

FEATURES

- Maximum output current I_O : 0.1 A
- Output voltage V_O : 5 V
- Continuous total dissipation P_D : 0.5W ($T_a=25^\circ\text{C}$)



SOT-89

1: OUT 2: GND 3: IN

ABSOLUTE MAXIMUM RATINGS

Operating temperature range applies

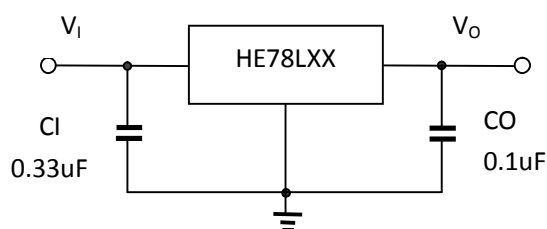
Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	0-125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

$V_i=10\text{V}, I_o=40\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$, unless otherwise specified

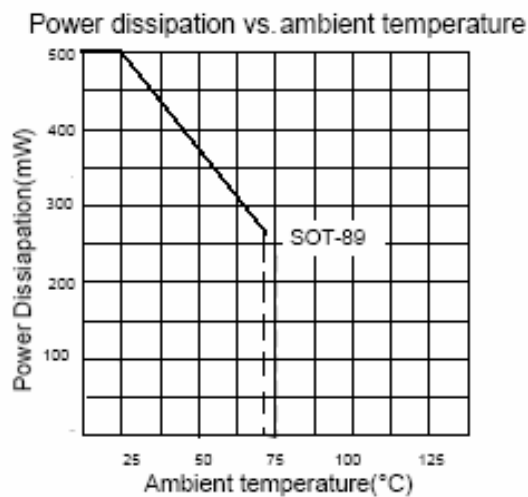
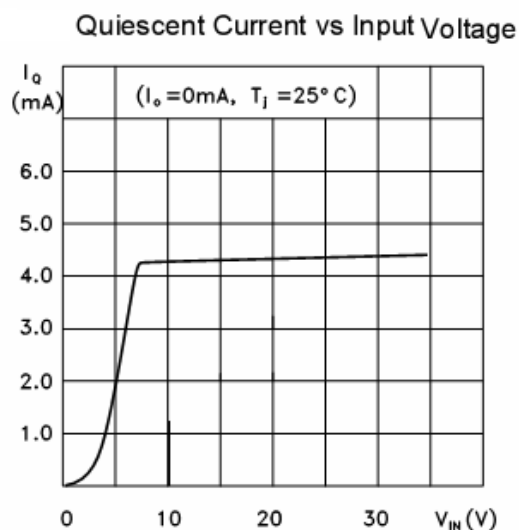
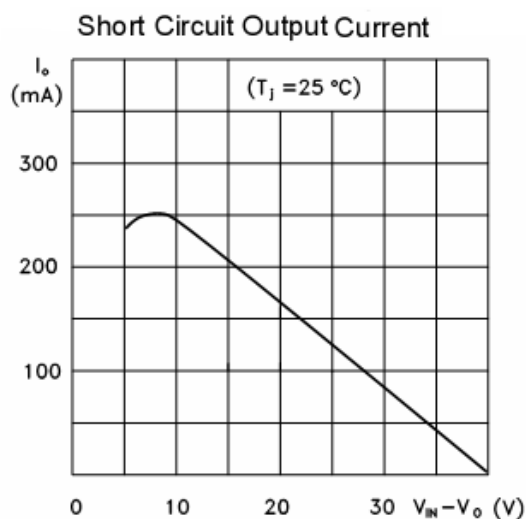
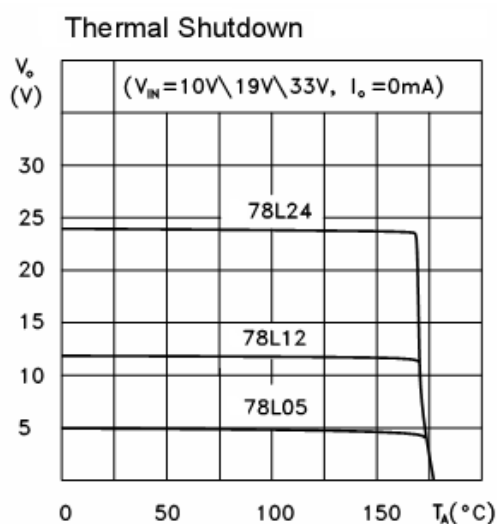
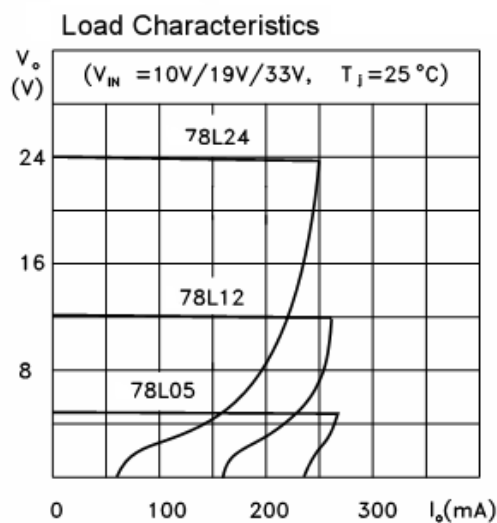
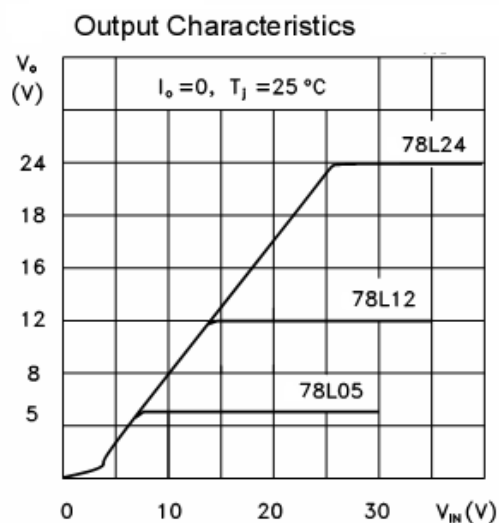
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	V_O		25°C	4.8	5.0	5.2	V
		$7\text{V} \leq V_i \leq 20\text{V}, I_o=1\text{mA} \sim 40\text{mA}$	$0-125^\circ\text{C}$	4.75	5.0	5.25	V
		$I_o=1\text{mA} \sim 70\text{mA}$		4.75	5.0	5.25	V
Load Regulation	ΔV_O	$I_o=1\text{mA} \sim 100\text{mA}$	25°C		15	60	mV
		$I_o=1\text{mA} \sim 40\text{mA}$	25°C		8	30	mV
Line regulation	ΔV_O	$7\text{V} \leq V_i \leq 20\text{V}$			32	150	mV
		$8\text{V} \leq V_i \leq 20\text{V}$	25°C		26	100	mV
Quiescent Current	I_q		25°C		3.8	6	mA
Quiescent Current Change	ΔI_q	$8\text{V} \leq V_i \leq 20\text{V}$	$0-125^\circ\text{C}$			1.5	mA
	ΔI_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°C		42		μV
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 20\text{V}, f=120\text{Hz}$	$0-125^\circ\text{C}$	41	49		dB
Dropout Voltage	V_d		25°C		1.7		V

