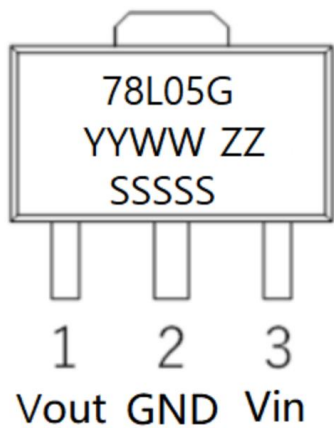
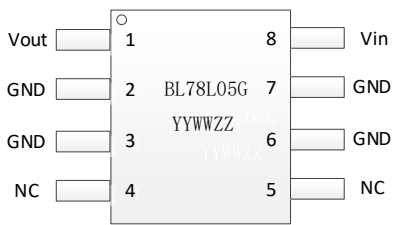


### FEATURES

- Maximum Output Current:0.1A
- Output Voltage:5V
- Thermal Overload Protection
- 2% Output Voltage Accuracy

### PIN CONNECTION

SOT89-3L	SOP8
 <p>78L05G YYWW ZZ SSSS</p> <p>1 2 3 Vout GND Vin</p>	 <p>Vout 1 8 Vin GND 2 BL78L05G 7 GND GND 3 YYWWZZ 6 GND NC 4 5 NC</p>
<p>“YY” STANDS FOR THE ASSEMBLY YEAR  “WW” STANDS FOR THE ASSEMBLY WEEK  “ZZ” STANDS FOR THE ASSEMBLY FACTORY  “SSSS” STANDS FOR 4th TO 8th CHARACTER OR NUMBER OF LOT</p>	

### Absolute Maximum Ratings (Ta=25°C)

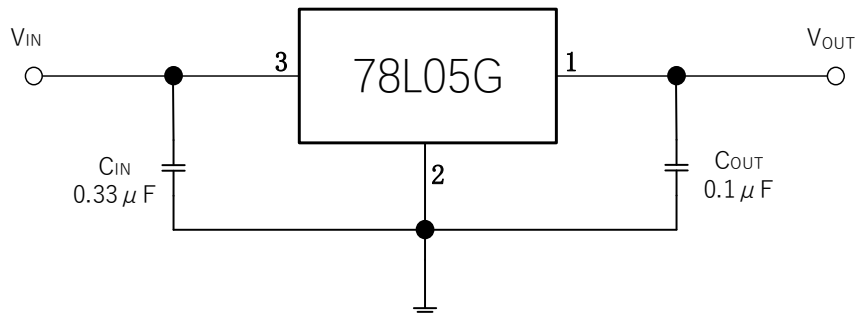
Characteristics	Symbol	Value	Unit
Input Voltage	Vi	42	V
Operating Junction Temperature Range	Tj	-40~+125	°C
Power Dissipation	Pd	750	m W
Operating Temperature Range	Topr	-40~+125	°C
Storage Temperature Range	Tstg	-40~+150	°C

### ELECTRICAL CHARACTERISTICS

(unless other wise noted,  $V_i=10V, I_o=40mA, -30 < T_j < 85^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$ ) (Note1)

Characteristics	Test Conditions	Symbol	Min	Typ	Max	Unit
Output Voltage	$T_j=25^\circ C$	$V_o$	4.9	5	5.1	V
	$7V \leq V_i \leq 20V; I_o=1mA \sim 40mA$		4.8		5.2	V
	$7V \leq V_i \leq V_{max}; I_o=1mA \sim 70mA$		4.8		5.2	V
Load Regulation	$T_j=25^\circ C; I_o=1mA \sim 100mA$	$\Delta V_o$		11	60	mV
	$T_j=25^\circ C; I_o=1mA \sim 40mA$			5	6	mV
Line Regulation	$T_j=25^\circ C; 7V \leq V_i \leq 20V$	$\Delta V_o$		8	150	mV
	$T_j=25^\circ C; 8V \leq V_i \leq 20V$			6	100	mV
Quiescent Current		$I_q$		3	5.5	mA
Quiescent Current Change	$8V \leq V_i \leq 20V$	$\Delta I_q$			1.5	mA
	$1mA \leq I_o \leq 40mA$				0.2	mA
Output Noise Voltage	$10Hz \leq f \leq 100kHz$	$V_N$		63		$\mu V$
Temperature Coefficient	$I_o=5mA$	$\Delta V_o/\Delta T$		0.65		$mV/^\circ C$
Ripple Rejection	$10V \leq V_i \leq 20V; f=120Hz; T_j=25^\circ C$	$RR$	41	60		dB
Dropout Voltage	$T_j=25^\circ C$	$V_d$		1.7		V

