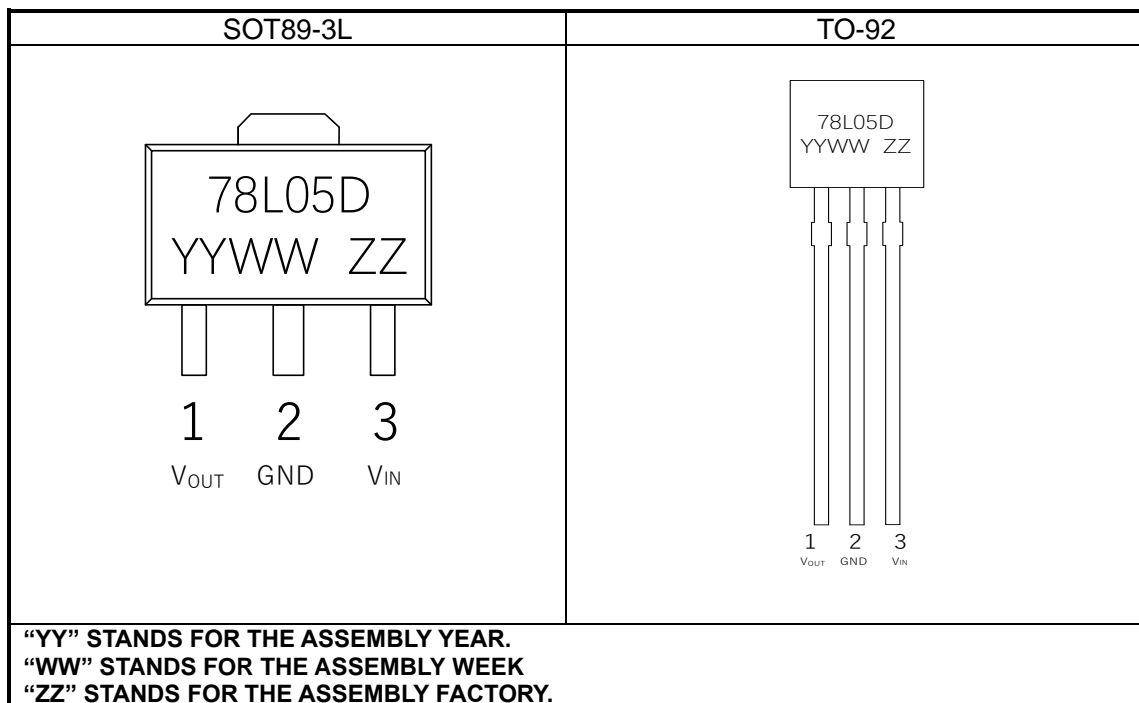


## FEATURES

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

## PIN CONNECTION



## Absolute Maximum Ratings (Ta=25°C)

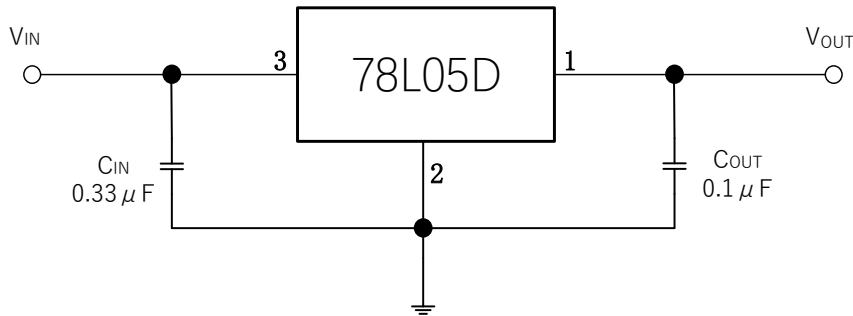
Characteristics	Symbol	Value	Unit
Input Voltage	$V_i$	42	V
Operating Junction Temperature Range	$T_j$	-40~+125	°C
Power Dissipation	$P_d$	750	m W
Operating Temperature Range	$T_{opr}$	-40~+85	°C
Storage Temperature Range	$T_{stg}$	-40~+150	°C

