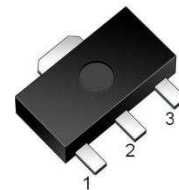


REPLACEMENT TYPE : KTC4376
FEATURES

- Small Flat Package
- High Current Application
- Complementary to HEA1664



SOT-89

1:BASE 2:COLLECTOR 3:EMITTER

MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------|----------|---------------------------|
| Collector-Base Voltage | V_{CBO} | 35 | V |
| Collector-Emitter Voltage | V_{CEO} | 30 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current-Continuous | I_C | 800 | mA |
| Collector Power Dissipation | P_C | 500 | mW |
| Thermal Resistance From Junction to Ambient | $R_{\theta JA}$ | 250 | $^\circ\text{C}/\text{W}$ |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55~+150 | $^\circ\text{C}$ |

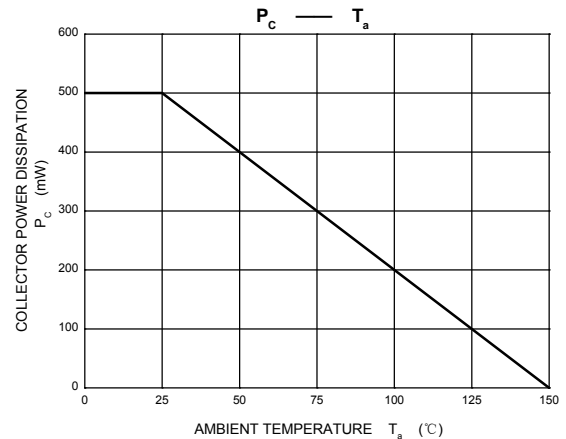
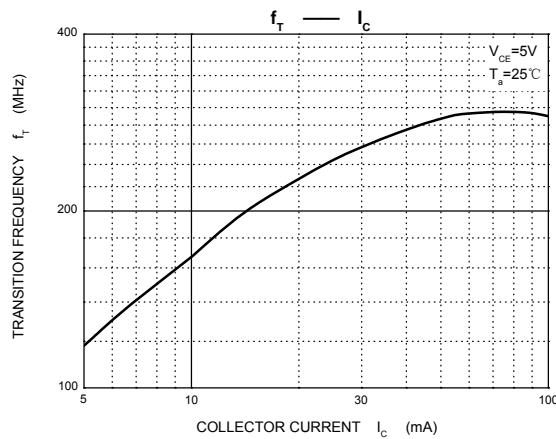
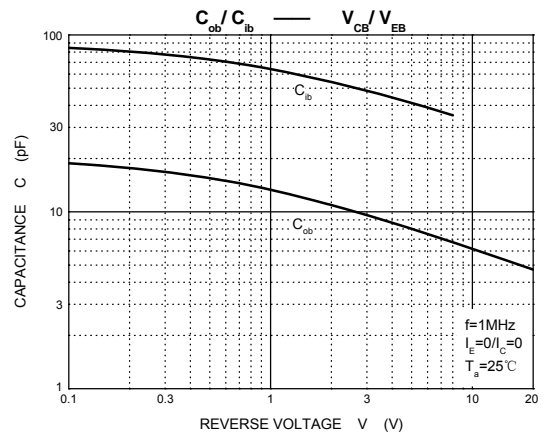
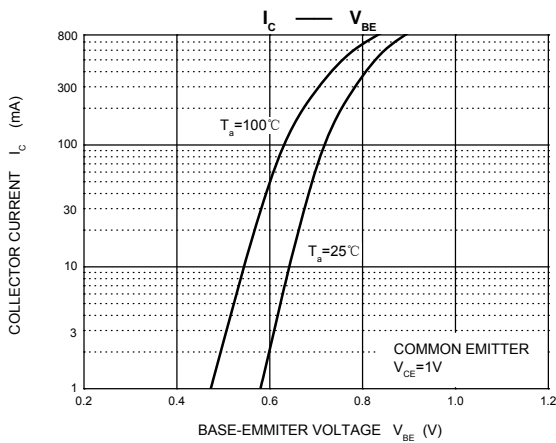
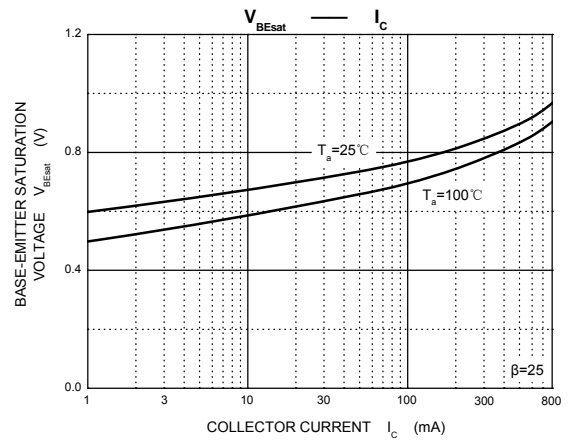
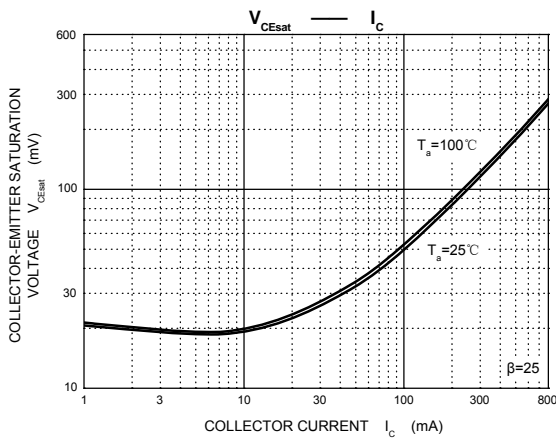
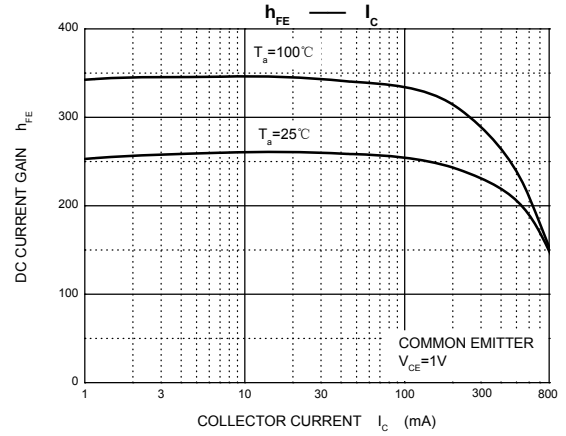
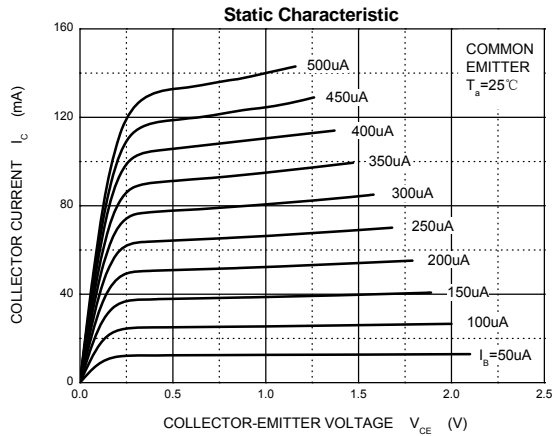
ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

