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| SANYO | No. 1207A | 2SC3277 |
| NPN Triple Diffused Planar Silicon Transistor FOR SWITCHING REGULATORS | | |

Features

- . High breakdown voltage, high current.
- . Wide ASO.
- . Fast switching speed.

Absolute Maximum Ratings at Ta=25°C

| | | | unit |
|------------------------------|------------------|---------------------------------|------|
| Collector-to-Base Voltage | V _{CBO} | 500 | V |
| Collector-to-Emitter Voltage | V _{CEO} | 400 | V |
| Emitter-to-Base Voltage | V _{EBO} | 7 | V |
| Collector Current | I _C | 10 | A |
| Peak Collector | i _{cp} | 20 | A |
| | | PW ≤ 300μs, Duty Cycle ≤ 10% | |
| Collector Dissipation | P _C | 90 | W |
| | | Tc=25°C | |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

Electrical Characteristics at Ta=25°C

| | | | min | typ | max | unit |
|--------------------------|-----------------------|---|-----|-----|-----|------|
| Collector Cutoff Current | I _{CBO} | V _{CB} =400V, I _E =0 | | | 10 | μA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} =5V, I _C =0 | | | 10 | μA |
| DC Current Gain | h _{FE} (1) | V _{CE} =5V, I _C =1.2A | 15* | | 50* | |
| | h _{FE} (2) | V _{CE} =5V, I _C =6A | 8 | | | |
| Gain-Bandwidth Product | f _T | V _{CE} =10V, I _C =1.2A | | 20 | | MHz |
| Output Capacitance | c _{ob} | V _{CB} =10V, f=1MHz | | 120 | | pF |
| C-E Saturation Voltage | V _{CE(sat)} | I _C =6A, I _B =1.2A | | | 1.0 | V |
| B-E Saturation Voltage | V _{BE(sat)} | I _C =6A, I _B =1.2A | | | 1.5 | V |
| C-B Breakdown Voltage | V _{(BR)CBO} | I _C =1mA, I _E =0 | 500 | | | V |
| C-E Breakdown Voltage | V _{(BR)CEO} | I _C =5mA, R _{BE} =∞ | 400 | | | V |
| E-B Breakdown Voltage | V _{(BR)EBO} | I _E =1mA, I _C =0 | 7 | | | V |
| C-E Sustain Voltage | V _{CEO(sus)} | I _C =10A, I _B =2A, L=50μH | 400 | | | V |

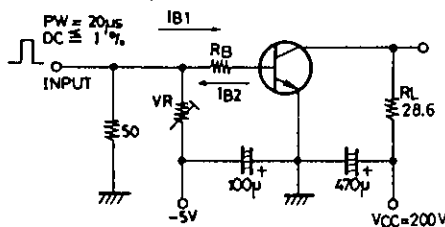
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*: The h_{FE}(1) of the 2SC3277 is classified as follows. When specifying the h_{FE}(1) rank, specify two ranks or more in principle.

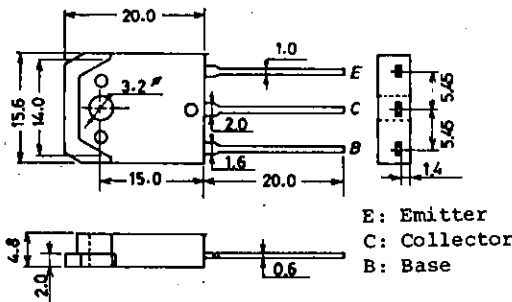
| | | | | | |
|------|----|------|----|------|----|
| 15 L | 30 | 20 M | 40 | 30 N | 50 |
|------|----|------|----|------|----|

Package Dimensions 2022
(unit:mm)

