

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

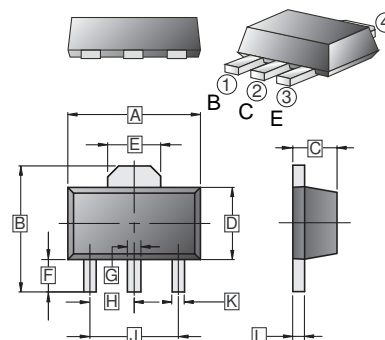
FEATURES

- Small Flat Package
- General Purpose Application
- Low $V_{CE(sat)}$. $V_{CE(sat)} = 0.2V$ (Typ.) ($I_C / I_B = 2A / 0.1A$)

CLASSIFICATION OF $h_{FE(1)}$

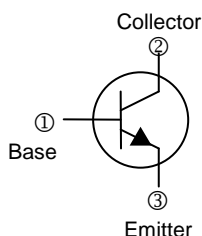
| Product-Rank | 2SC4115-Q | 2SC4115-R | 2SC4115-S |
|--------------|-----------|-----------|-----------|
| Range | 120~270 | 180~390 | 270~560 |
| Marking | 4115Q | 4115R | 4115S |

SOT-89



PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SOT-89 | 1K | 7 inch |



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 4.40 | 4.60 | G | 0.40 | 0.58 |
| B | 3.94 | 4.25 | H | 1.50 | TYP |
| C | 1.40 | 1.60 | J | 3.00 | TYP |
| D | 2.25 | 2.60 | K | 0.32 | 0.52 |
| E | 1.50 | 1.85 | L | 0.35 | 0.44 |
| F | 0.89 | 1.20 | | | |

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|--------------------------------|----------------|--------------|------------|
| Collector-Base Voltage | V_{CBO} | 40 | V |
| Collector-Emitter Voltage | V_{CEO} | 20 | V |
| Emitter-Base Voltage | V_{EBO} | 6 | V |
| Collector Current-Continuous | I_C | 3 | A |
| Collector Power Dissipation | P_C | 500 | mW |
| Junction & Storage Temperature | T_J, T_{STG} | 150, -55~150 | $^\circ C$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ C$ unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test conditions |
|--------------------------------------|---------------|------|------|------|---------|----------------------------------|
| Collector-Base Breakdown Voltage | $V_{(BR)CBO}$ | 40 | - | - | V | $I_C=50\mu A, I_E=0$ |
| Collector-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | 20 | - | - | V | $I_C=1mA, I_B=0$ |
| Emitter-Base Breakdown Voltage | $V_{(BR)EBO}$ | 6 | - | - | V | $I_E=50\mu A, I_C=0$ |
| Collector Cut-Off Current | I_{CBO} | - | - | 0.1 | μA | $V_{CB}=30V, I_E=0$ |
| Emitter Cut-Off Current | I_{EBO} | - | - | 0.1 | μA | $V_{EB}=5V, I_C=0$ |
| DC Current Gain | h_{FE} | 120 | - | 560 | | $V_{CE}=2V, I_C=100mA$ |
| Collector-Emitter Saturation voltage | $V_{CE(sat)}$ | - | - | 0.5 | V | $I_C=2A, I_B=100mA$ |
| Transition Frequency | f_T | 200 | 290 | - | MHz | $V_{CE}=2V, I_C=500mA, f=100MHz$ |