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| SANYO | No.2439A | 2SA1540/2SC3955 |
| | | PNP/NPN Epitaxial Planar Silicon Transistors High-Definition CRT Display Video Output Applications |

Applications

- High-definition CRT display video output, wide-band amp

Features

- High gain-bandwidth product ($f_T=300\text{MHz}$)
- High breakdown voltage ($V_{CE0}=200\text{Vmin}$)
- Small reverse transfer capacitance and excellent high frequency characteristics ($c_{re}=1.5\text{pF/NPN}$, 1.8pF/PNP)
- Complementary PNP and NPN types
- Adoption of FBET process
- Micaless type (T0126 plastic package)

(): PNP

Absolute Maximum Ratings at $T_a=25^\circ\text{C}$

| | | | unit |
|------------------------------|------------------------|-------------|------------------|
| Collector-to-Base Voltage | V_{CB0} | (-)200 | V |
| Collector-to-Emitter Voltage | V_{CE0} | (-)200 | V |
| Emitter-to-Base Voltage | V_{EB0} | (-)3 | V |
| Collector Current | I_C | (-)100 | mA |
| Peak Collector Current | i_{cp} | (-)200 | mA |
| Collector Dissipation | P_C | 1.3 | W |
| | $T_c=25^\circ\text{C}$ | 7 | W |
| Junction Temperature | T_j | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics at $T_a=25^\circ\text{C}$

| | | | min | typ | max | unit |
|------------------------------|---------------|--------------------------------------------|-----|-------|--------|---------------|
| Collector Cutoff Current | I_{CBO} | $V_{CB}=(-)150\text{V}, I_E=0$ | | | (-)0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB}=(-)2\text{V}, I_C=0$ | | | (-)1.0 | μA |
| DC Current Gain | h_{FE1} | $V_{CE}=(-)10\text{V}, I_C=(-)10\text{mA}$ | 40* | | 320* | |
| | h_{FE2} | $V_{CE}=(-)10\text{V}, I_C=(-)50\text{mA}$ | 20 | | | |
| Gain-Bandwidth Product | f_T | $V_{CE}=(-)30\text{V}, I_C=(-)30\text{mA}$ | | 300 | | MHz |
| Output Capacitance | c_{ob} | $V_{CB}=(-)30\text{V}, f=1\text{MHz}$ | | 1.9 | | pF |
| | | | | (2.4) | | pF |
| Reverse Transfer Capacitance | c_{re} | $V_{CB}=(-)30\text{V}, f=1\text{MHz}$ | | 1.5 | | pF |
| | | | | (1.8) | | pF |
| C-E Saturation Voltage | $V_{CE(sat)}$ | $I_C=(-)20\text{mA}, I_B=(-)2\text{mA}$ | | | (-)1.0 | V |
| E-B Saturation Voltage | $V_{BE(sat)}$ | $I_C=(-)20\text{mA}, I_B=(-)2\text{mA}$ | | | (-)1.0 | V |

* h_{FE1} : The 2SA1540/2SC3955 are classified by 10mA h_{FE} as follows:

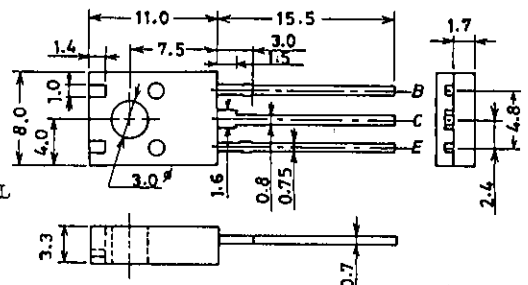
| | | | | | | | | | | | |
|----|---|----|----|---|-----|-----|---|-----|-----|---|-----|
| 40 | C | 80 | 60 | D | 120 | 100 | E | 200 | 160 | F | 320 |
|----|---|----|----|---|-----|-----|---|-----|-----|---|-----|

Package Dimensions 2042A

(unit: mm)

