

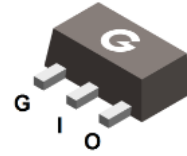
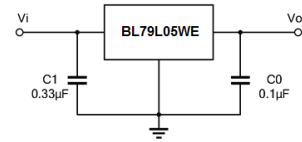
Features

- If adequate heat sinking is provided, they can deliver over 100mA output current
- Thermal overload protection
- Short circuit current limiting
- Output voltage of -5V
- RoHS compliant with Halogen-free

HF

Mechanical Data

- Case: SOT-89
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



SOT-89

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BL79L05WE	SOT-89	1000 pcs / Tape & Reel	79L05W

Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Maximum Output Current	I_{CM}	100	mA

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation ($T_A = 25^\circ\text{C}$) ^{*1, 2}	P_D	0.8	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	200	$^\circ\text{C/W}$
Operating Temperature Range	T_{OPR}	-40 ~ +125	$^\circ\text{C}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 ~ +150	$^\circ\text{C}$

Notes:

1. $T_A \leq 25^\circ\text{C}$, if $T_A > 25^\circ\text{C}$, derate by $6.4\text{mW}/^\circ\text{C}$
2. 15 mm * 25 mm * 0.7 mm glass epoxy board, $T_A \leq 25^\circ\text{C}$

Electrical Characteristics

($I_o = 40\text{mA}$, $V_i = -10\text{V}$, $C_i = 0.33\mu\text{F}$, $C_o = 0.1\mu\text{F}$, $T_j = -40^\circ\text{C}$ to 125°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	V_O	$V_i = -10\text{V}$, $I_o = 40\text{mA}$	-4.8	-5.0	-5.2	V
Line Regulation	ΔV_{OLINE}	$-7\text{V} \leq V_i \leq -20\text{V}$, $I_o = 40\text{mA}$, $T_j = 25^\circ\text{C}$	-	15	150	mV
Load Regulation	ΔV_{OLOAD}	$V_i = -10\text{V}$, $1\text{mA} \leq I_o \leq 100\text{mA}$, $T_j = 25^\circ\text{C}$	-	7	60	mV
Quiescent Current	I_Q	$V_i = -10\text{V}$, $I_o = 40\text{mA}$, $T_j = 25^\circ\text{C}$	-	2	6	mA
Output Noise Voltage	V_N	$V_i = -10\text{V}$, $I_o = 40\text{mA}$ $10\text{Hz} \leq f \leq 100\text{kHz}$, $T_j = 25^\circ\text{C}$	-	120	-	μV
Ripple Rejection	RR	$-8\text{V} \leq V_i \leq -18\text{V}$, $I_o = 40\text{mA}$, $f = 120\text{Hz}$ $e_{in} = 1\text{Vp-p}$, $T_j = 25^\circ\text{C}$	41	71	-	dB
Dropout Voltage	V_D	$T_j = 25^\circ\text{C}$	-	1.3	-	V