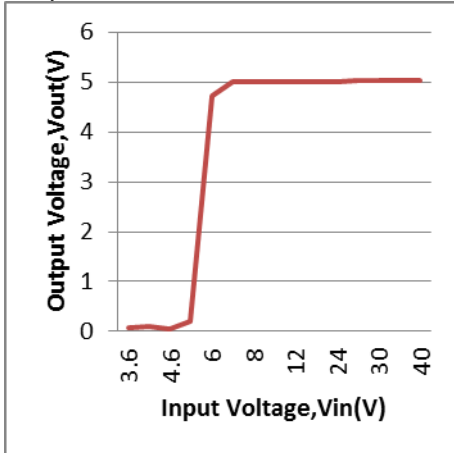
### APPLICATION CIRCUIT



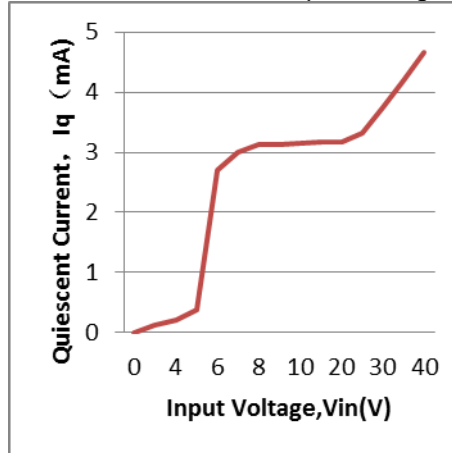
\*Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

