

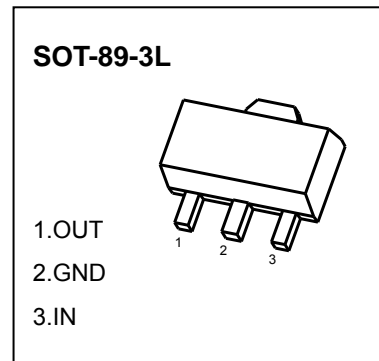
SOT-89-3L Encapsulate Three-terminal Voltage Regulator

CJ75L05

Three-terminal positive voltage regulator

FEATURES

- Maximum output current
 I_o : 100mA
- Output voltage
 V_o : 5 V
- Continuous total dissipation
 P_D : Internal limited



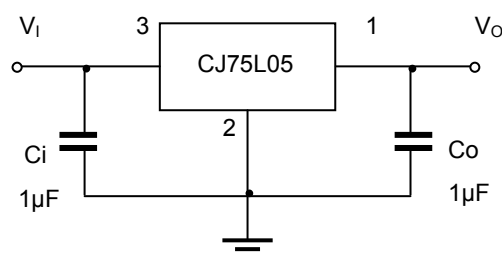
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|-------------------------------------|-----------|----------|------|
| Input Voltage Range | V_I | -0.3~+40 | V |
| Operating Ambient Temperature Range | T_{OPR} | -40~+85 | °C |
| Storage Temperature Range | T_{STG} | -55~+150 | °C |