TYPICAL CHARACTERISTICS (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

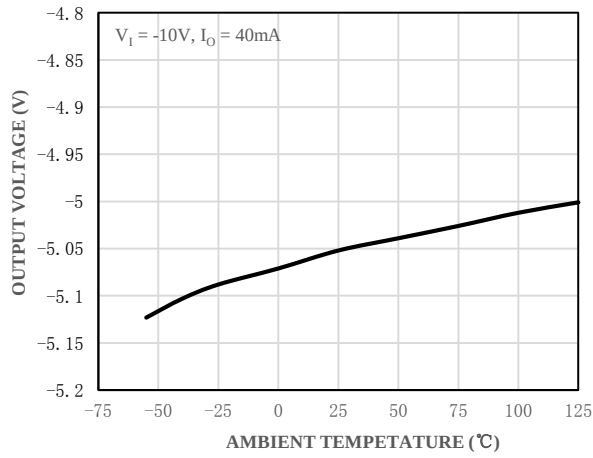


Fig 1 Output Voltage vs. Temperature

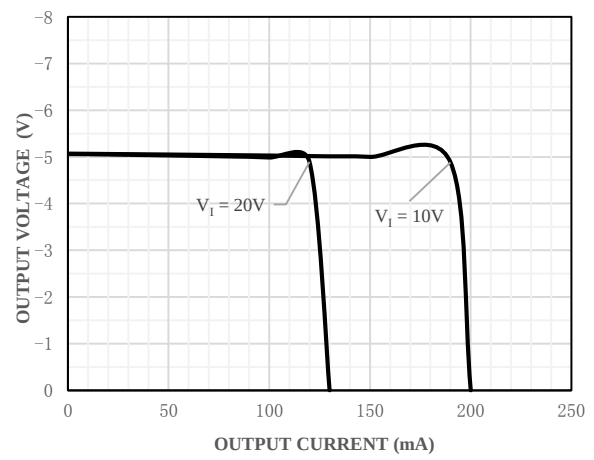


Fig 2 Output Voltage vs. Output Current

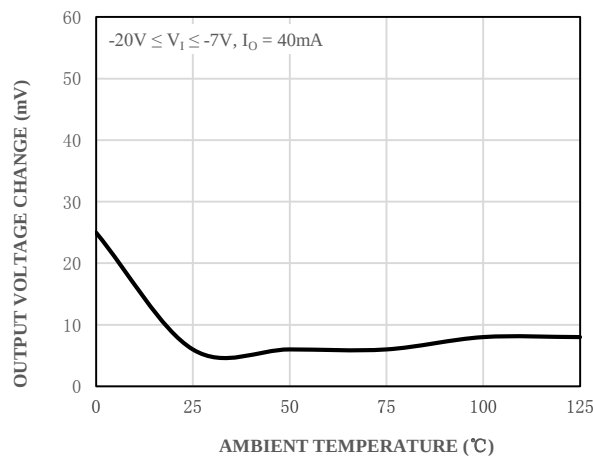


Fig 3 Line Regulation vs. Temperature

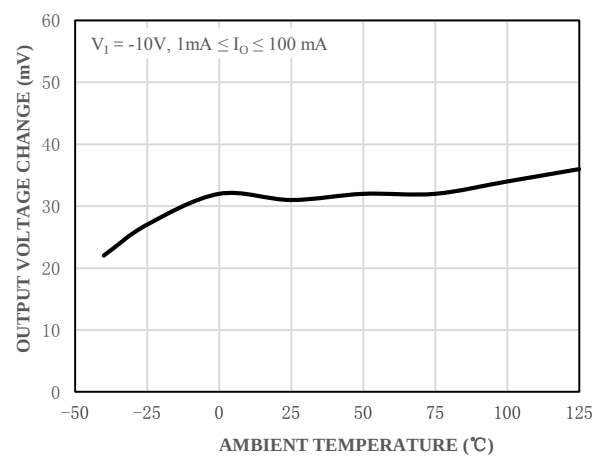


Fig 4 Load Regulation vs. Temperature

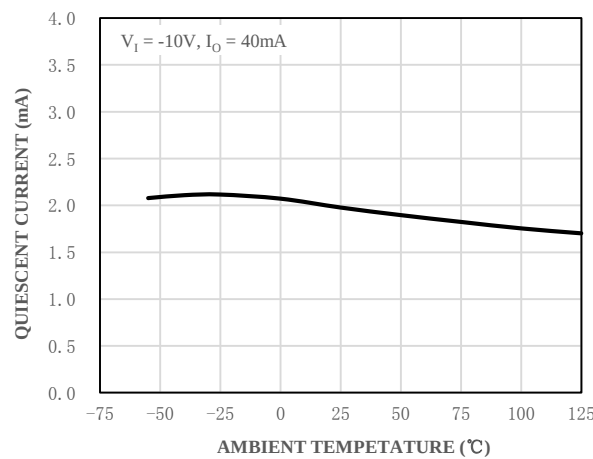


Fig 5 Quiescent Current vs. Temperature

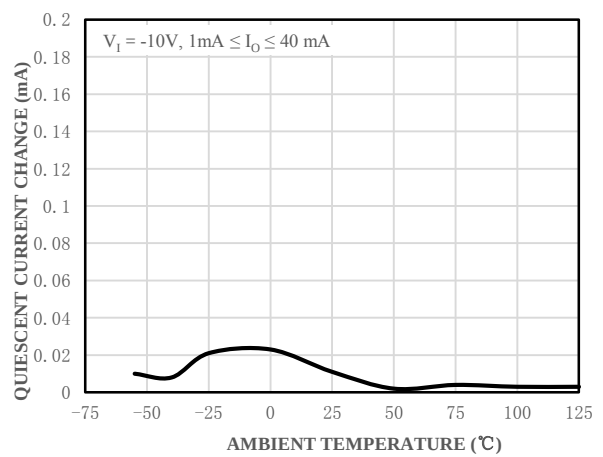


Fig 6 Quiescent Current Change vs. Temperature

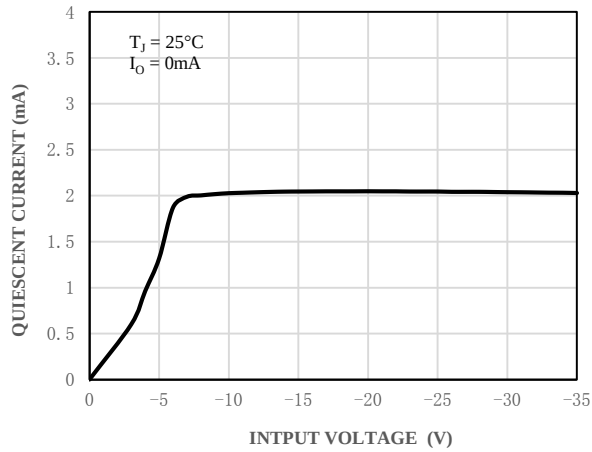