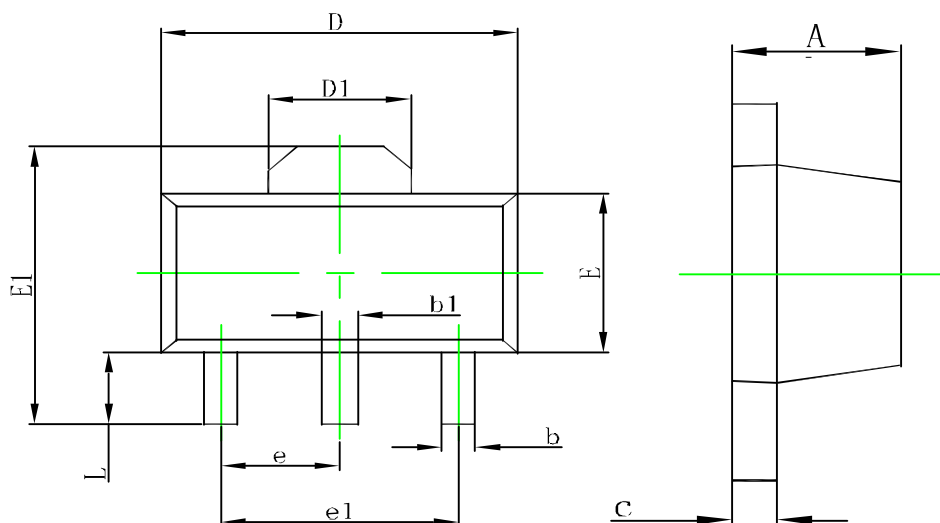
| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|---|-----|-----|-----|------|
| Collector-Base Breakdown Voltage | V_{CBO} | $I_C=1\text{mA}, I_E=0$ | 35 | | | V |
| Collector-Emitter Breakdown Voltage | V_{CEO} | $I_C=10\text{mA}, I_B=0$ | 30 | | | V |
| Emitter-Base Breakdown Voltage | V_{EBO} | $I_E=1\text{mA}, I_C=0$ | 5 | | | V |
| Collector Cut-off Current | I_{CBO} | $V_{CB}=35\text{V}, I_E=0$ | | | 100 | nA |
| Emitter Cut-off Current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 100 | nA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=1\text{V}, I_C=100\text{mA}$ | 100 | | 320 | |
| | $h_{FE(2)}$ | $V_{CE}=1\text{V}, I_C=700\text{mA}$ | 35 | | | |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=20\text{mA}$ | | | 0.5 | V |
| Base-Emitter Voltage | V_{BE} | $V_{CE}=1\text{V}, I_C=10\text{mA}$ | 0.5 | | 0.8 | V |
| Output Capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | 13 | | PF |
| Transition Frequency | f_T | $V_{CE}=5\text{V}, I_C=10\text{mA}$, | | 120 | | MHz |