B: Base
C: Collector
E: Emitter

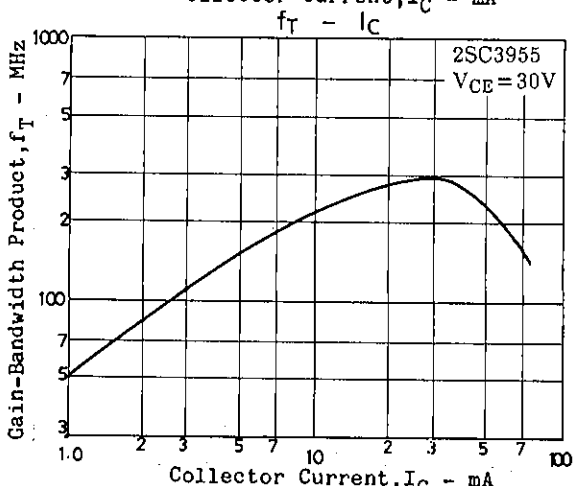
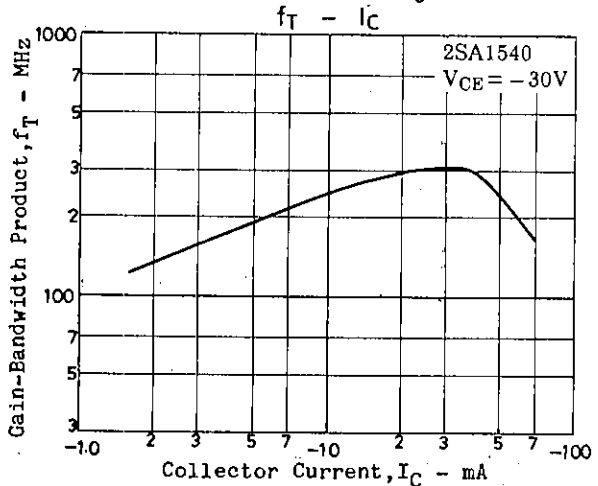
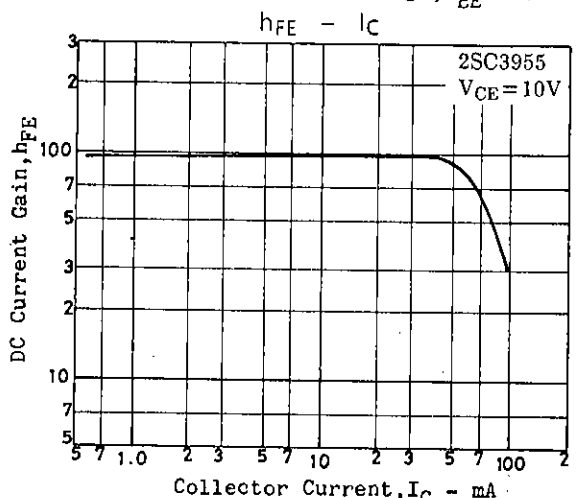
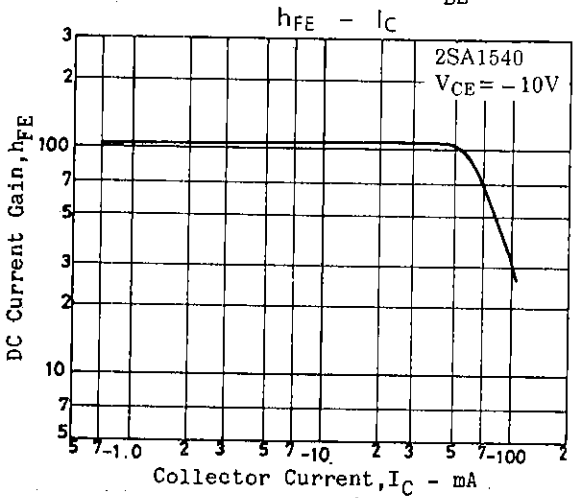