Fig 7 Quiescent Current vs. Input Voltage

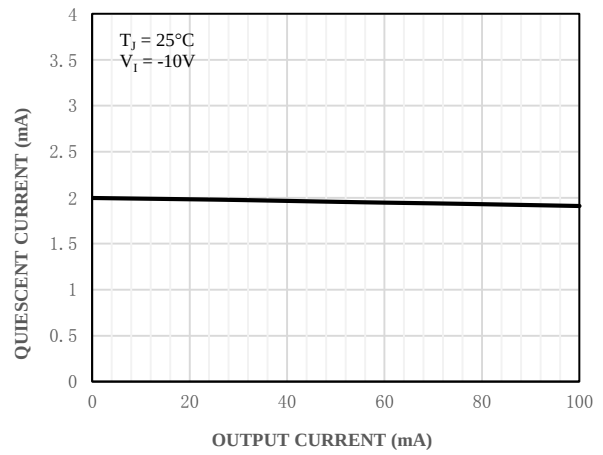


Fig 8 Quiescent Current vs. Output Current

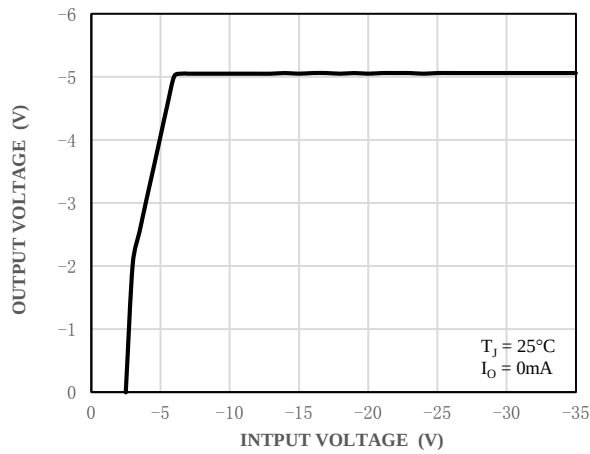


Fig 9 Output Voltage vs. Input Voltage

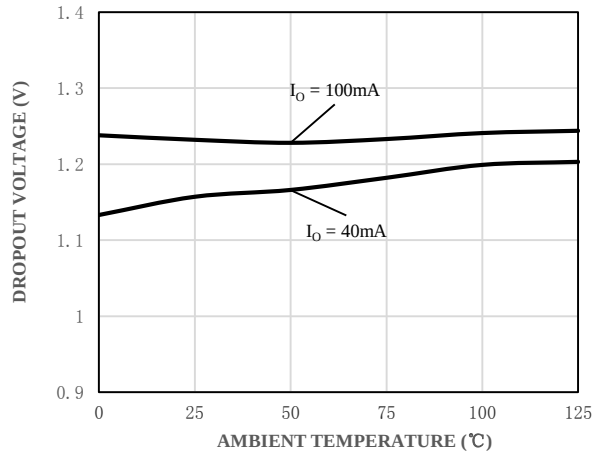


Fig 10 Dropout Voltage vs. Junction Temperature

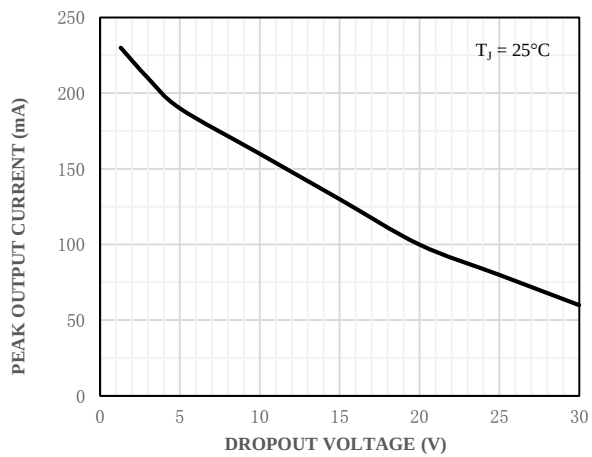
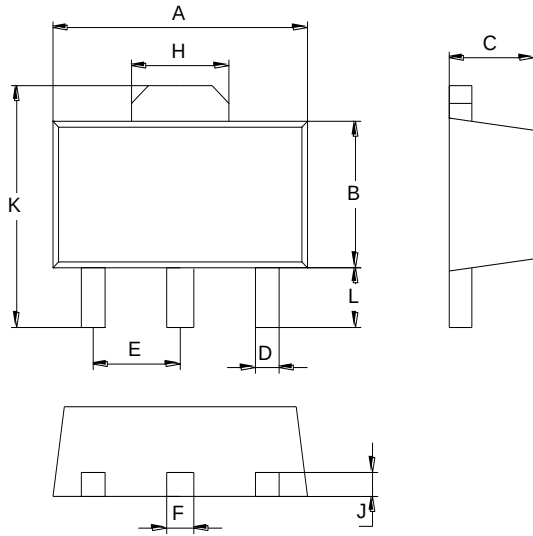


Fig 11 Peak Output Current vs. Dropout Voltage

Package Outline Dimensions (Unit: mm)



SOT-89		
Dimension	Min.	Max.
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35

Mounting Pad Layout (Unit: mm)

SOT-89