### 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



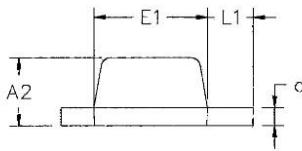
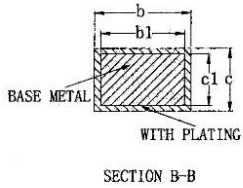
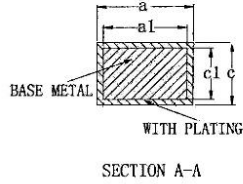
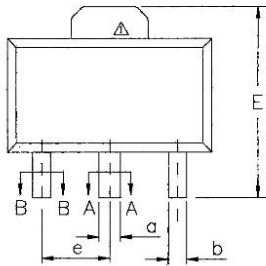
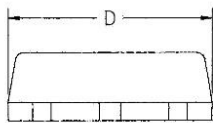
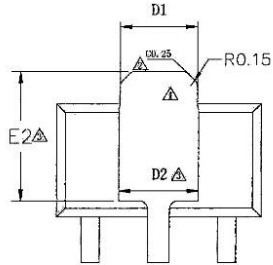
\*Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

### ORDER INFORMATION

1	BL78L05D	SOT89-3L	Packaged by Tianshui Huatian Technology
2	BL78L05D-P	SOT89-3L	Packaged by Dongguan Pingjingsemi Technology
3	BL78L05D-TO92	TO-92	Packaged by Wuxi Hongguang Electronic Limited

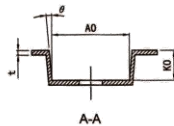
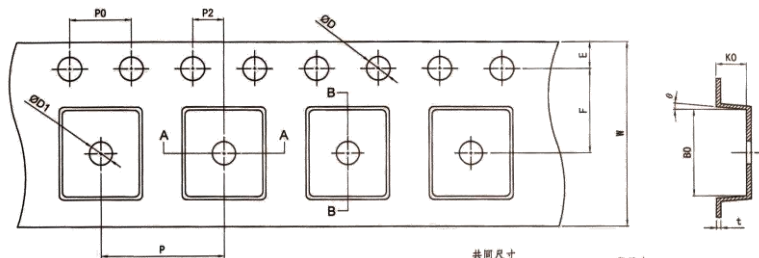
### OUTLINEDRAWING & Tray information

#### 1.BL78L05D (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

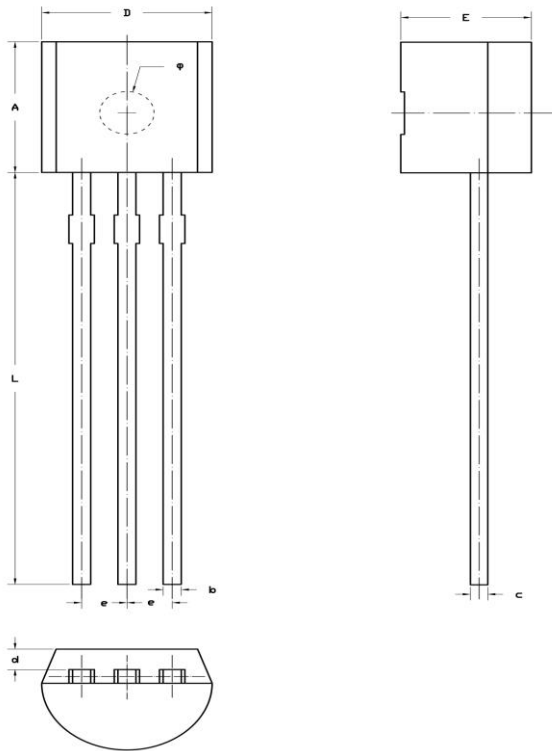
L/P Size (mil)	Size (mm)	D2	E2
66.9*63		1.75REF	2.84REF