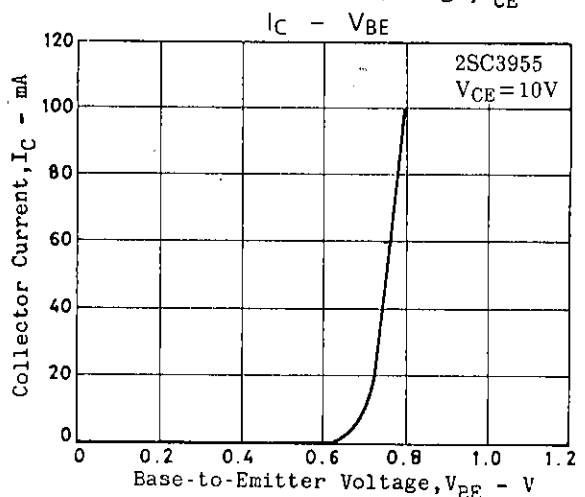
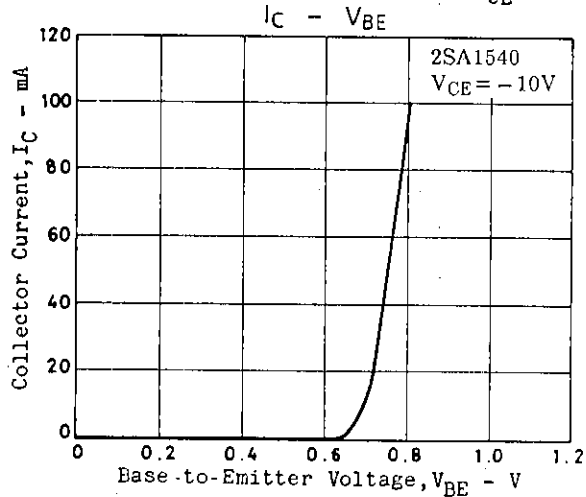
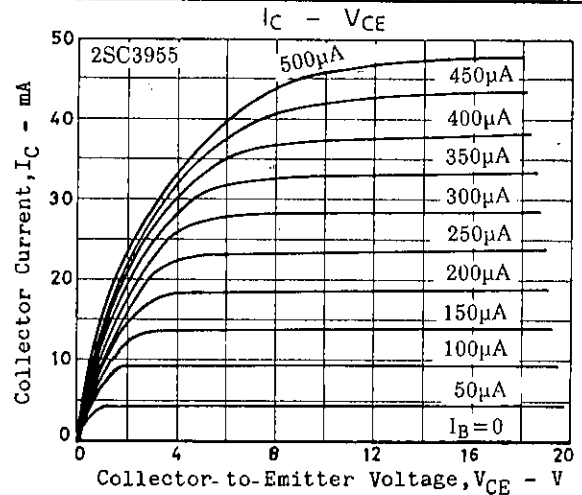
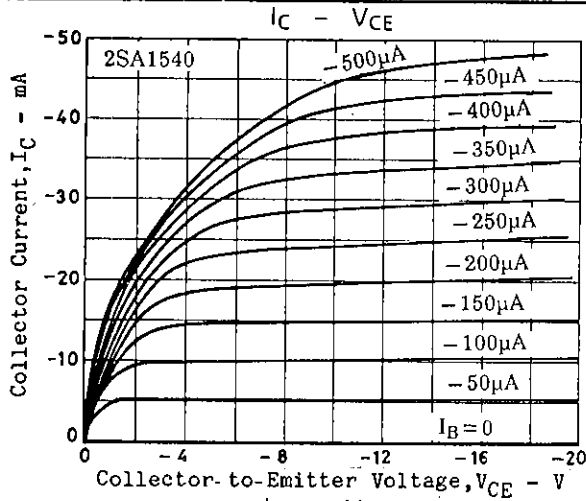
SANYO: T0126ML



