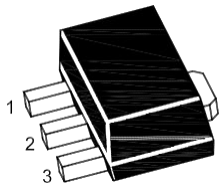
FEATURES

- Maximum output current
  I_{OM}: 0.1A
- Output voltage
  V_O: 12V
- Continuous total dissipation
  P_D: 0.6 W (T_a= 25 ℃)

SOT-89



OUT 2. GND 3. IN

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

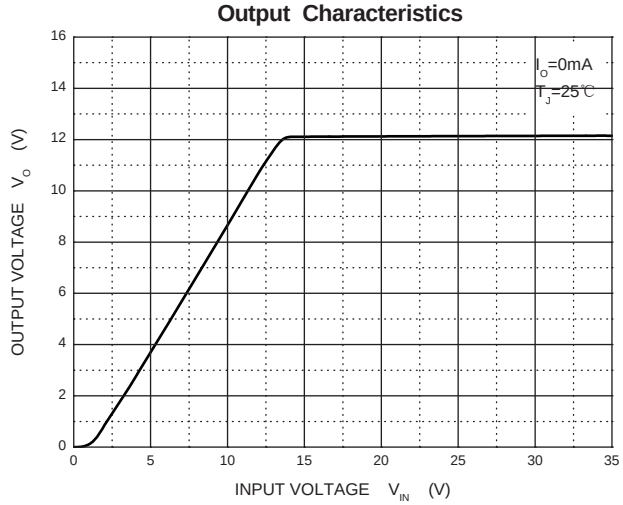
Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	166.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-40~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE (Vi=19V,Io=40mA,Ci=0.33uF,,Co=0.1uF, unless otherwise specified)

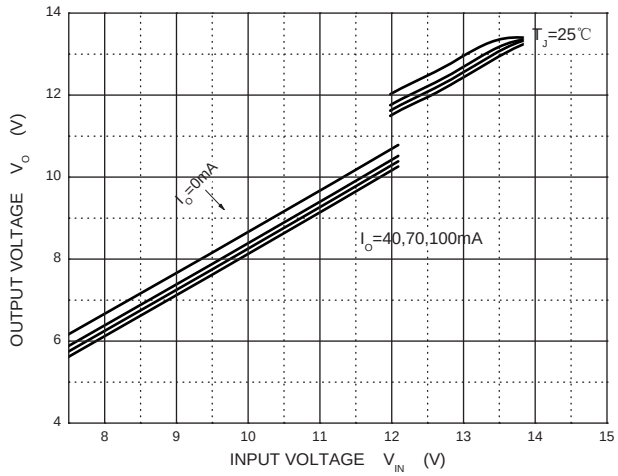
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo		25℃	11.5	12	12.5	V
		14V≤V_I≤27V, Io=1mA-40mA	0-125℃	11.4	12	12.6	V
		Io=1mA-70mA		11.4	12	12.6	V
Load Regulation	△Vo	Io=1mA-100mA	25℃		22	100	mV
		Io=1mA-40mA	25℃		13	50	mV
Line regulation	△Vo	14.5V≤V_I≤27V	25℃		55	250	mV
		16V≤V_I≤27V	25℃		49	200	mV
Quiescent Current	Iq		25℃		4.3	6.5	mA
Quiescent Current Change	△Iq	16V≤V_I≤27V	0-125℃			1.5	mA
	△Iq	1mA≤I_O≤40mA	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		70		μV/Vo
Ripple Rejection	RR	15V≤V_I≤25V,f=120Hz	0-125℃	37	42		dB
Dropout Voltage	Vd		25℃		1.7		V

