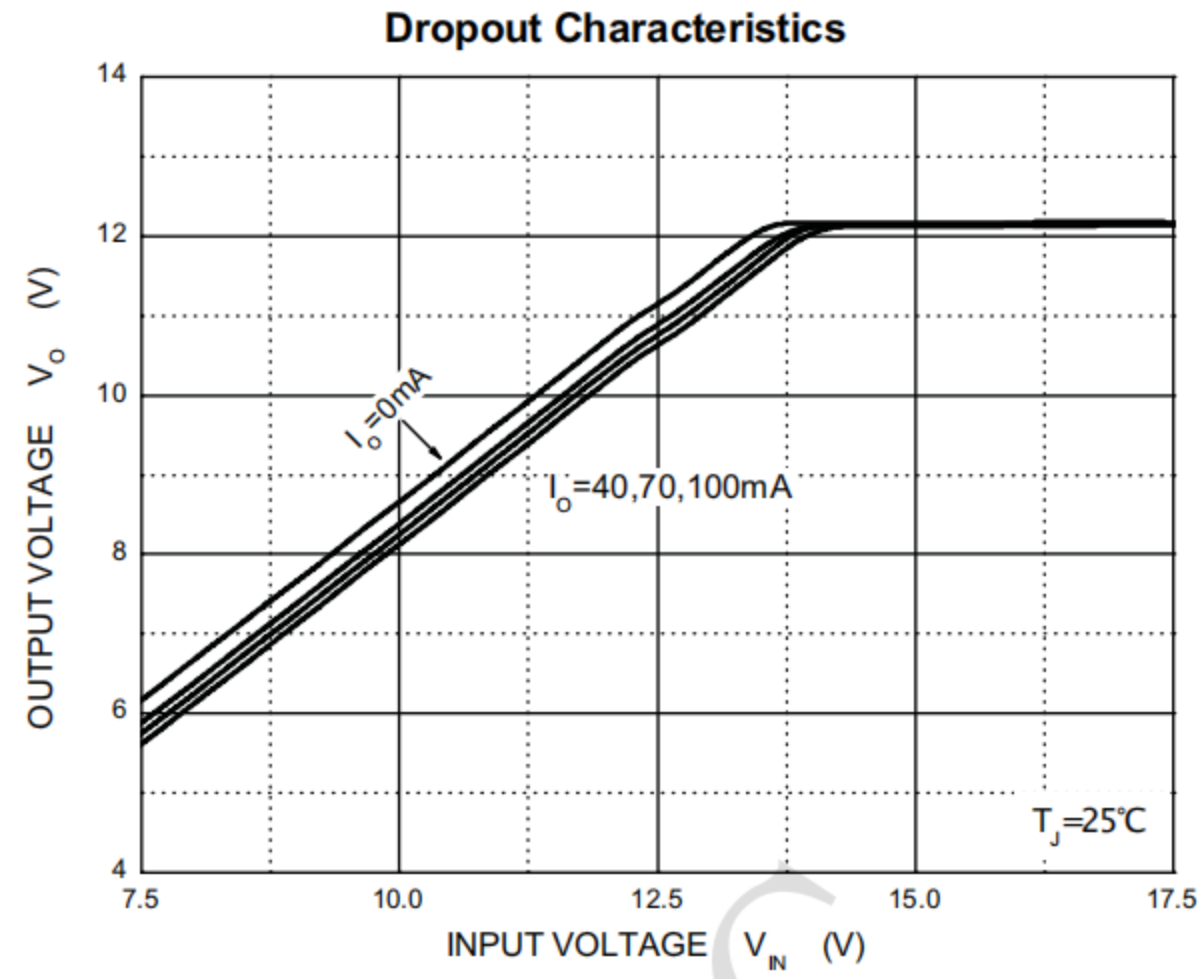
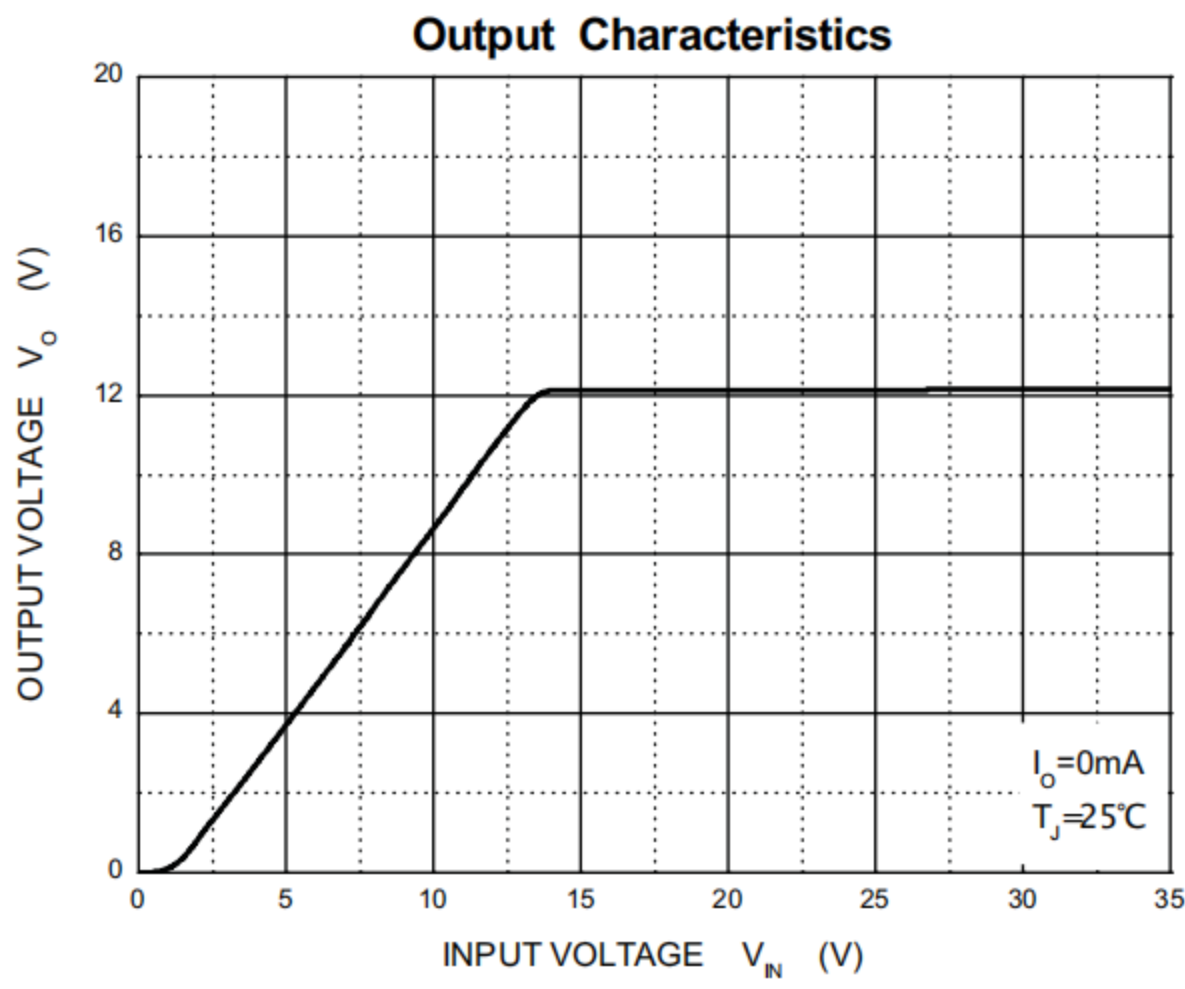
■ Electrical Characteristics ( $V_i=10\text{V}, I_o=40\text{mA}, 0^\circ\text{C} < T_j < 125^\circ\text{C}, C_1=0.33\ \mu\text{F}, C_o=0.1\ \mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT	
