



## SOT-23 Plastic-Encapsulate Transistors

### A1015LT1 TRANSISTOR ( PNP )

#### FEATURES

Power dissipation

$$P_{CM} : 0.2 \text{ W ( } T_{amb}=25 \text{ )}$$

Collector current

$$I_{CM} : -0.15 \text{ A}$$

Collector-base voltage

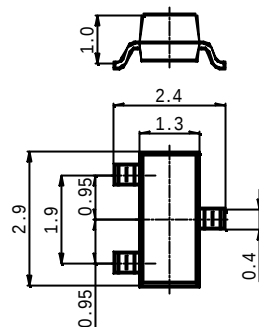
$$V_{(BR)CBO} : -50 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55 \text{ to } +150$$

#### SOT—23

1. BASE
2. EMITTER
3. COLLECTOR



Unit : mm

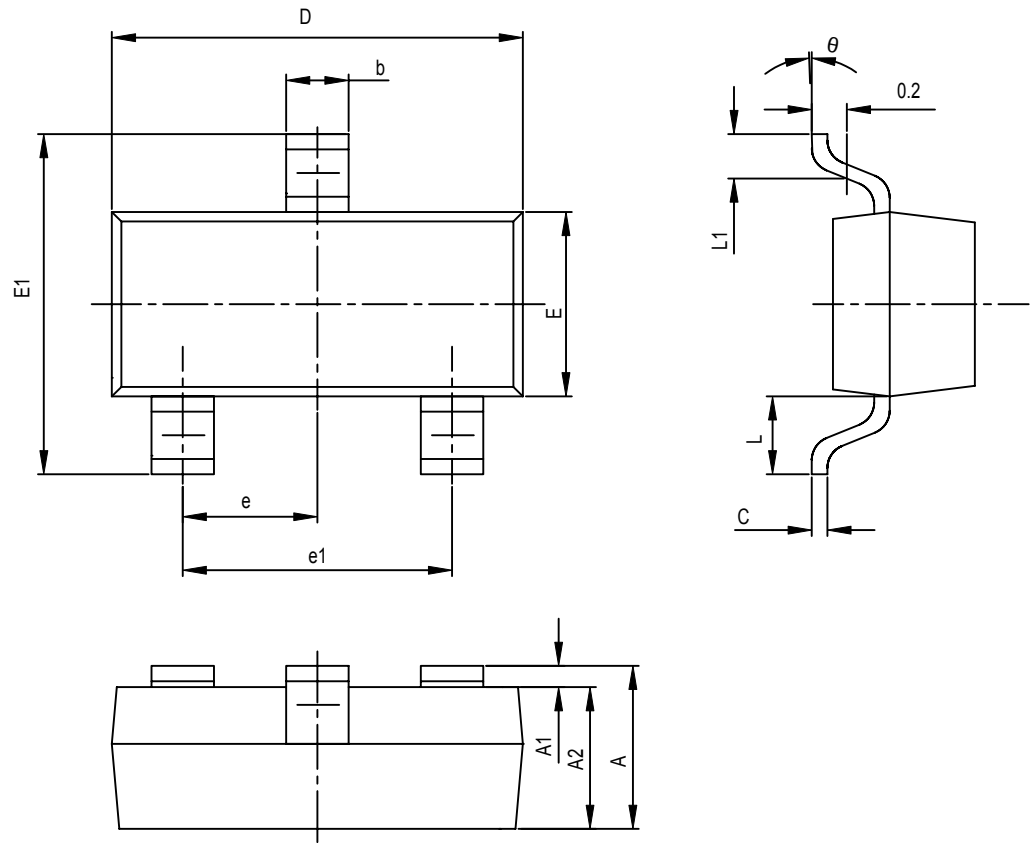
#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25$ unless otherwise specified )

| Parameter                            | Symbol        | Test conditions                            | MIN | TYP | MAX  | UNIT    |
|--------------------------------------|---------------|--------------------------------------------|-----|-----|------|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | $I_C = -100 \mu A, I_E = 0$                | -50 |     |      | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | $I_C = -0.1mA, I_B = 0$                    | -50 |     |      | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | $I_E = -10 \mu A, I_C = 0$                 | -5  |     |      | V       |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB} = -50 V, I_E = 0$                  |     |     | -0.1 | $\mu A$ |
| Collector cut-off current            | $I_{CEO}$     | $V_{CE} = -50 V, I_B = 0$                  |     |     | -0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = -5 V, I_C = 0$                   |     |     | -0.1 | $\mu A$ |
| DC current gain                      | $H_{FE(1)}$   | $V_{CE} = -6V, I_C = -2mA$                 | 130 |     | 400  |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -100 mA, I_B = -10mA$               |     |     | -0.3 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$ | $I_C = -100 mA, I_B = -10mA$               |     |     | -1.1 | V       |
| Transition frequency                 | $f_T$         | $V_{CE} = -10V, I_C = -1mA$<br>$f = 30MHz$ | 80  |     |      | MHz     |

#### CLASSIFICATION OF $H_{FE(1)}$

|         |         |         |
|---------|---------|---------|
| Rank    | L       | H       |
| Range   | 130-200 | 200-400 |
| MARKING | BA      |         |

# SOT-23 PACKAGE OUTLINE DIMENSIONS



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min                       | Max   | Min                  | Max   |
| A        | 0.900                     | 1.100 | 0.035                | 0.043 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.000 | 0.035                | 0.039 |
| 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        | 0.950TPY                  |       | 0.037TPY             |       |
| e1       | 1.800                     | 2.000 | 0.071                | 0.079 |
| L        | 0.550REF                  |       | 0.022REF             |       |
| L1       | 0.300                     | 0.500 | 0.012                | 0.020 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |