
**PRODUCT NAME** : 2SA1015 PNP General Purpose Transistor (Pack of 5)

**PRICE** : Rs 39.00
**SKU** : RM2117

## DESCRIPTION

## Features

- Collector-Emitter Volt (Vceo): 50V
- Collector-Base Volt (Vcbo): 50V
- Collector Current (Ic): 0.15A
- hfe: 70-400 @ 2mA
- Power Dissipation (Ptot): 400mW
- Current-Gain-Bandwidth (ftotal): 80MHz
- Type: PNP

**TOSHIBA** 2SA1015

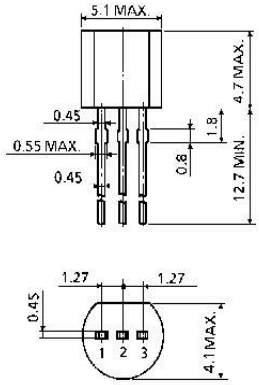
TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (PCT PROCESS)

# 2SA1015

AUDIO FREQUENCY GENERAL PURPOSE AMPLIFIER APPLICATIONS
DRIVER STAGE AMPLIFIER APPLICATIONS

Unit in mm

- High Voltage and High Current.
  : $V_{CEO} = -50V$ (Min.), $I_C = -150mA$ (Max.)
- Excellent $h_{FE}$ Linearity
  : $h_{FE\,(2)} = 80$ (Typ.) at $V_{CE} = -6V$, $I_C = -150mA$
  : $h_{FE}\,(I_C = -0.1mA) / h_{FE}\,(I_C = -2mA) = 0.95$ (Typ.)
- Low Noise : NF = 1dB (Typ.) at f = 1kHz
- Complementary to 2SC1815.




1. EMITTER
2. COLLECTOR
3. BASE

| | |
|---|---|
| JEDEC | TO-92 |
| EIAJ | SC-43 |
| TOSHIBA | 2-5F1B |

Weight : 0.21g

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | −50 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | −50 | V |
| Emitter-Base Voltage | $V_{EBO}$ | −5 | V |
| Collector Current | $I_C$ | −150 | mA |
| Base Current | $I_B$ | −50 | mA |
| Collector Power Dissipation | $P_C$ | 400 | mW |
| Junction Temperature | $T_j$ | 125 | °C |
| Storage Temperature Range | $T_{stg}$ | −55~125 | °C |

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|
| Collector Cut-off Current | $I_{CBO}$ | $V_{CB} = -50V$, $I_E = 0$ | — | — | −0.1 | μA |
| Emitter Cut-off Current | $I_{EBO}$ | $V_{EB} = -5V$, $I_C = 0$ | — | — | −0.1 | μA |
| DC Current Gain | $h_{FE\,(1)}$ (Note) | $V_{CE} = -6V$, $I_C = -2mA$ | 70 | — | 400 | |
| | $h_{FE\,(2)}$ | $V_{CE} = -6V$, $I_C = -150mA$ | 25 | 80 | — | |
| Collector-Emitter Saturation Voltage | $V_{CE\,(sat)}$ | $I_C = -100mA$, $I_B = -10mA$ | — | −0.1 | −0.3 | V |
| Base-Emitter Saturation Voltage | $V_{BE\,(sat)}$ | $I_C = -100mA$, $I_B = -10mA$ | — | — | −1.1 | V |
| Transition Frequency | $f_T$ | $V_{CE} = -10V$, $I_C = -1mA$ | 80 | — | — | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB} = -10V$, $I_E = 0$, f = 1MHz | — | 4 | 7 | pF |
| Base Intrinsic Resistance | $r_{bb'}$ | $V_{CE} = -10V$, $I_E = 1mA$, f = 30MHz | — | 30 | — | Ω |
| Noise Figure | NF | $V_{CE} = -6V$, $I_C = -0.1mA$, $R_G = 10k\Omega$, f = 1kHz | — | 1.0 | 10 | dB |

Note : $h_{FE\,(1)}$ Classification O : 70~140, Y : 120~240, GR : 200~400

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