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| SANYO | No.3093 | 2SA1707/2SC4487 |
| | | PNP/NPN Epitaxial Planar Silicon Transistors High-Current Switching Applications |

Features

- Adoption of FBET, MBIT processes
- Large current capacity, wide ASO
- Low collector-to-emitter saturation voltage
- Fast switching speed

() : 2SA1707

Absolute Maximum Ratings at Ta = 25°C

| | | | unit |
|------------------------------|------------------|-------------|------|
| Collector to Base Voltage | V _{CB0} | (-)60 | V |
| Collector to Emitter Voltage | V _{CEO} | (-)50 | V |
| Emitter to Base Voltage | V _{EBO} | (-)6 | V |
| Collector Current | I _C | (-)3 | A |
| Collector Current(Pulse) | I _{CP} | (-)6 | A |
| Collector Dissipation | P _C | 1 | W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature | T _{stg} | -55 to +150 | °C |

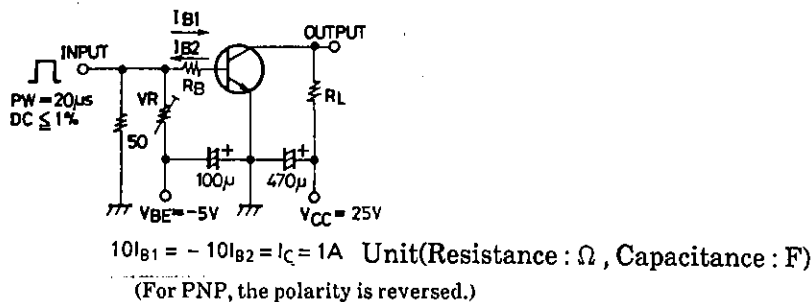
Electrical Characteristics at Ta = 25°C

| | | | min | typ | max | unit |
|--------------------------|----------------------|--|---------|--------|--------|------|
| Collector Cutoff Current | I _{CB0} | V _{CB} = (-)40V, I _E = 0 | | | (-)1 | μA |
| Emitter Cutoff Current | I _{EBO} | V _{EB} = (-)4V, I _C = 0 | | | (-)1 | μA |
| DC Current Gain | h _{FE} (1) | V _{CE} = (-)2V, I _C = (-)100mA | 100※ | | 400※ | |
| | h _{FE} (2) | V _{CE} = (-)2V, I _C = (-)3A | 35 | | | |
| Gain-Bandwidth Product | f _T | V _{CE} = (-)10V, I _C = (-)50mA | | 150 | | MHz |
| C-E Saturation Voltage | V _{CE(sat)} | I _C = (-)2A, I _B = (-)100mA | (-)0.35 | | (-)0.7 | V |
| | | | 0.2 | | 0.5 | |
| B-E Saturation Voltage | V _{BE(sat)} | I _C = (-)2A, I _B = (-)100mA | (-)0.95 | | (-)1.2 | V |
| Output Capacitance | c _{ob} | V _{CB} = (-)10V, f = 1MHz | | (39)25 | | pF |
| C-B Breakdown Voltage | V _{(BR)CBO} | I _C = (-)10μA, I _E = 0 | (-)60 | | | V |
| C-E Breakdown Voltage | V _{(BR)CEO} | I _C = (-)1mA, R _{BE} = ∞ | (-)50 | | | V |
| E-B Breakdown Voltage | V _{(BR)EBO} | I _E = (-)10μA, I _C = 0 | (-)6 | | | V |
| Turn-ON Time | t _{on} | See specified Test Circuit. | | 70 | | ns |
| Storage Time | t _{stg} | " | | (450) | | ns |
| | | | | 650 | | |
| Fall Time | t _f | " | | 35 | | ns |

※: The 2SA1707/2SC4487 are classified by 100mA h_{FE} as follows:

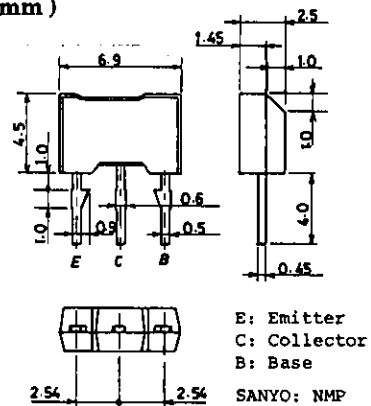
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|-----------|-----------|-----------|
| 100 R 200 | 140 S 280 | 200 T 400 |
|-----------|-----------|-----------|