## TYPICAL CHARACTERISTICS

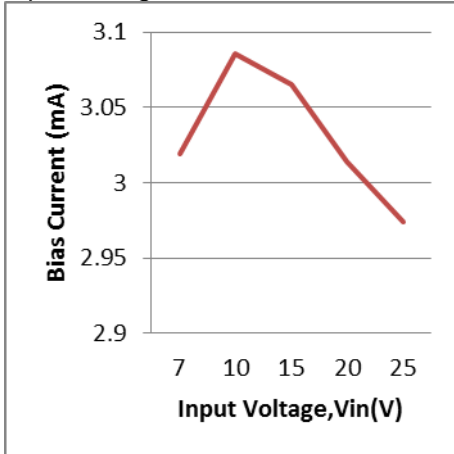
Output Characteristics



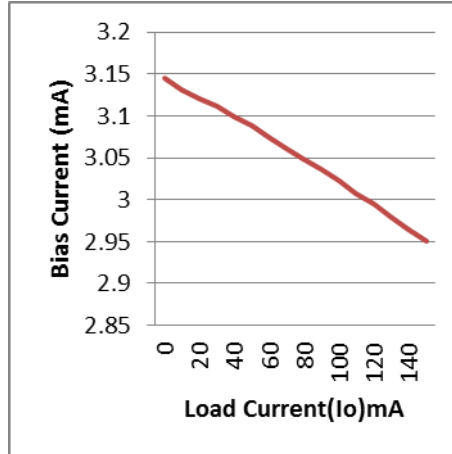
Quiescent Current vs Input Voltage



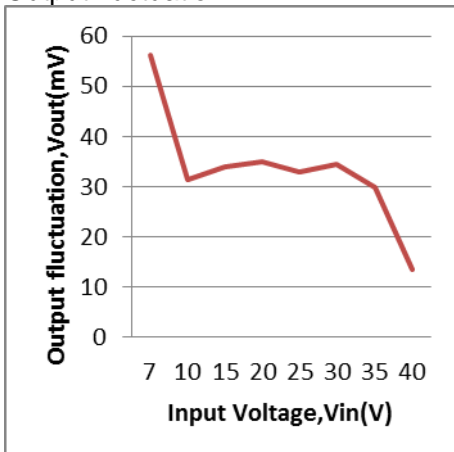
Input Voltage vs Bias Current



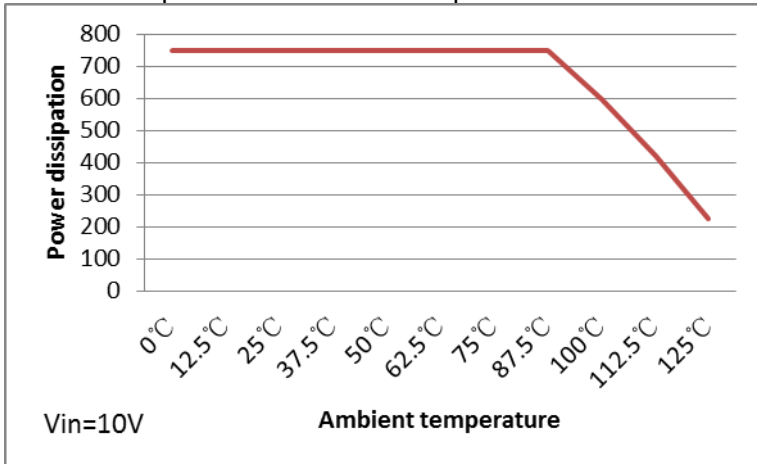
Load Current vs Bias Current



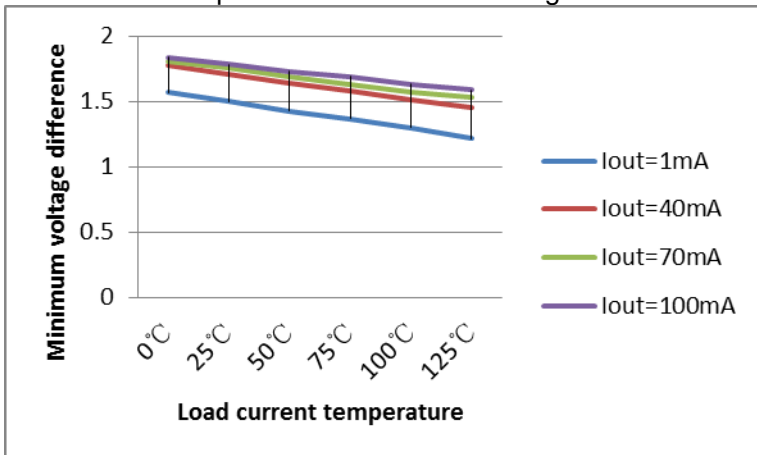
Output fluctuation



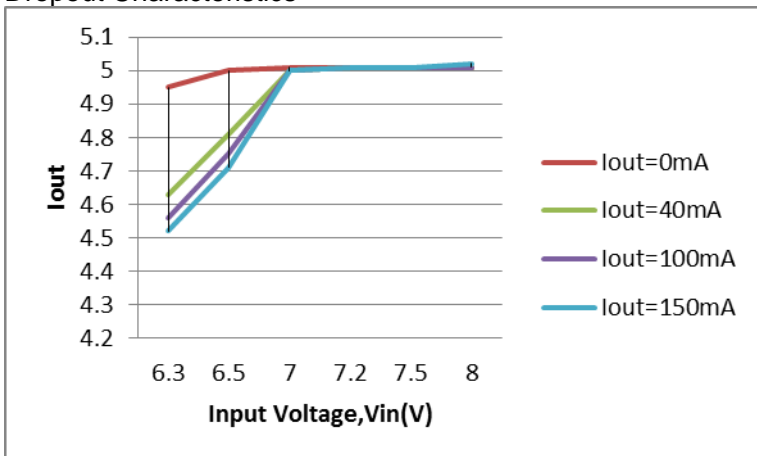
Ambient temperature vs Power dissipation



