Elektronische Bauelemente

# 2SA1300

**-2 A, -20 V**

**PNP Plastic Encapsulated Transistor**

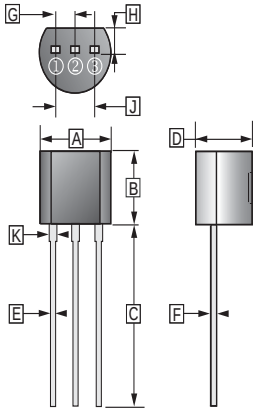
RoHS Compliant Product

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

## FEATURES

- High DC Current gain and excellent $h_{FE}$ linearity
- Low Saturation Voltage

**TO-92**

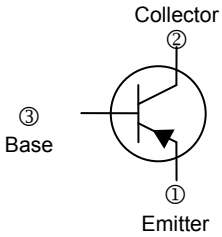



①Emitter
②Collector
③Base

| REF. | Millimeter | |
|---|---|---|
| | Min. | Max. |
| A | 4.40 | 4.70 |
| B | 4.30 | 4.70 |
| C | 12.70 | - |
| D | 3.30 | 3.81 |
| E | 0.36 | 0.56 |
| F | 0.36 | 0.51 |
| G | 1.27 TYP. | |
| H | 1.10 | - |
| J | 2.42 | 2.66 |
| K | 0.36 | 0.76 |

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

| Product-Rank | 2SA1300-Y | 2SA1300-GR | 2SA1300-BL |
|---|---|---|---|
| Range | 140~280 | 200~400 | 300~600 |




## ABSOLUTE MAXIMUM RATINGS ($T_A$ = 25°C unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector to Base Voltage | $V_{CBO}$ | -20 | V |
| Collector to Emitter Voltage | $V_{CEO}$ | -10 | V |
| Emitter to Base Voltage | $V_{EBO}$ | -6 | V |
| Collector Current - Continuous | $I_C$ | -2 | A |
| Collector Power Dissipation | $P_C$ | 750 | mW |
| Junction, Storage Temperature | $T_J$, $T_{STG}$ | 150, -55~150 | °C |

## ELECTRICAL CHARACTERISTICS ($T_A$ = 25°C unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test condition |
|---|---|---|---|---|---|---|
| Collector to Base Breakdown Voltage | $V_{(BR)CBO}$ | -20 | - | - | V | $I_C$= -1mA, $I_E$=0 |
| Collector to Emitter Breakdown Voltage | $V_{(BR)CEO}$ | -10 | - | - | V | $I_C$= -10mA, $I_B$=0 |
| Emitter to Base Breakdown Voltage | $V_{(BR)EBO}$ | -6 | - | - | V | $I_E$= -0.1mA, $I_C$=0 |
| Collector Cut-Off Current | $I_{CBO}$ | - | - | -0.1 | μA | $V_{CB}$= -20V, $I_E$=0 |
| Emitter Cut-Off Current | $I_{EBO}$ | - | - | -0.1 | μA | $V_{EB}$= -6V, $I_C$=0 |
| DC Current Gain | $h_{FE}$ | 140 | - | 600 | | $V_{CE}$= -1V, $I_C$= -0.5A |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | - | - | -0.82 | V | $I_C$= -2A, $I_B$= -0.1A |
| Base to Emitter Voltage | $V_{BE}$ | - | - | -1.5 | V | $V_{CE}$= -1V, $I_C$= -2A |
| Transition Frequency | $f_T$ | - | 140 | - | MHz | $V_{CE}$= -1V, $I_C$= -0.5A, f=30MHz |
| Collector Output Capacitance | $C_{ob}$ | - | 50 | - | pF | $V_{CB}$= -10V, $I_E$=0, f=1MHz |

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## CHARACTERISTICS CURVE