Switching Time Test Circuit

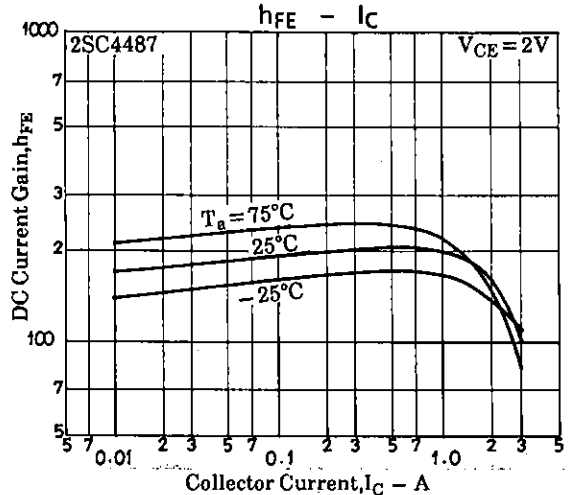
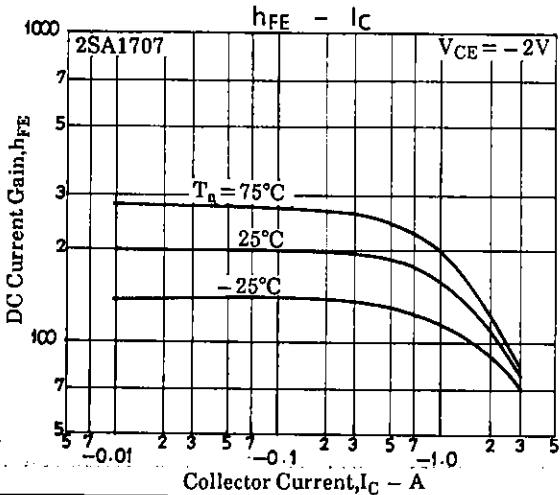
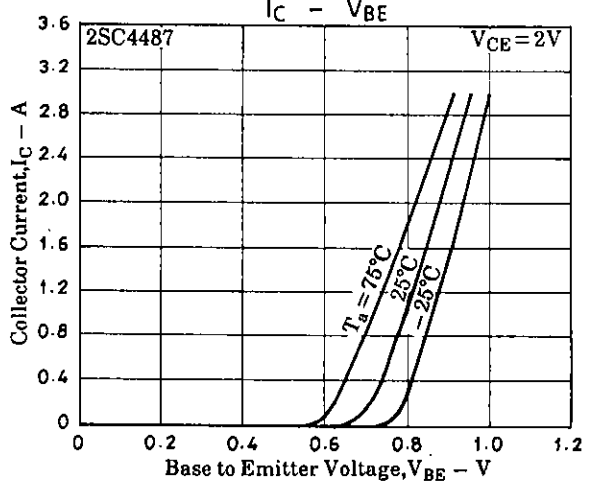
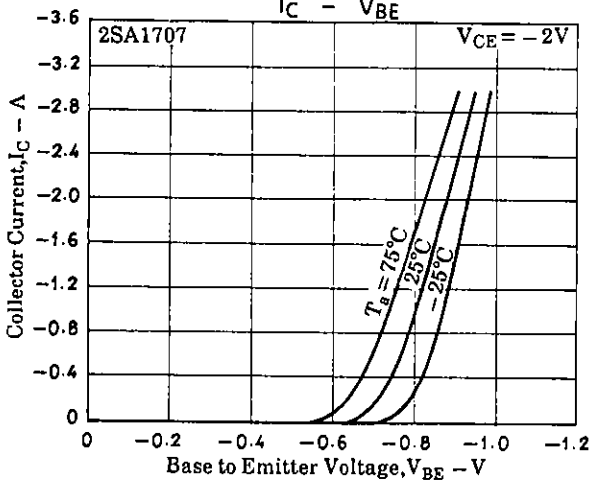