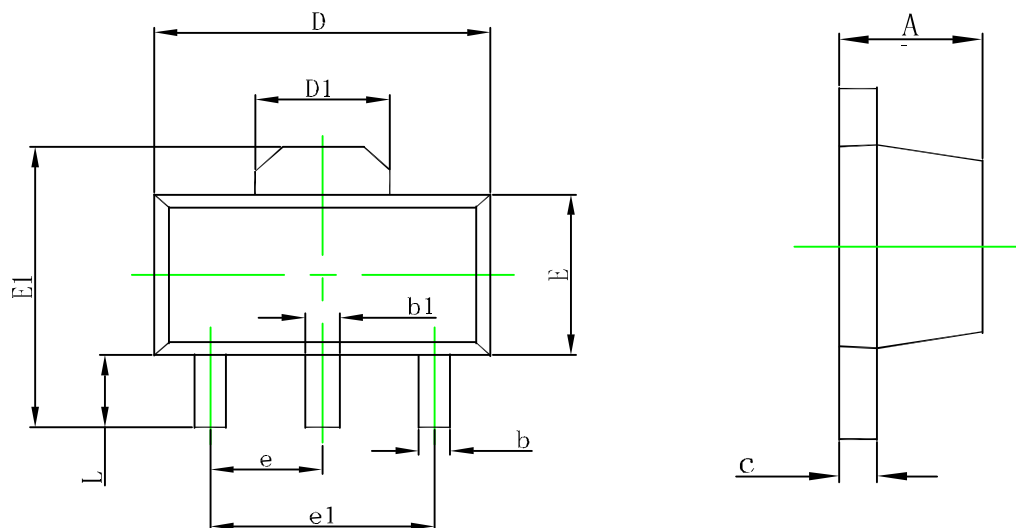
TYPICAL APPLICATION



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

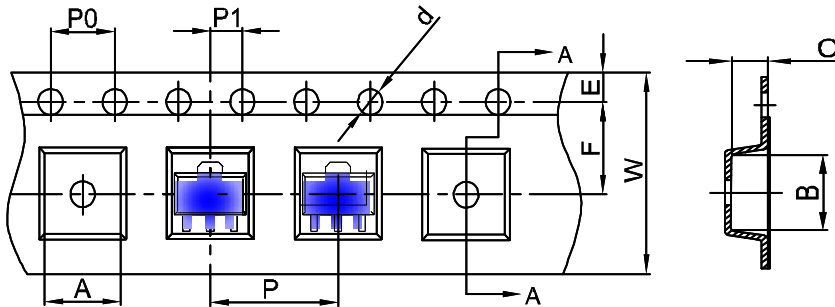
Typical Characteristics



SOT-89 Package Outline Dimensions


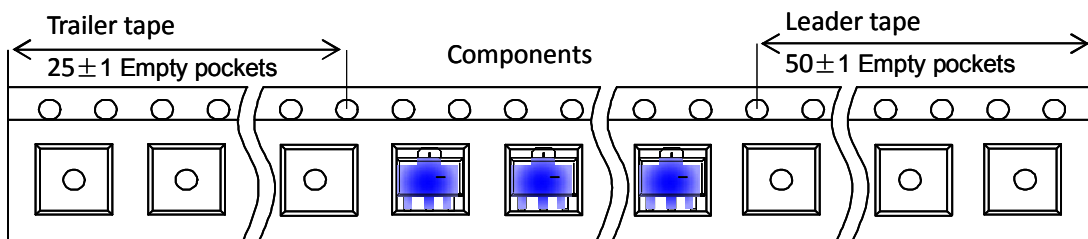
Symbol	DimensionsInMillimeters		DimensionsInInches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550REF.		0.061REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP.		0.060TYP.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

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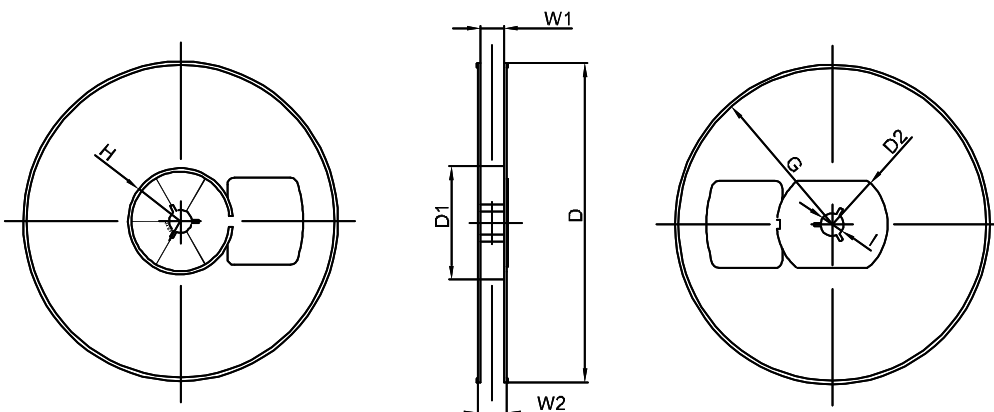


DIMENSIONS ARE IN MILLIMETER										
TYPE	A	B	C	d	E	F	P0	P	P1	W
SOT-23	4.85	4.45	1.85	φ 1.50	1.75	5.50	4.00	8.00	2.00	12.00
TOLERANCE	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1

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REEL OPTION	D	D1	D2	G	H	I	W1	W2		
7" DIA	φ 180	60.00	R32.00	R86.50	R30.00	13.00	13.20	16.50		
TOLERANCE	±2	±1	±1	±1	±1	±1	±1	±1		