Ordering number:EN4692

NPN Epitaxial Planar Silicon Transistor

# 2SC4660

## High-Definition CRT Display Video Output Driver Applications

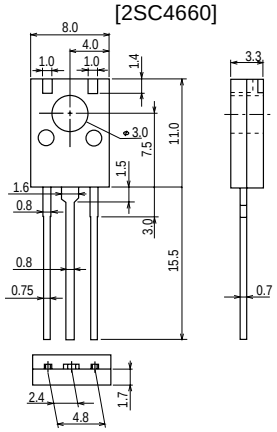
## Features

- High $f_T$ ($f_T$=2.2GHz typ)
- Large current ($I_C$=300mA)
- Adoption of FBET process.

## Package Dimensions

unit:mm

2042B




1 : Emitter
2 : Collector
3 : Base
SANYO : TO-126ML

## Specifications

### Absolute Maximum Ratings at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Collector-to-Base Voltage | $V_{CBO}$ | | 30 | V |
| Collector-to-Emitter Voltage | $V_{CEO}$ | | 20 | V |
| Emitter-to-Base Voltage | $V_{EBO}$ | | 3 | V |
| Collector Current | $I_C$ | | 300 | mA |
| Collector Current (Pulse) | $I_{CP}$ | | 600 | mA |
| Collector Dissipation | $P_C$ | | 1.3 | W |
| | | Tc=25˚C | 5 | W |
| Junction Temperature | Tj | | 150 | ˚C |
| Storage Temperature | Tstg | | –55 to +150 | ˚C |

### Electrical Characteristics at Ta = 25˚C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Collector Cutoff Current | $I_{CBO}$ | $V_{CB}$=20V, $I_E$=0 | | | 0.1 | μA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$=2V, $I_C$=0 | | | 5.0 | μA |
| DC Current Gain | $h_{FE}1$ | $V_{CE}$=5V, $I_C$=50mA | 40 | | 200 | |
| | $h_{FE}2$ | $V_{CE}$=5V, $I_C$=300mA | 20 | | | |
| Gain-Bandwidth Product | $f_T$ | $V_{CE}$=5V, $I_C$=50mA | | 2.2 | | GHz |

* : The 2SC4660 is classified by 50mA $h_{FE}$ as follows :

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 40 | C | 80 | 60 | D | 120 | 100 | E | 200 |




SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Output Capacitance | $C_{ob}$ | $V_{CB}$=10V, f=1MHz | | 3.9 | | pF |
| Reverse Transfer Capacitance | $C_{re}$ | $V_{CB}$=10V, f=1MHz | | 3.2 | | pF |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$=100mA, $I_B$=10mA | | 0.2 | 0.6 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$=100mA, $I_B$=10mA | | 0.9 | 1.2 | V |