Output voltage	$V_o$	$25^\circ\text{C}$	11.5	12	12.5	V	
		$14\text{V} \leq V_i \leq 27\text{V}, I_o=1\text{mA}-40\text{mA}$	0-125 $^\circ\text{C}$	11.4	12	12.6	V
		$I_o=1\text{mA}-70\text{mA}$		11.4	12	12.6	V
Load Regulation	$\Delta V_o$	$I_o=1\text{mA}-100\text{mA}$	25 $^\circ\text{C}$	22	100	mV	
		$I_o=1\text{mA}-40\text{mA}$	25 $^\circ\text{C}$	13	50	mV	
Line regulation	$\Delta V_o$	$14.5\text{V} \leq V_i \leq 27\text{V}$	25 $^\circ\text{C}$	55	250	mV	
		$16\text{V} \leq V_i \leq 27\text{V}$	25 $^\circ\text{C}$	49	200	mV	
Quiescent Current	$I_q$		25 $^\circ\text{C}$	4.3	6.5	mA	
Quiescent Current Change	$\Delta I_q$	$16\text{V} \leq V_i \leq 27\text{V}$	0-125 $^\circ\text{C}$		1.5	mA	
	$\Delta I_q$	$1\text{mA} \leq I_o \leq 40\text{mA}$	0-125 $^\circ\text{C}$		0.1	mA	
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$	25 $^\circ\text{C}$	70		$\mu\text{V}$	