Load current temperature vs Minimum voltage difference



Dropout Characteristics



### ORDER INFORMATION

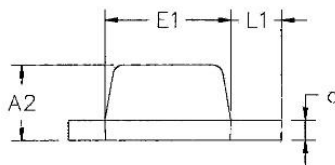
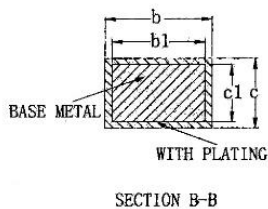
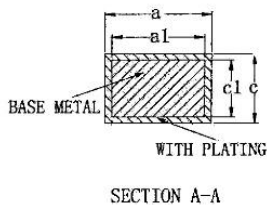
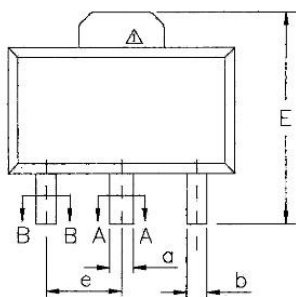
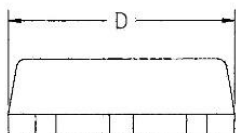
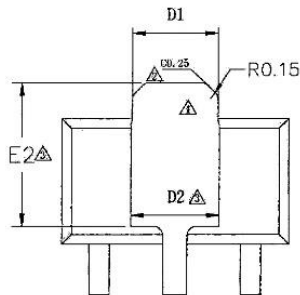
1	BL78L05G	SOT89-3L	Packaged by Tianshui Huatian Technology
2	BL78L05G-SOP8	SOP8	Packaged by Wuxi Hongguang Electronic Limited

### Storage conditions and packaging

- Warranty period: Two years
- Packing method: Reel
- Minimum packaging  
SOT89-3L: 1000  
SOP8: 2500

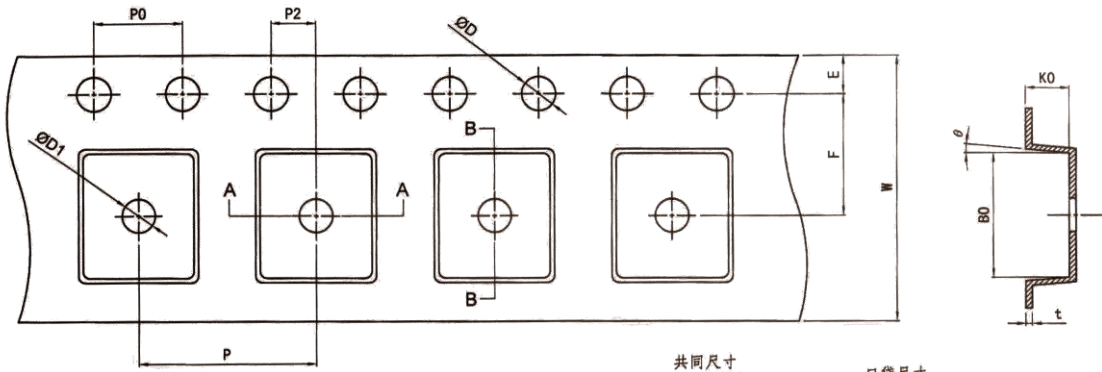
### OUTLINEDRAWING & Tray information

#### 1.BL78L05G (SOT89-3L)



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A2	1.40	1.50	1.60
b	0.38	—	0.46
b1	0.37	0.40	0.43
c	0.38	—	0.42
c1	0.37	0.38	0.39
a	0.46	—	0.56
a1	0.45	0.48	0.51
D	4.40	4.50	4.60
D1	1.62	—	1.83
E	3.95	—	4.25
E1	2.40	2.50	2.60
e	1.50BSC		
L1	0.89	—	1.20

