

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## MS79L05S/MS79L05

Product specification

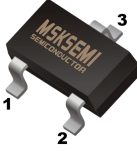
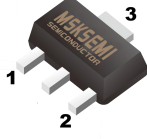
Maximum output current  $I_o$ : 0.1 A

Output voltage  $V_o$ : -5 V

Continuous total dissipation

$P_D$ : SOT-23-3L 0.35 W ( $T_a= 25\text{ }^\circ\text{C}$ )

SOT-89 0.5 W ( $T_a= 25\text{ }^\circ\text{C}$ )

| SOT-23  | SOT-89  |                        |
|---|---|------------------------|
|  |  | 1.GND<br>2.OUT<br>3.IN |

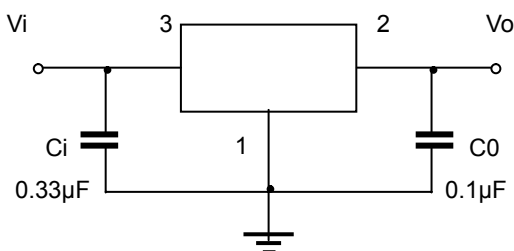
**ABSOLUTE MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)**

| Parameter                            | Symbol    | Value    | Units            |
|--------------------------------------|-----------|----------|------------------|
| Input Voltage                        | $V_i$     | -30      | V                |
| Operating Junction Temperature Range | $T_{OPR}$ | 0~+125   | $^\circ\text{C}$ |
| Storage Temperature Range            | $T_{STG}$ | -55~+150 | $^\circ\text{C}$ |

**ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE( $V_i=-10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified )**

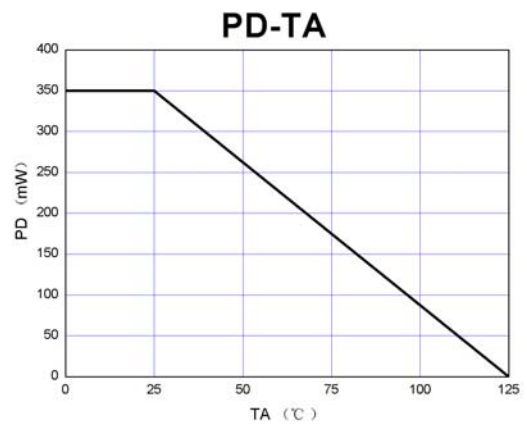
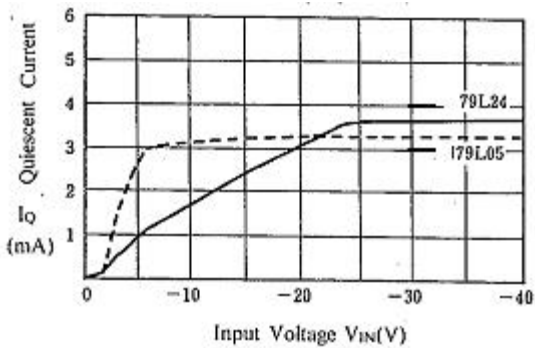
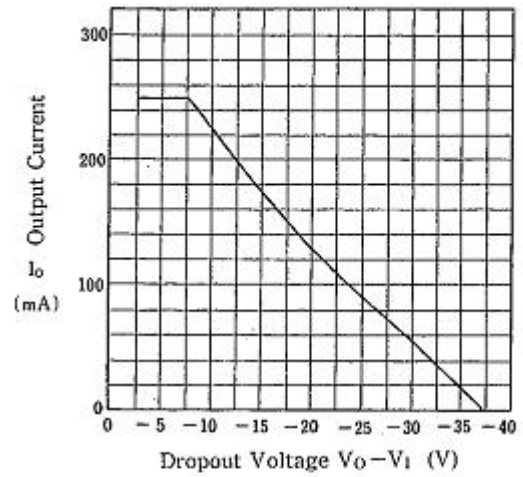
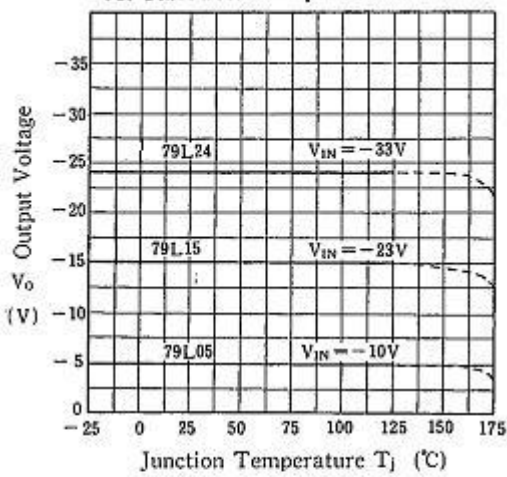
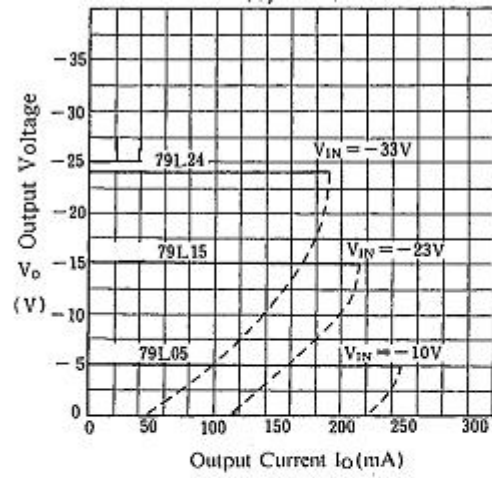
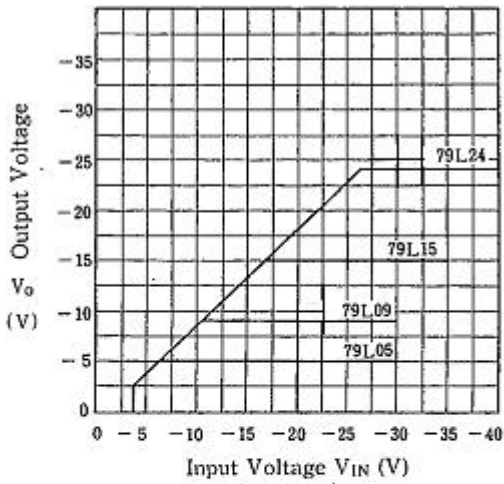
| Parameter                | Symbol       | Test conditions                             | MIN                   | TYP  | MAX   | UNIT    |
|--------------------------|--------------|---|-----------------------|------|-------|---------|
| Output voltage           | $V_o$        | $25^\circ\text{C}$                          | -4.8                  | -5.0 | -5.2  | V       |
|                          |              | $-7V \leq V_i \leq -20V, I_o=1mA \sim 40mA$ | -4.75                 | -5.0 | -5.25 | V       |
|                          |              | $0-125^\circ\text{C}$                       | -4.75                 | -5.0 | -5.25 | V       |
| Load Regulation          | $\Delta V_o$ | $I_o=1mA \sim 100mA$                        |                       | 20   | 60    | mV      |
|                          |              | $I_o=1mA \sim 40mA$                         | $25^\circ\text{C}$    | 10   | 30    | mV      |
| Line regulation          | $\Delta V_o$ | $-7V \leq V_i \leq -20V$                    | $25^\circ\text{C}$    | 15   | 150   | mV      |
|                          |              | $-8V \leq V_i \leq -20V$                    | $25^\circ\text{C}$    | 12   | 100   | mV      |
| Quiescent Current        | $I_q$        | $25^\circ\text{C}$                          |                       |      | 6     | mA      |
| Quiescent Current Change | $\Delta I_q$ | $-8V \leq V_i \leq -20V$                    | $0-125^\circ\text{C}$ |      | 1.5   | mA      |
|                          | $\Delta I_q$ | $1mA \leq I_o \leq 40mA$                    | $0-125^\circ\text{C}$ |      | 0.1   | mA      |
| Output Noise Voltage     | $V_N$        | $10Hz \leq f \leq 100KHz$                   | $25^\circ\text{C}$    | 40   |       | $\mu V$ |
| Ripple Rejection         | RR           | $-8V \leq V_i \leq -18V, f=120Hz$           | $0-125^\circ\text{C}$ | 41   | 49    | dB      |
| Dropout Voltage          | $V_d$        | $25^\circ\text{C}$                          |                       | 1.7  |       | V       |