Switching Time Test Circuit



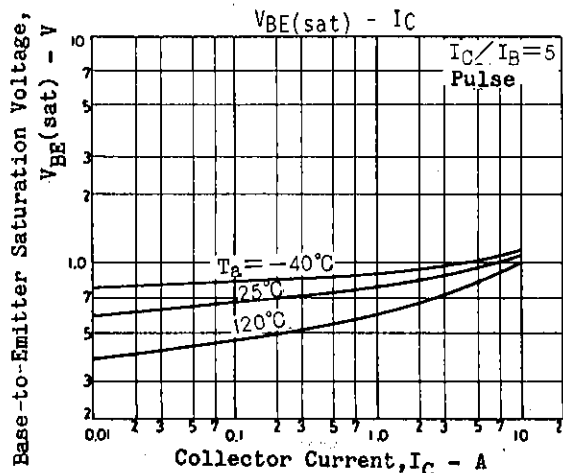
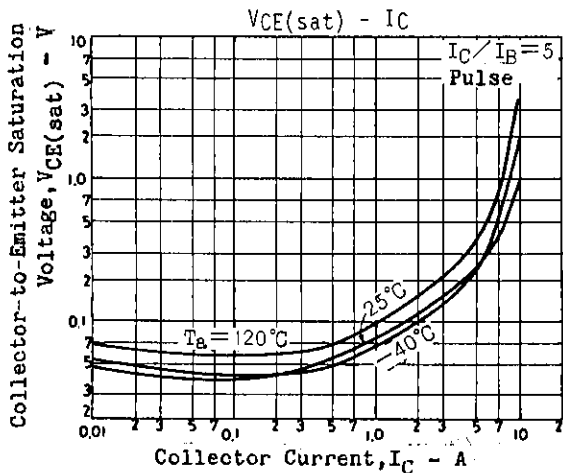
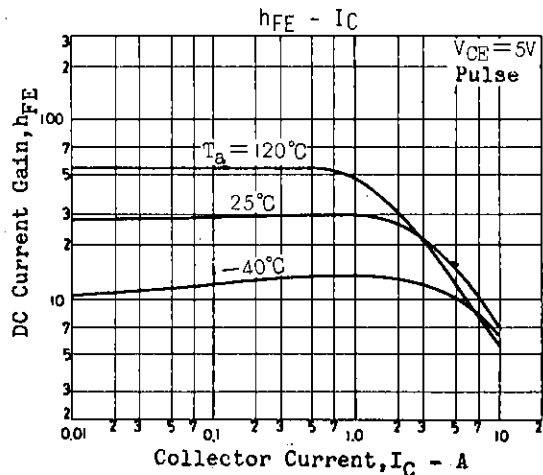
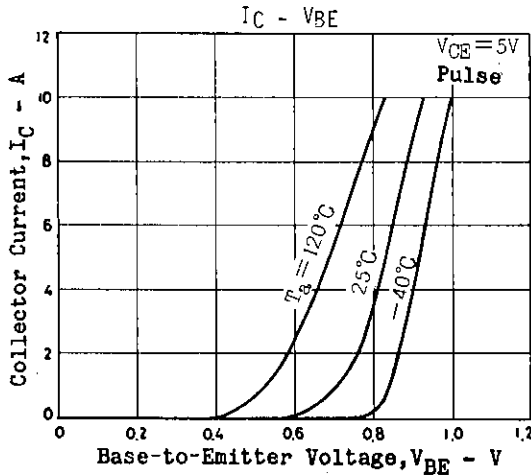
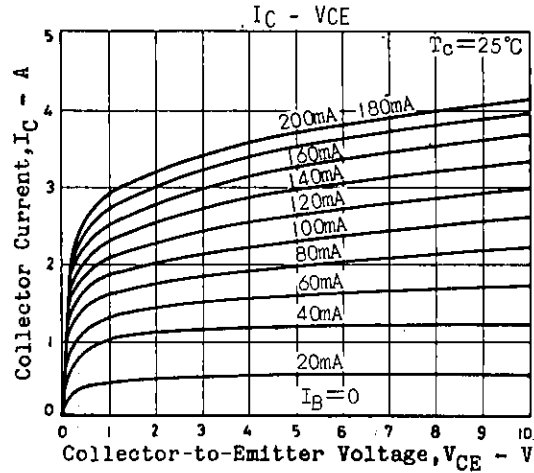
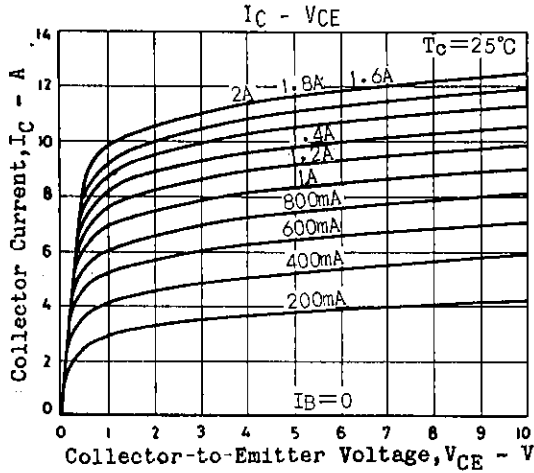
Unit (Resistance : Ω, Capacitance : F)