L/F Size (mil)	Stn (mm)	D2	E2
66.9*63		1.75REF	2.84REF

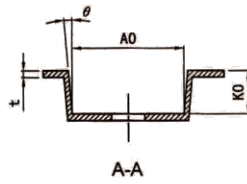


共同尺寸

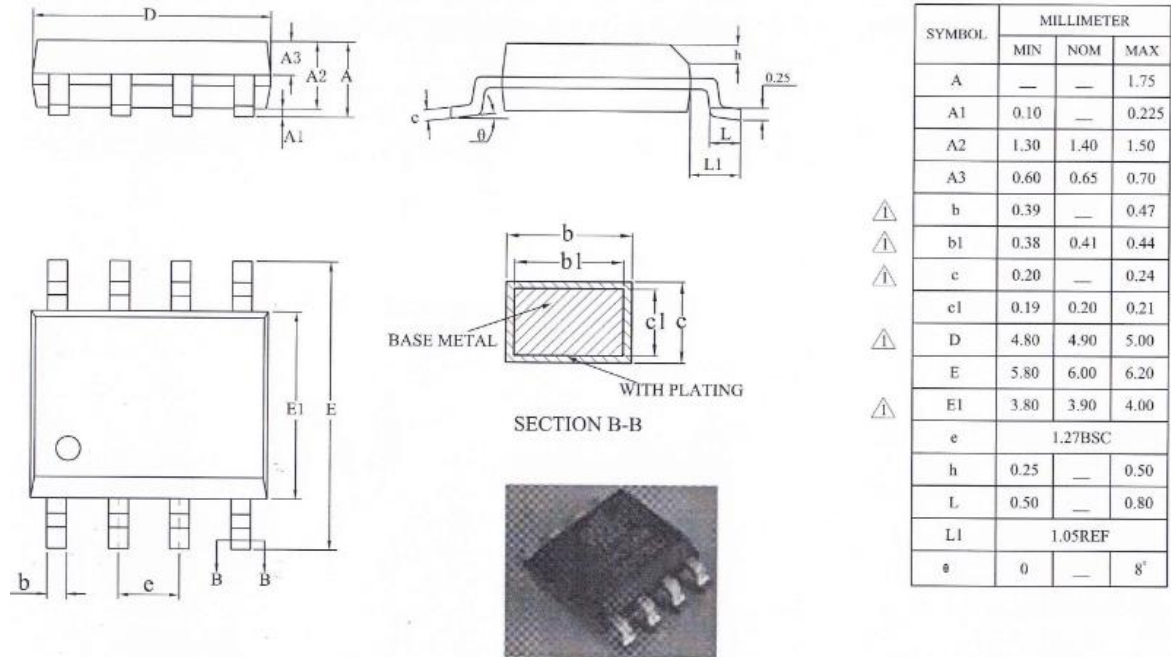
外观	尺寸(mm)
E	1.75±0.10
F	5.50±0.05
P2	2.00±0.05
D	1.50 <sup>0</sup> <sub>-0.1</sub>
D1	1.50±0.1
P0	4.00±0.10
10P0	40.00±0.20

口袋尺寸

外观	尺寸(mm)
W	12.00±0.10
P	8.00±0.10
A0	4.80±0.10
B0	4.40±0.10
K0	1.80±0.10
t	0.30±0.05
theta	3 - 5° TYP



**3.BL78L05G (SOP8)**



產品尺寸規格					(UNIT:mm)				
規格	W	P1	E	F	D0	D1	P0	P2	10P0
尺寸	12.0 <sup>+0.30</sup> <sub>-0.10</sub>	8.0±0.1	1.75±0.1	5.5±0.05	1.5 <sup>+0.10</sup> <sub>-0</sub>	1.5 <sup>+0.25</sup> <sub>-0</sub>	4±0.1	2±0.05	40±0.2
規格	A0	A1	B0	B1	K0	K1	T		
尺寸	6.40±0.10		5.40±0.10		2.10±0.10		0.25±0.03		