Ripple Rejection	RR	$15\text{V} \leq V_i \leq 25\text{V}, f=120\text{Hz}$	0-125 $^\circ\text{C}$	37	42	dB	
Dropout Voltage	$V_d$		25 $^\circ\text{C}$	1.7		V	

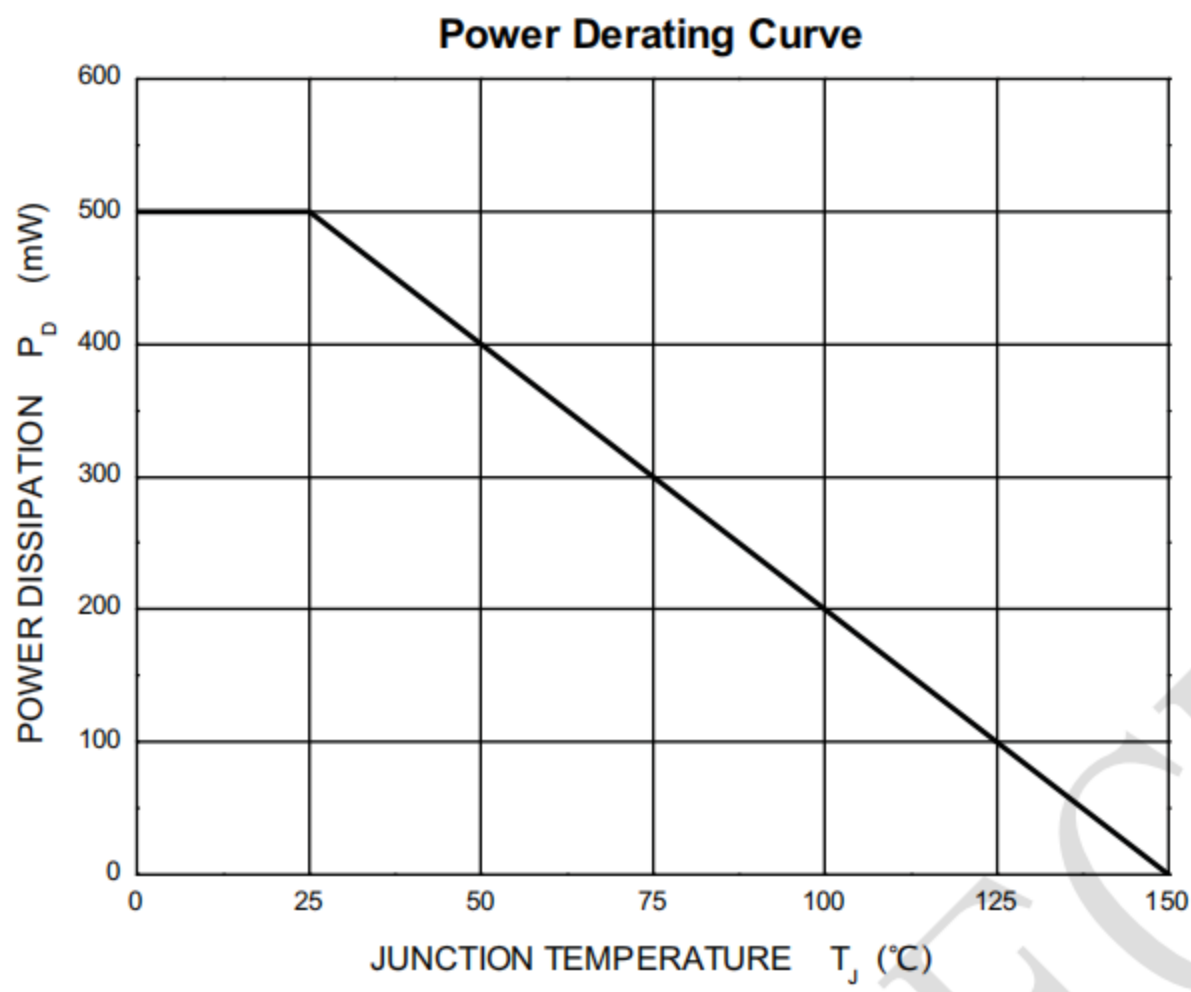
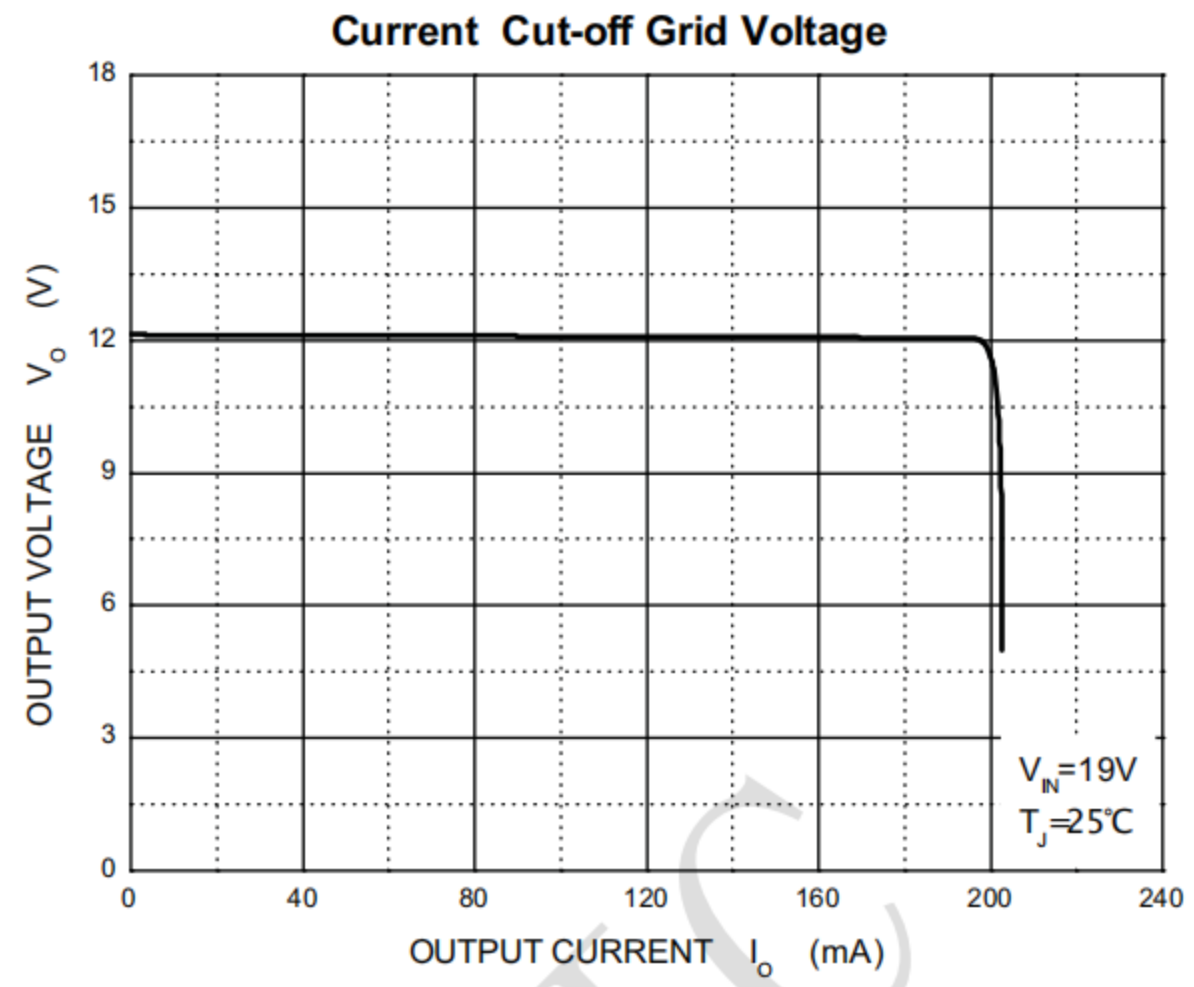
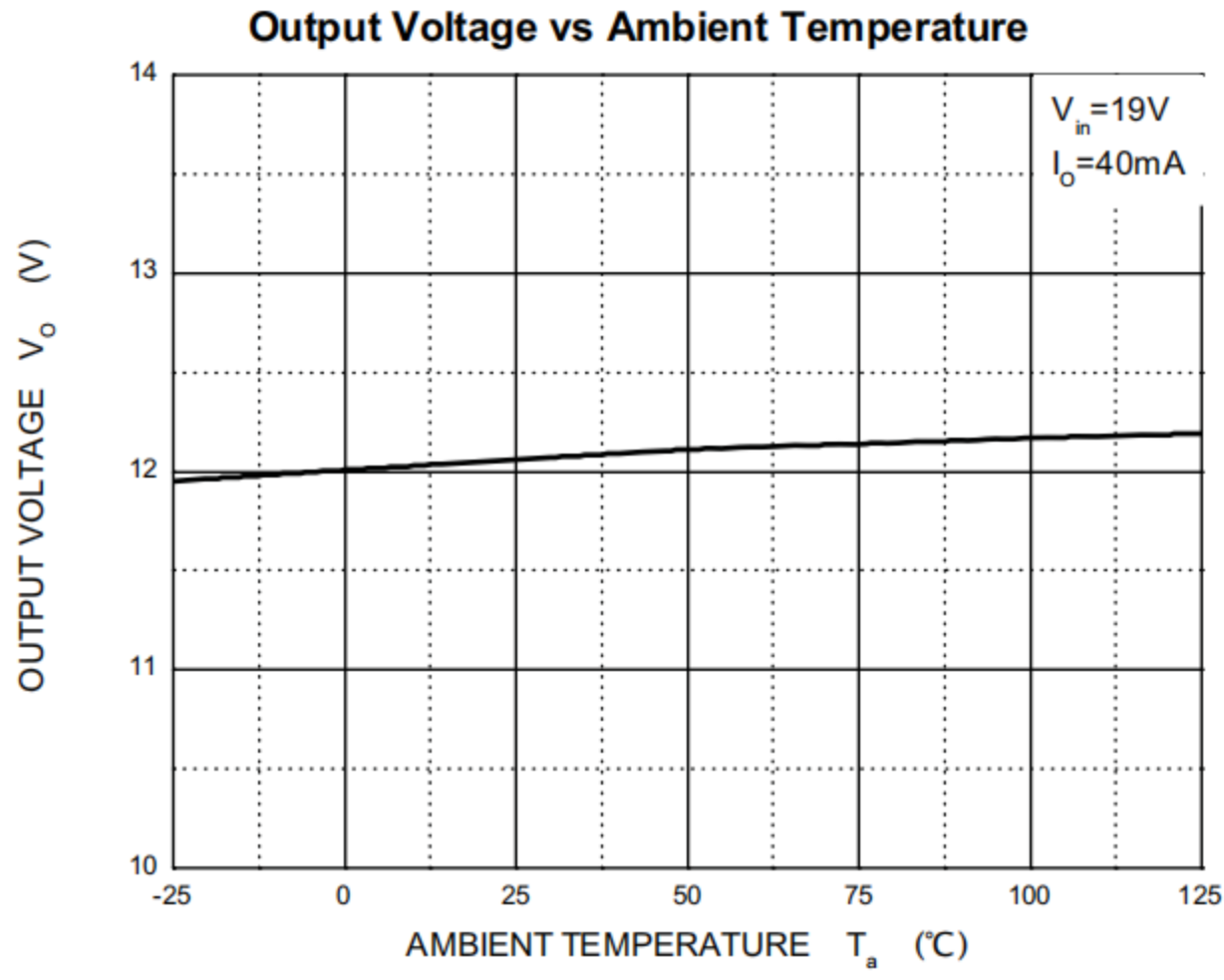
■ Typical application.