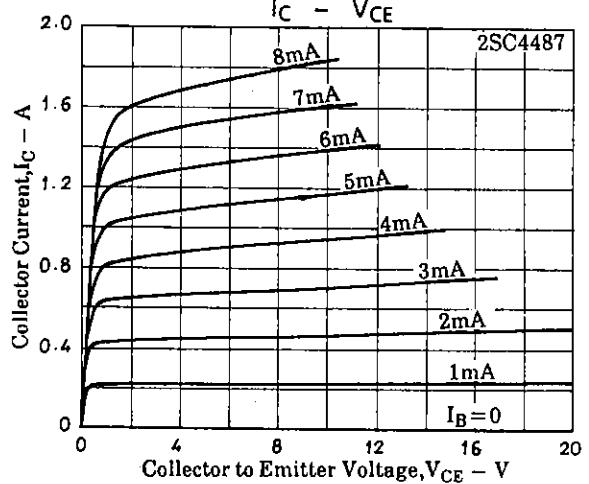
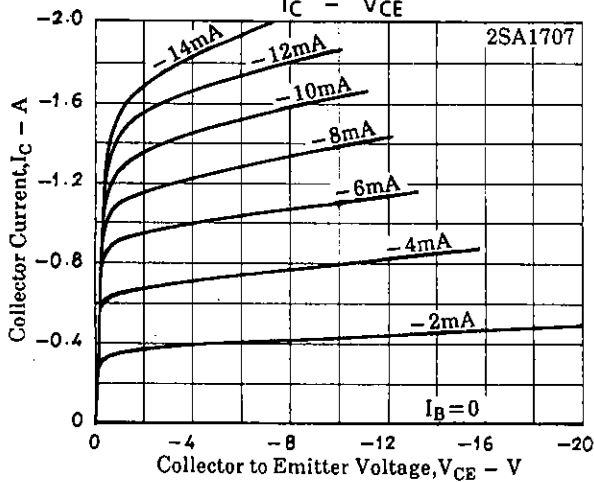
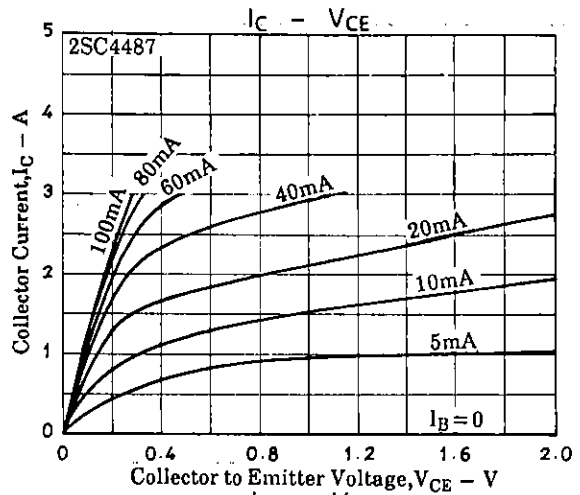
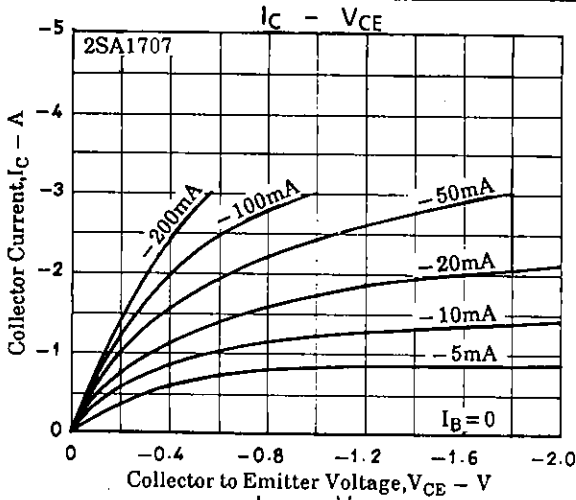