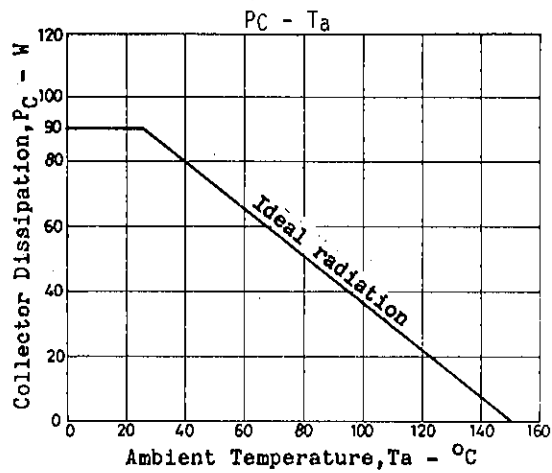
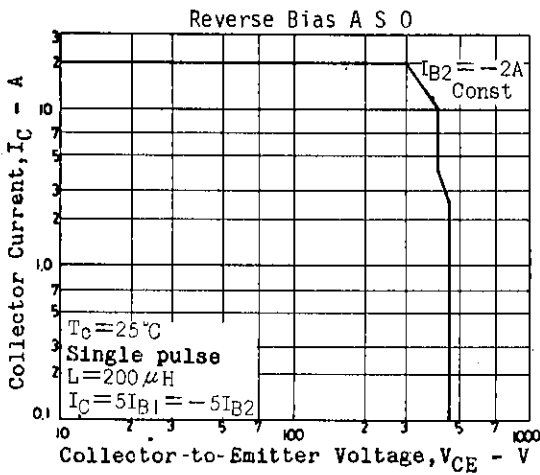
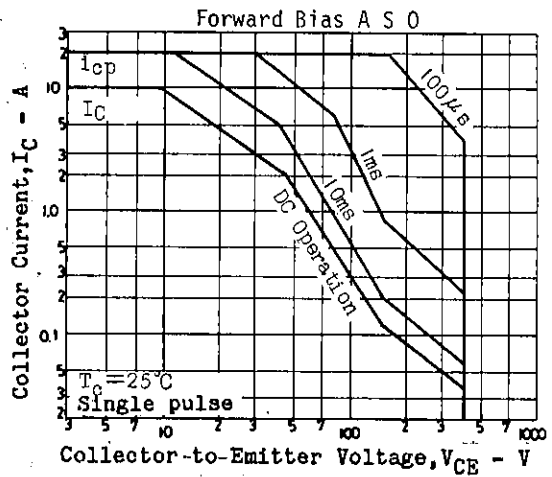
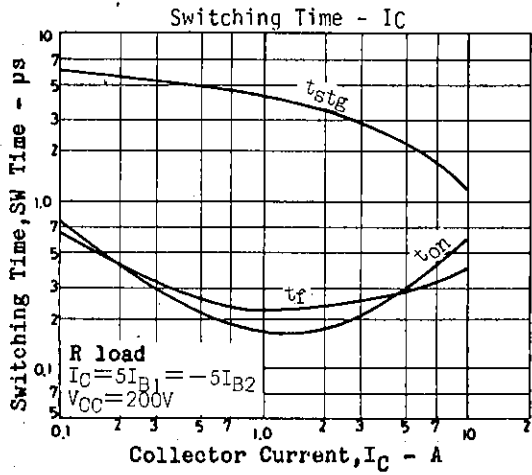


E: Emitter
C: Collector
B: Base

Continued from preceding page.

| | | | min | typ | max | unit |
|---------------------|--------------------|--|-----|-----|-----|---------|
| C-E Sustain Voltage | $V_{CEX(sus)}$ (1) | $I_C=10A, I_{B1}=2A, L=200\mu H,$ $I_{B2}=-2A, \text{clamped}$ | 400 | | | V |
| C-E Sustain Voltage | $V_{CEX(sus)}$ (2) | $I_C=2.5A, I_{B1}=0.5A, L=200\mu H,$ $I_{B2}=-0.5A, \text{clamped}$ | 450 | | | V |
| Turn-ON Time | t_{on} | $I_C=7A, I_{B1}=1.4A, I_{B2}=-1.4A,$ $R_L=28.6ohms, V_{CC}=200V$ | | | 1.0 | μs |
| Storage Time | t_{stg} | " " | | | 2.5 | μs |
| Fall Time | t_f | " " | | | 1.0 | μs |





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