**Typical Electrical Characteristic Curves**

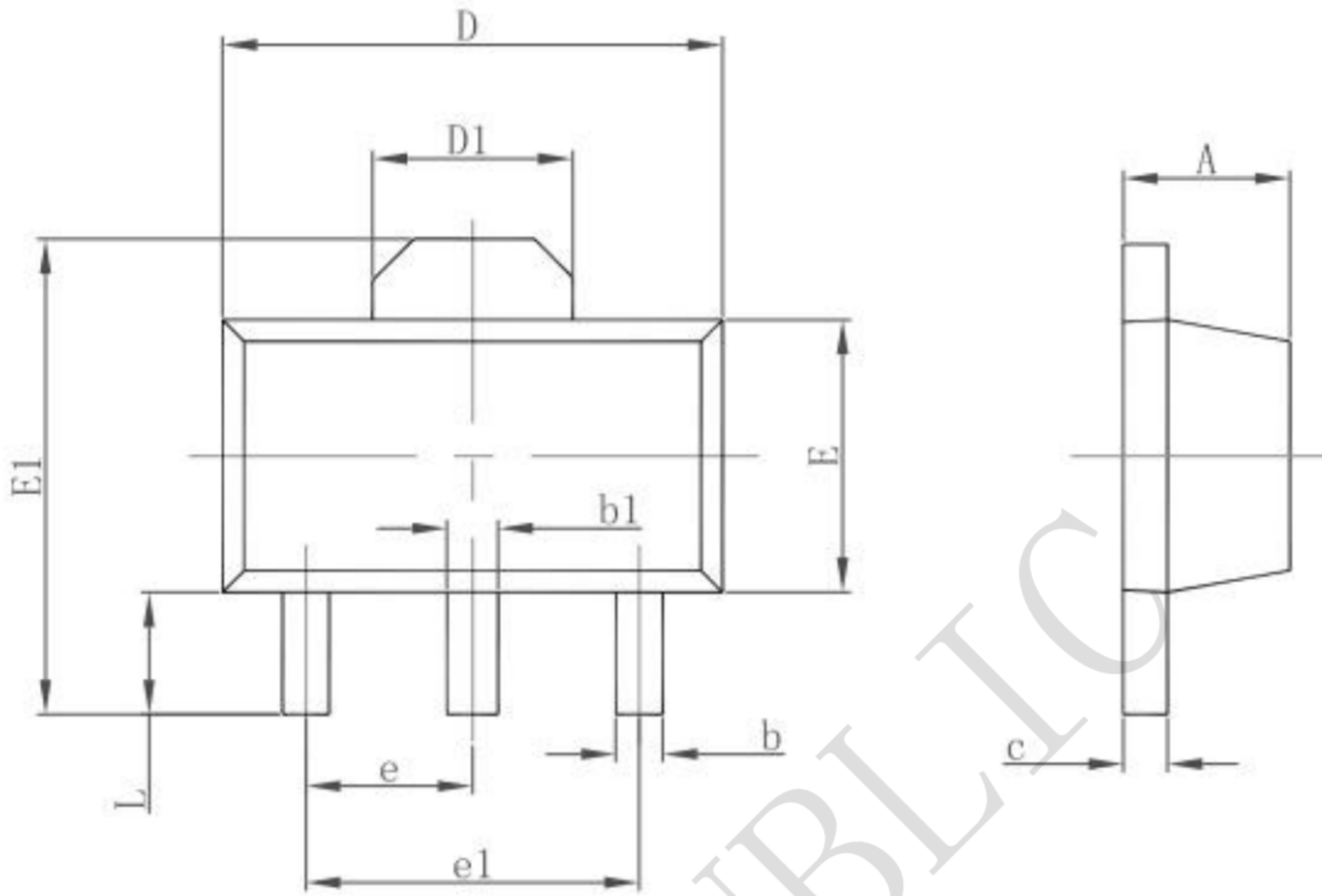


Typical Electrical Characteristic Curves



Package information

SOT89-3



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047