Typical Characteristics

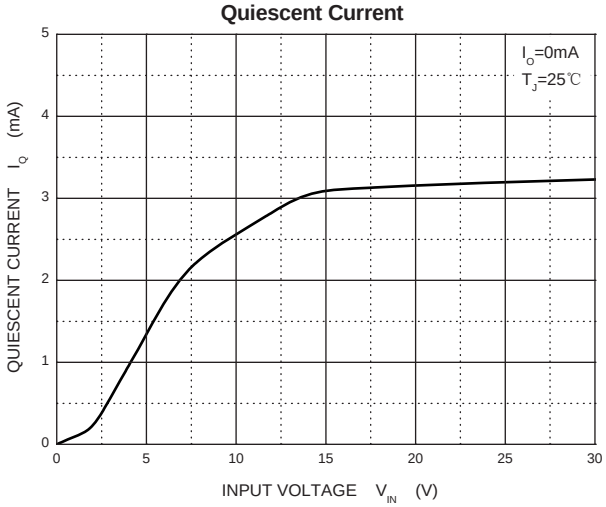
Output Characteristics



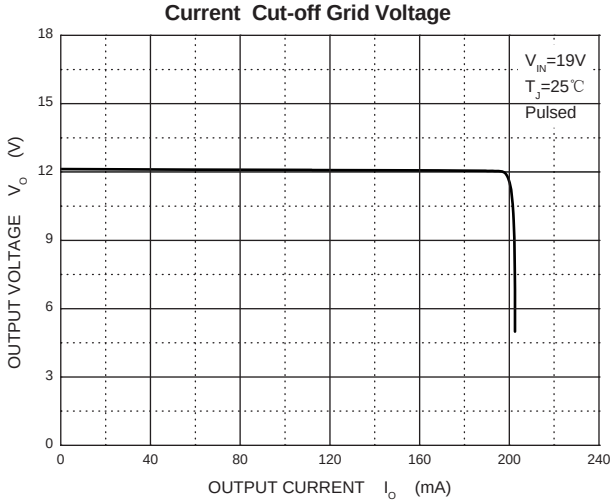
Dropout Characteristics



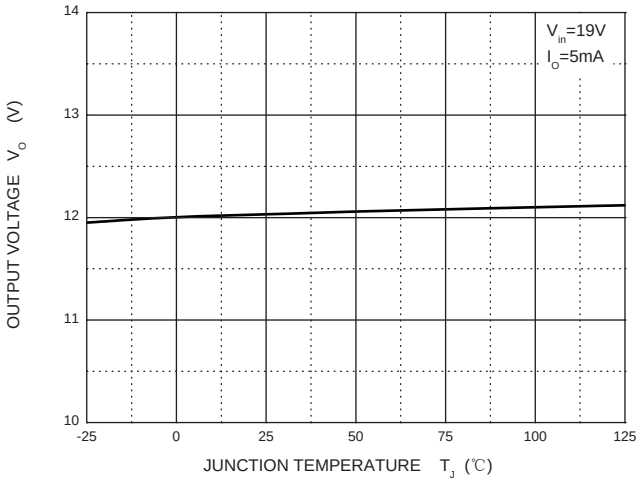
Quiescent Current



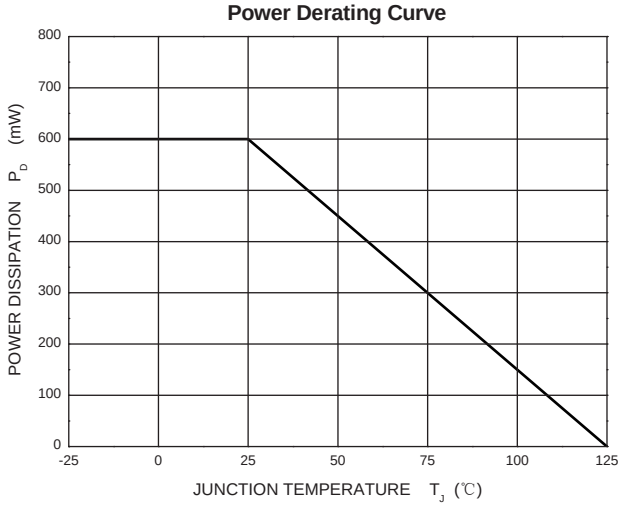
Current Cut-off Grid Voltage

