

RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

TO-92L

**FEATURE**

Power dissipation

$P_{CM}$ : 1 W ( $T_{amb}=25^{\circ}C$ )

Collector current

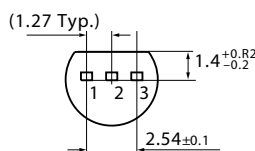
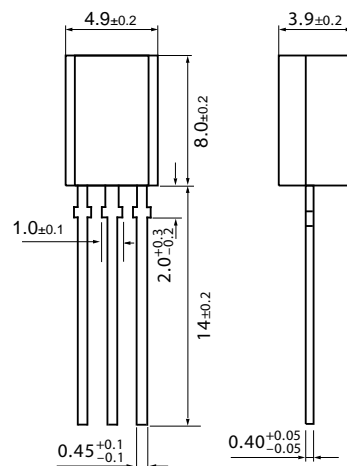
$I_{CM}$ : 1 A

Collector-base voltage

$V_{(BR)CBO}$ : 2SC1383L: 30 V  
2SC1384L: 60 V

Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$



1: Emitter  
2: Collector  
3: Base

Unit: mm

**ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^{\circ}C$  unless otherwise specified)**

| Parameter                            | Symbol               | Test conditions         | MIN | MAX | UNIT    |
|--------------------------------------|----------------------|-------------------------|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$        | $I_C=10\mu A, I_E=0$    | 30  |     | V       |
|                                      | 2SC1383L<br>2SC1384L |                         | 60  |     |         |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$        | $I_C=2mA, I_B=0$        | 25  |     | V       |
|                                      | 2SC1383L<br>2SC1384L |                         | 50  |     |         |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$        | $I_E=10\mu A, I_C=0$    | 5   |     | V       |
| Collector cut-off current            | $I_{CBO}$            | $V_{CB}=20V, I_E=0$     |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)}$          | $V_{CE}=10V, I_C=500mA$ | 85  | 340 |         |
|                                      | $h_{FE(2)}$          | $V_{CE}=5V, I_C=1A$     | 50  |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$        | $I_C=500mA, I_B=50mA$   |     | 0.4 | V       |
| Base-emitter saturation voltage      | $V_{BE(sat)}$        | $I_C=500mA, I_B=50mA$   |     | 1.2 | V       |
| Transition frequency                 | $f_T$                | $V_{CE}=10V, I_C=50mA$  | 100 |     | MHz     |

**CLASSIFICATION OF  $h_{FE(1)}$**

| Rank  | Q      | R       | S       |
|-------|--------|---------|---------|
| Range | 85-170 | 120-240 | 170-340 |