**TYPICAL APPLICATION**

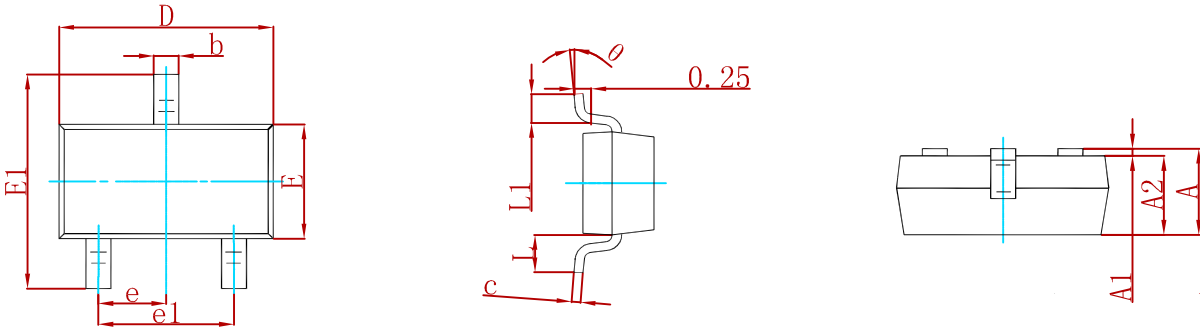


**Note :** Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

**Typical Characteristics**

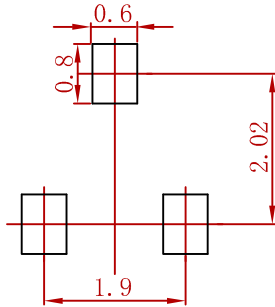


**PACKAGE MECHANICAL DATA**



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

**Suggested Pad Layout**



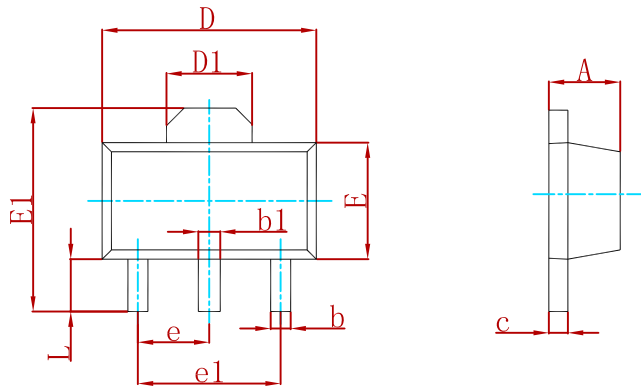
Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

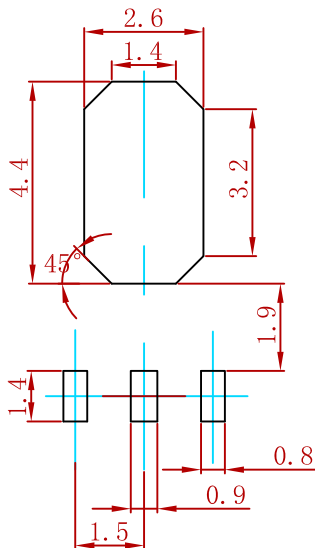
| P/N      | PKG    | QTY  |
|----------|--------|------|
| MS79L05S | SOT-23 | 3000 |

**PACKAGE MECHANICAL DATA**



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | 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     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |

**Suggested Pad Layout**



- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.

**REEL SPECIFICATION**

| P/N     | PKG    | QTY  |
|---------|--------|------|
| MS79L05 | SOT-89 | 1000 |

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