Package Dimensions
(unit: mm)

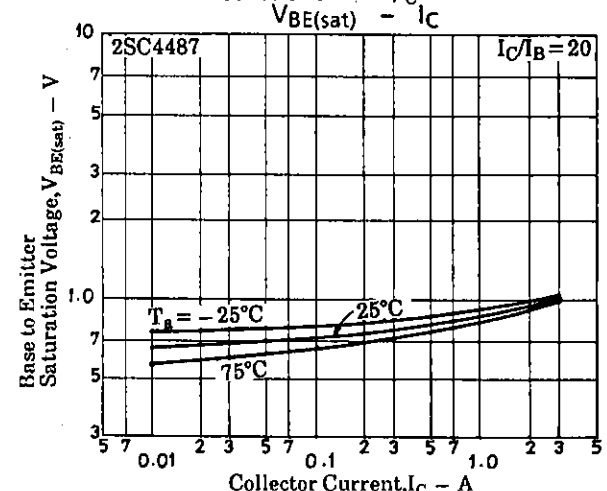
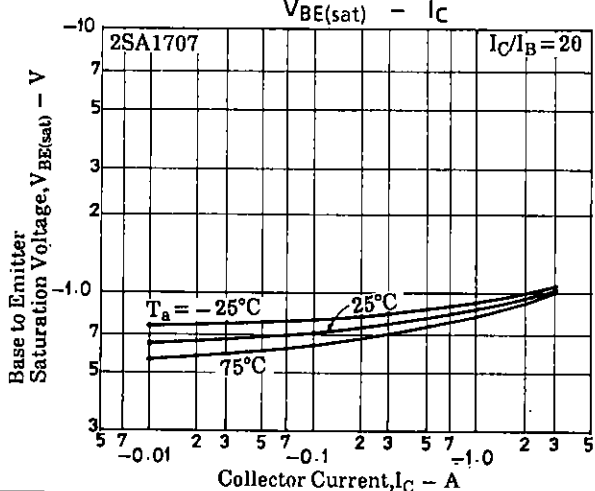
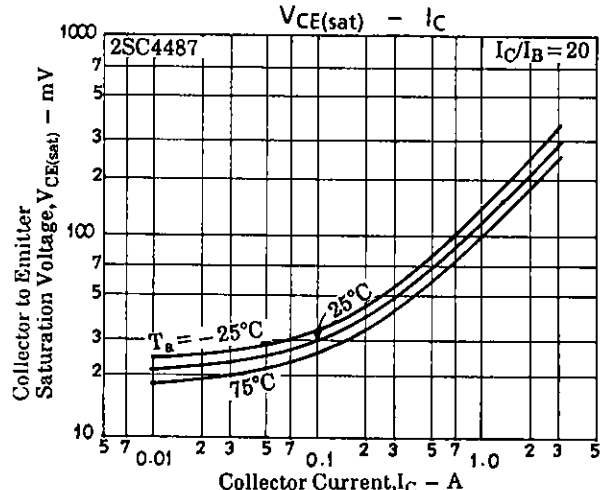
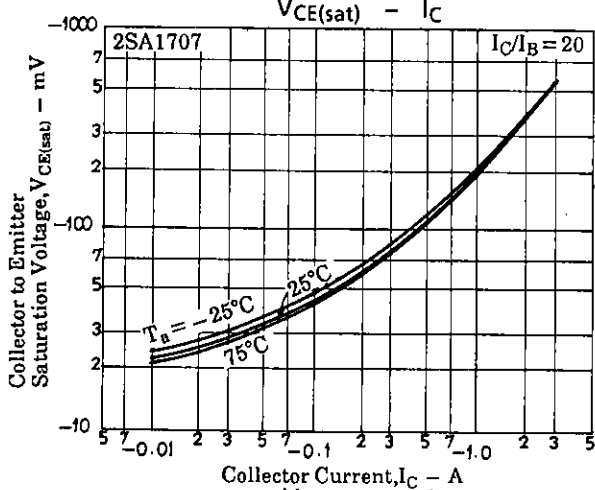
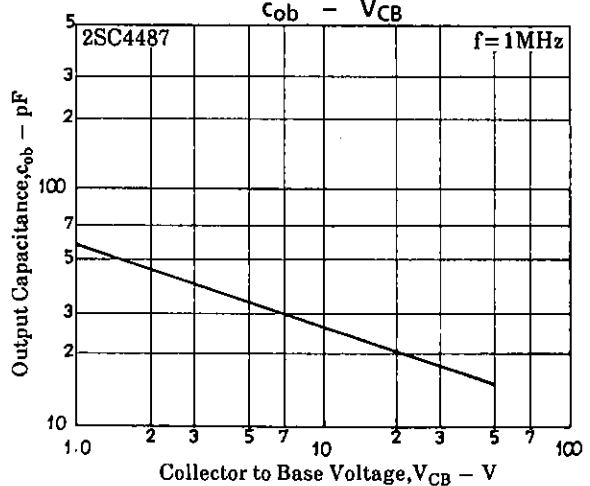
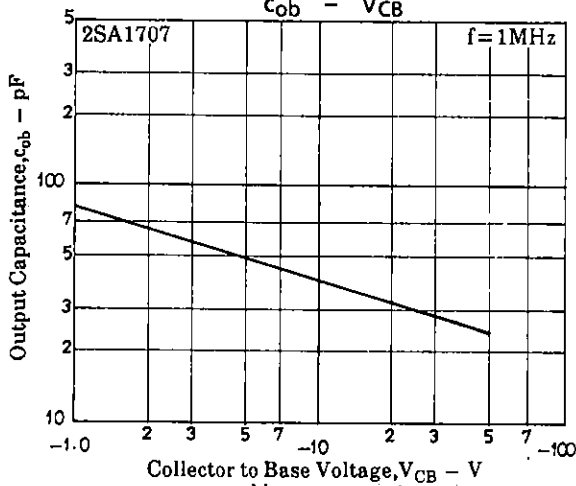