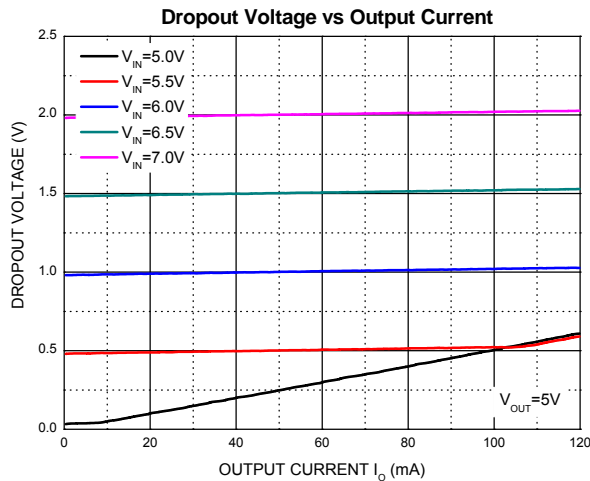
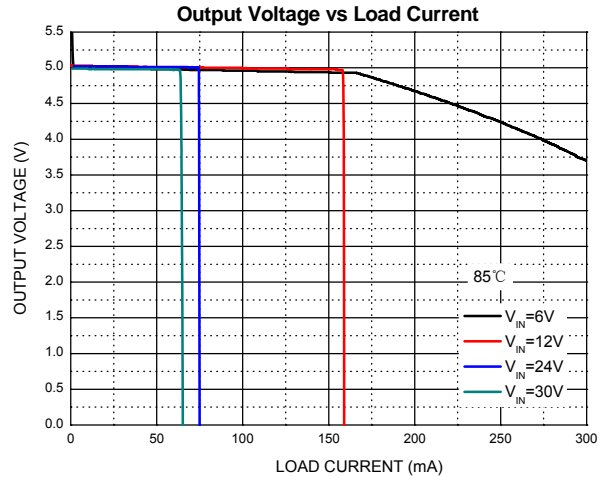
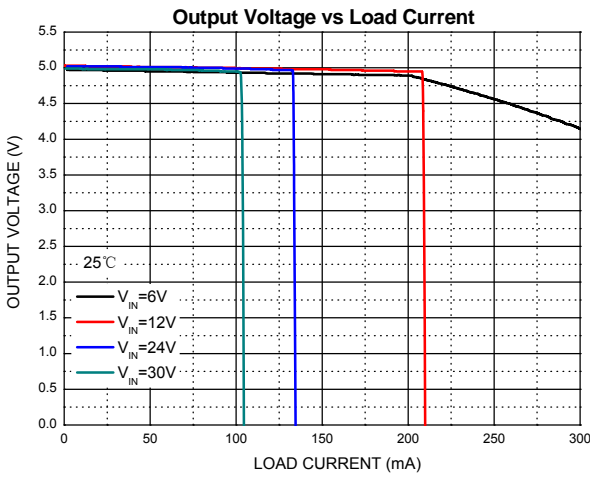
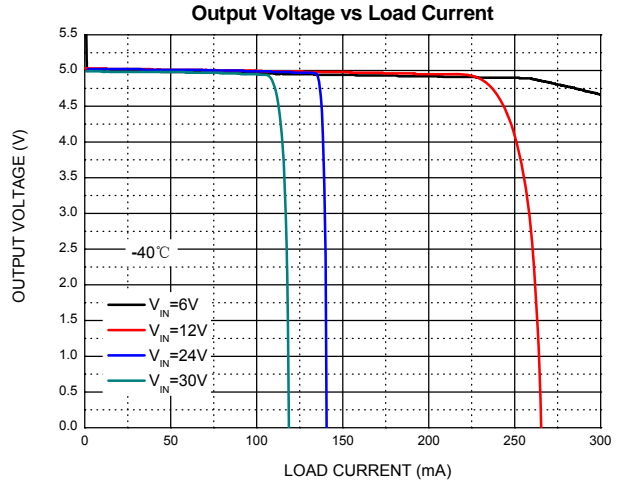
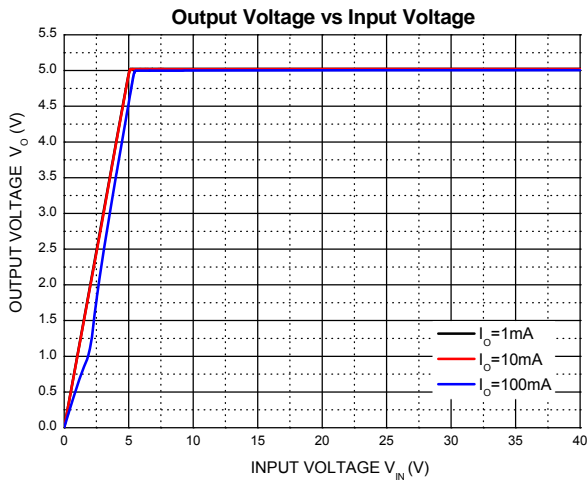
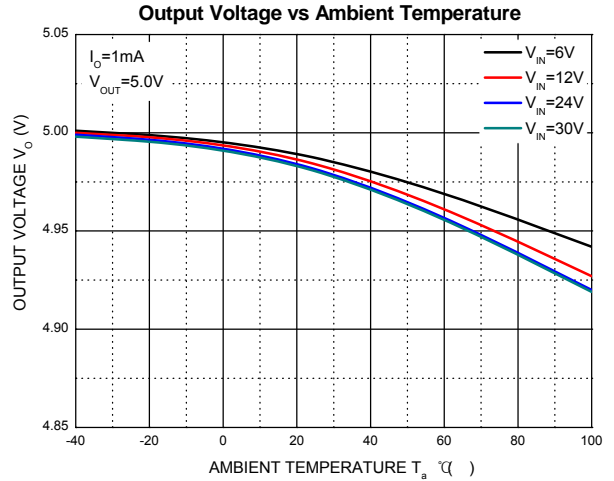
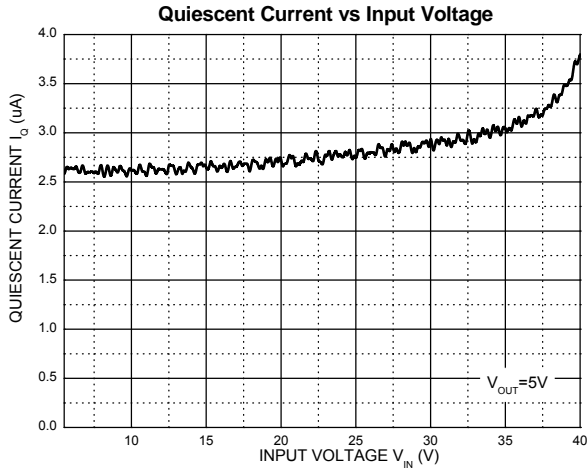
ELECTRICAL CHARACTERISTICS ($V_I=7V, C_i=C_o=1\mu F, T_a=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-------------------------|-----------------------|---|------------|-----------|-----|---------------|
| Input voltage | V_I | | 2.5 | | 36 | V |
| Output voltage | V_O | $V_I=7V, I_o=10mA$ | 4.9 | 5 | 5.1 | V |
| Load regulation | ΔV_o | $I_o=1mA-100mA$ | | 10 | | mV |
| Line regulation | ΔV_o | $6V \leq V_I \leq 36V, V_O=5V, I_o=10mA$ | | 0.01 | 0.3 | %/V |
| Quiescent current | I_q | $V_I=7V, \text{No load}$ | | 2 | 5 | μA |
| Dropout Voltage | V_d | $I_o=100mA, V_{OUT}=5V$ | | 500 | | mV |
| Output noise voltage | V_N | $BW=10Hz \text{ to } 100kHz$ | | 135 | | μV_{RMS} |
| Ripple rejection | RR | $V_I=7V, V_{PP}=0.5V, I_o=1mA$ | $f=100Hz$ | 80 | | dB |
| | | | $f=1kHz$ | 70 | | |
| | | | $f=10kHz$ | 60 | | |
| | | | $f=100kHz$ | 40 | | |
| Short current | I_{SC} | $V_{OPUT}=V_{SS}$ | | 25 | | mA |
| Output Current Limit | I_{PK} | $V_{OUT}=0.5 \times V_{OUT(Normal)}, V_{IN}=5V$ | 250 | 400 | | mA |
| Thermal protection | T_{SD} | $I_o=1mA$ | | 150 | | °C |
| Thermal protection Hys | T_{SD_HYS} | $I_o=1mA$ | | 20 | | °C |
| Temperature coefficient | $\Delta V_o/\Delta T$ | $I_o=1mA$ | | ± 0.5 | | $mV/^\circ C$ |