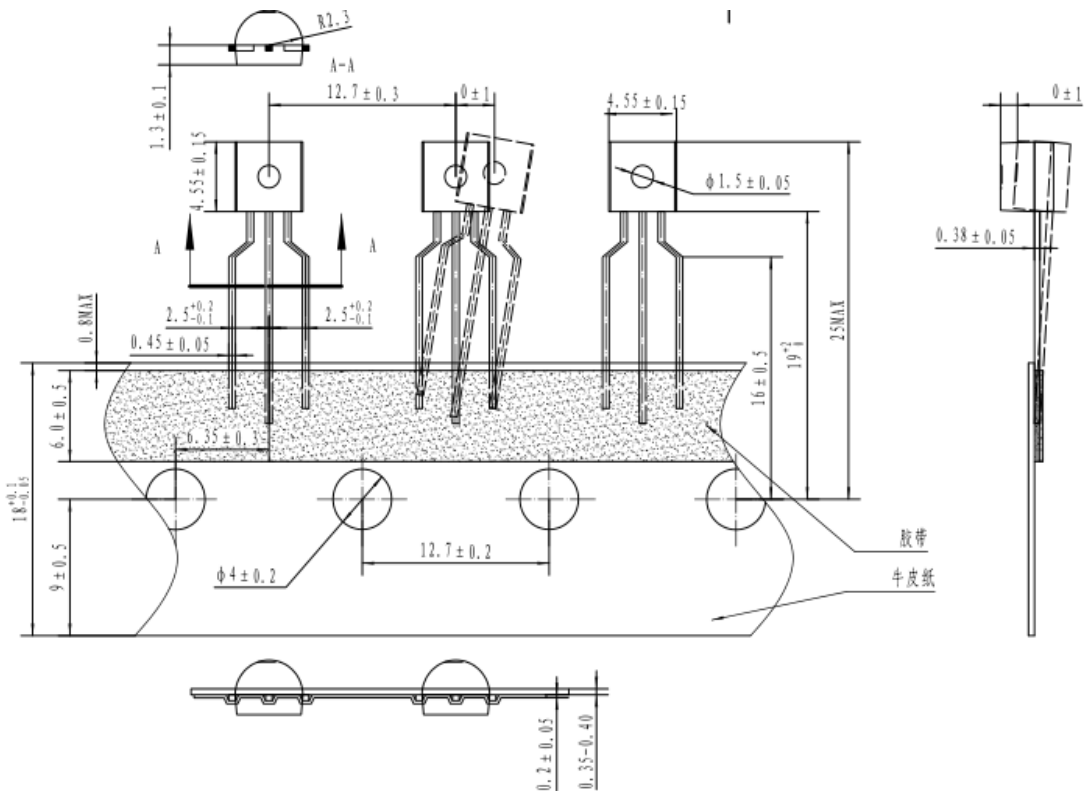
共同尺寸		口袋尺寸	
外观	尺寸 (mm)	外观	尺寸 (mm)
E	1.75±0.10	W	12.00±0.10
F	5.50±0.05	P	8.00±0.10
P2	2.00±0.05	A0	4.80±0.10
D	1.50 <sup>±0.1</sup>	B0	4.40±0.10
D1	1.50±0.1	K0	1.80±0.10
P0	4.00±0.10	t	0.30±0.05
10P0	40.00±0.20	θ	3-φ TYP



3.BL78L05D (TO-92)



尺寸符号	数值 (单位: mm)	
	最小值	最大值
A	4.35	4.70
b	0.40	0.55
c	0.36	0.50
D	4.40	4.70
d	0.80	1.20
E	3.40	3.70
e	1.20	1.30
L	13.5	14.5
Φ	1.45	1.60



## Storage conditions and packaging

- Warranty period: Two years
- Packing method: Reel
- Minimum packaging: 1000