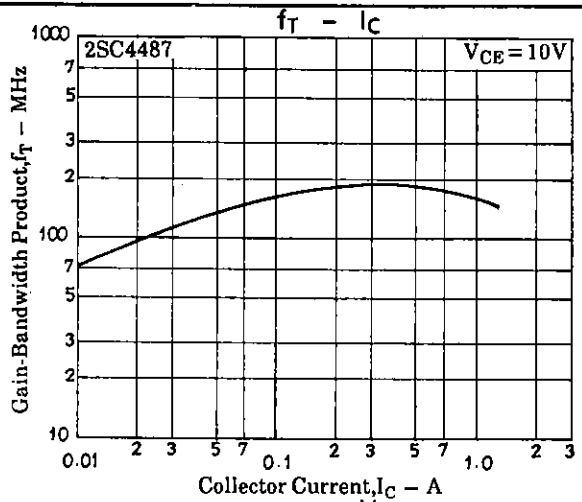
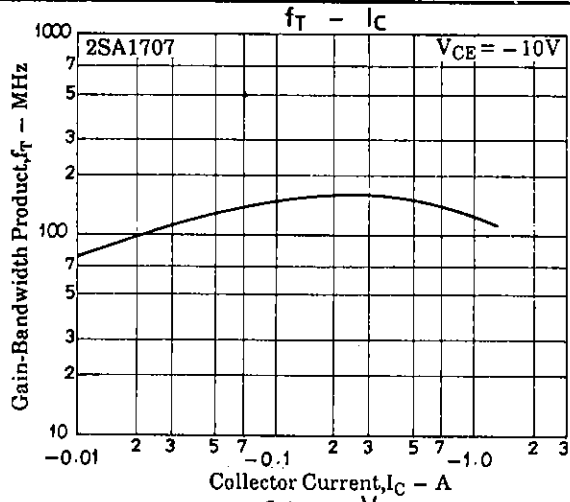
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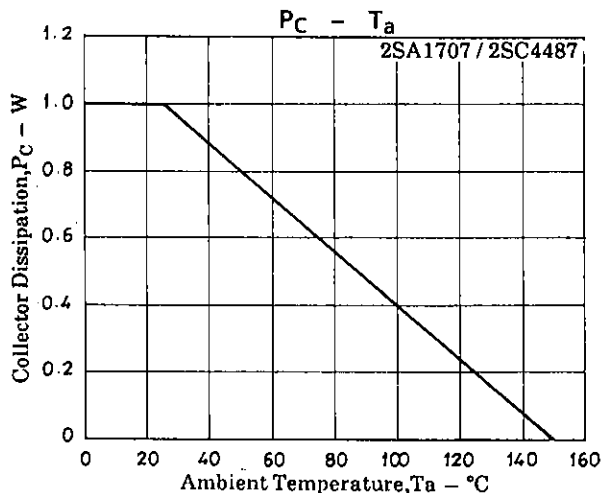
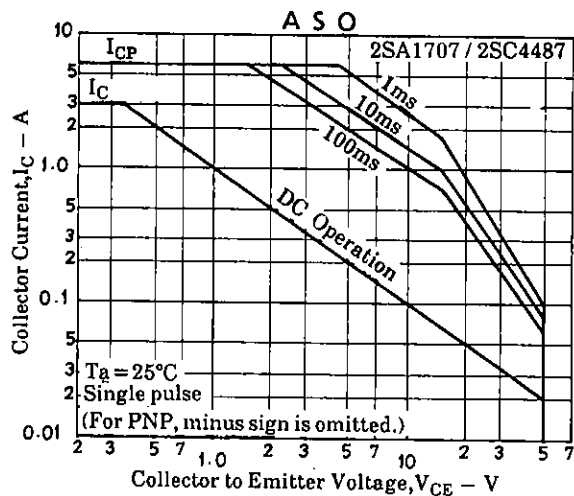


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