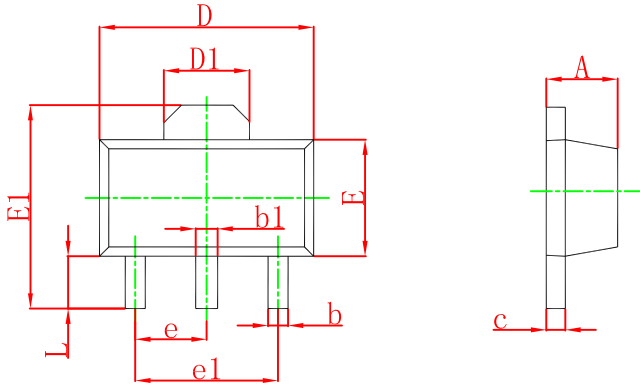
TYPICAL APPLICATION



Typical Characteristics

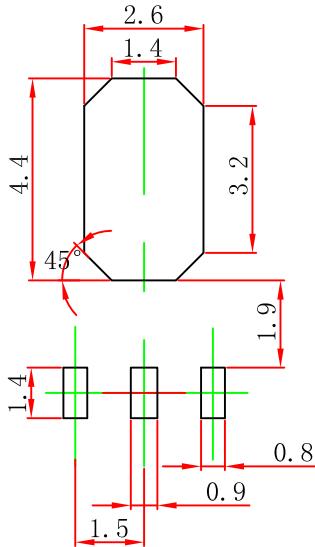


SOT-89-3L Package Outline Dimensions



| 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 |

SOT-89-3L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JCET does not assume any liability arising out of the application or use of any product described herein.