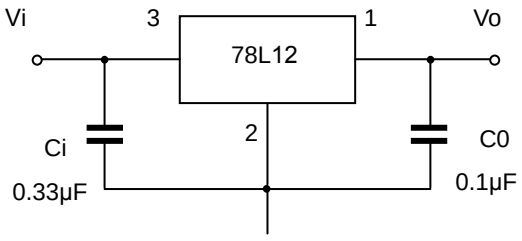


Output Voltage vs Junction Temperature

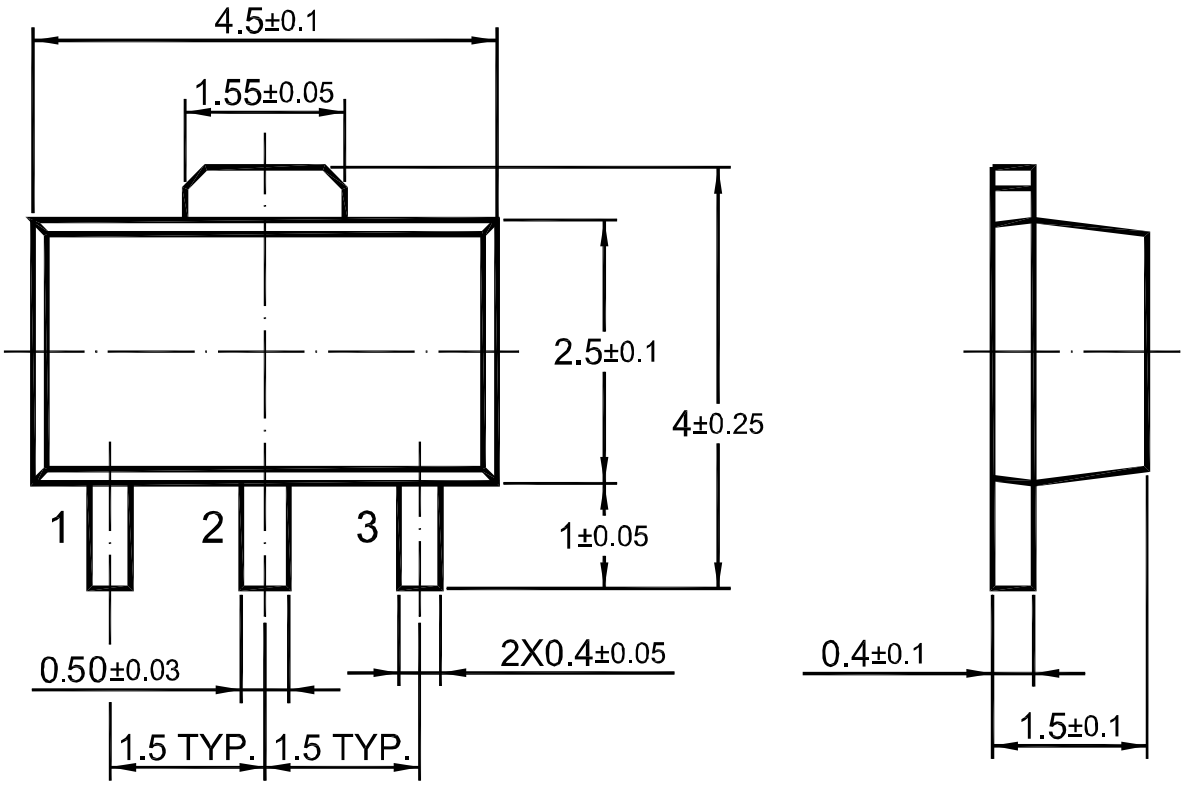


Power Derating Curve





Package Outline
SOT-89
Dimensions in mm



Ordering Information

Device	Package	Shipping
TK78L12	SOT-89	1,000/ Tape & Reel (7 inches)