CLASSIFICATION OF h_{FE}

| Rank | O | Y |
|---------|---------|---------|
| Range | 100-200 | 160-320 |
| Marking | PO | PY |

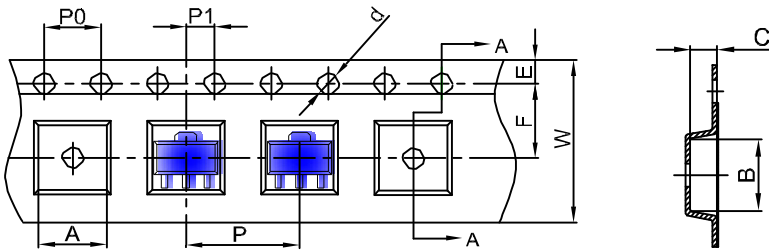
Typical Characteristics



SOT-89 Package Outline Dimensions


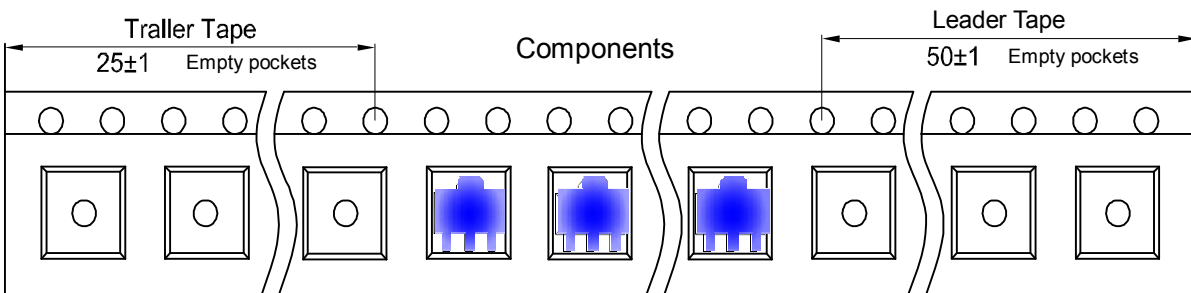
| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 1.400 | 1.600 | 0.055 | 0.063 |
| b | 0.320 | 0.520 | 0.013 | 0.020 |
| b1 | 0.400 | 0.580 | 0.016 | 0.023 |
| c | 0.350 | 0.440 | 0.014 | 0.017 |
| D | 4.400 | 4.600 | 0.173 | 0.181 |
| D1 | 1.550REF. | | 0.061REF. | |
| E | 2.300 | 2.600 | 0.091 | 0.102 |
| E1 | 3.940 | 4.250 | 0.155 | 0.167 |
| e | 1.500TYP. | | 0.060TYP. | |
| e1 | 3.000TYP. | | 0.118TYP. | |
| L | 0.900 | 1.200 | 0.035 | 0.047 |

SOT-89 Tape and Reel

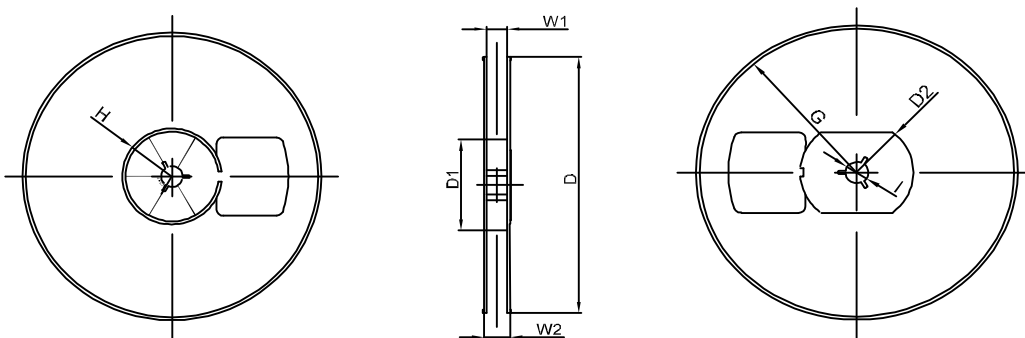


| DIMENSIONS ARE IN MILLIMETER | | | | | | | | | | |
|------------------------------|------|------|------|-------|------|------|------|------|------|-------|
| TYPE | A | B | C | d | E | F | P0 | P | P1 | W |
| SOT-89 | 4.85 | 4.45 | 1.85 | φ1.50 | 1.75 | 5.50 | 4.00 | 8.00 | 2.00 | 12.00 |
| TOLERANCE | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 | ±0.1 |

SOT-89 Tape Leader and Trailer



SOT-89 Reel



| DIMENSIONS ARE IN MILLIMETER | | | | | | | | |
|------------------------------|-------|-------|--------|--------|--------|---------|-------|-------|
| REEL OPTION | D | D1 | D2 | G | H | I | W1 | W2 |
| 7" DIA | φ 180 | 60.00 | R32.00 | R86.50 | R30.00 | φ 13.00 | 13.20 | 16.50 |
| TOLERANCE | ±2 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 | ±1 |