SOT-89-3L Tape and Reel

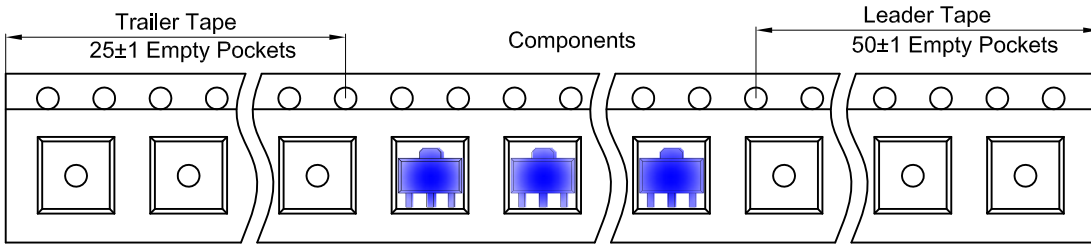
SOT-89-3L Embossed Carrier Tape



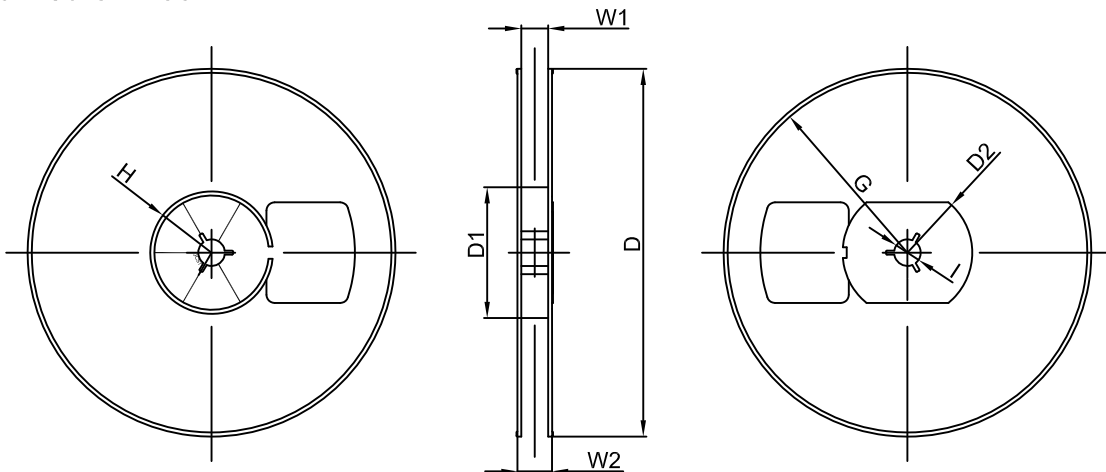
Packaging Description:
 SOT-89-3L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 1,000 units per 7" or 18.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-89-3L | 4.85 | 4.45 | 1.85 | Ø1.50 | 1.75 | 5.50 | 4.00 | 8.00 | 2.00 | 12.00 |

SOT-89-3L Tape Leader and Trailer



SOT-89-3L Reel



| Dimensions are in millimeter | | | | | | | | |
|------------------------------|---------|-------|--------|--------|--------|--------|-------|-------|
| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" Dia | Ø180.00 | 60.00 | R32.00 | R86.50 | R30.00 | Ø13.00 | 13.20 | 16.50 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|------------|-----------------|----------|
| 1000 pcs | 7 inch | 10,000 pcs | 203×203×195 | 40,000 pcs | 438×438×220 | |