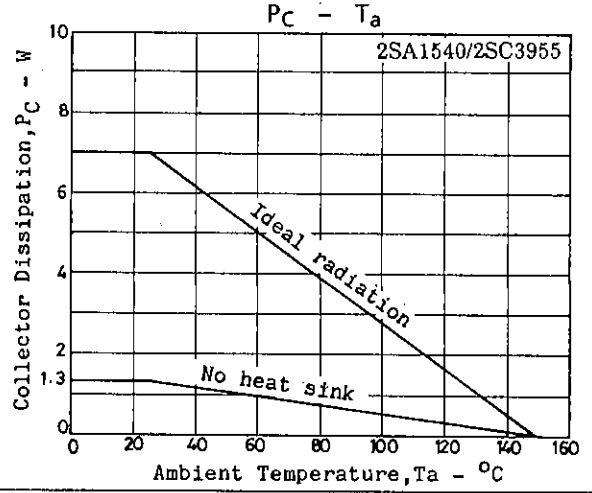
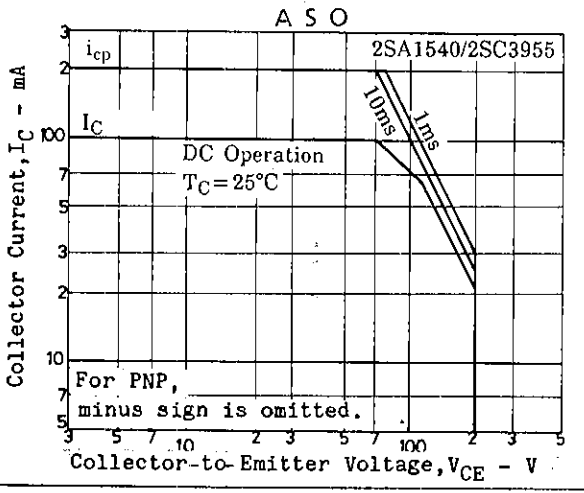
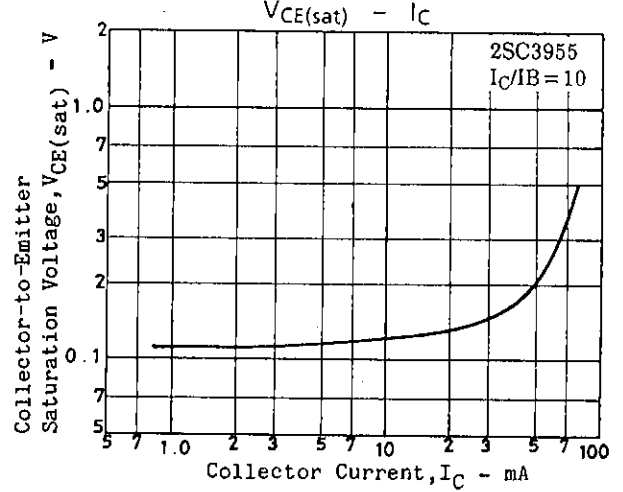
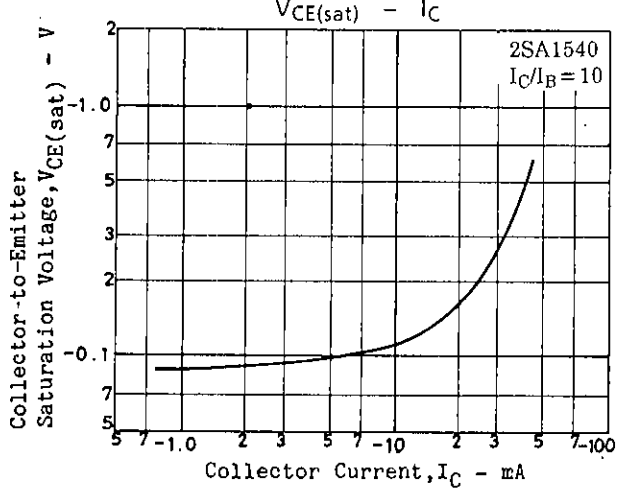
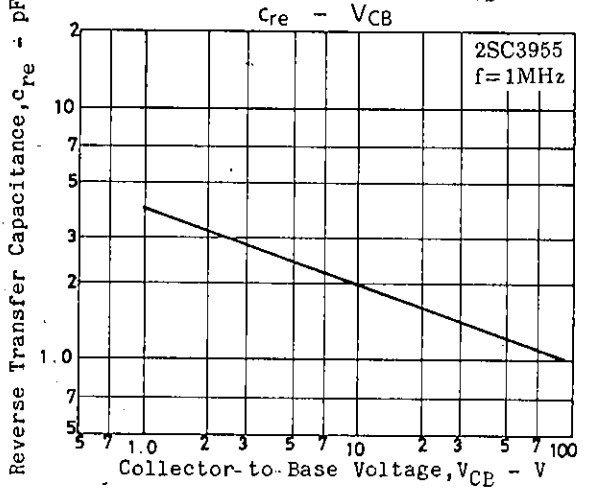
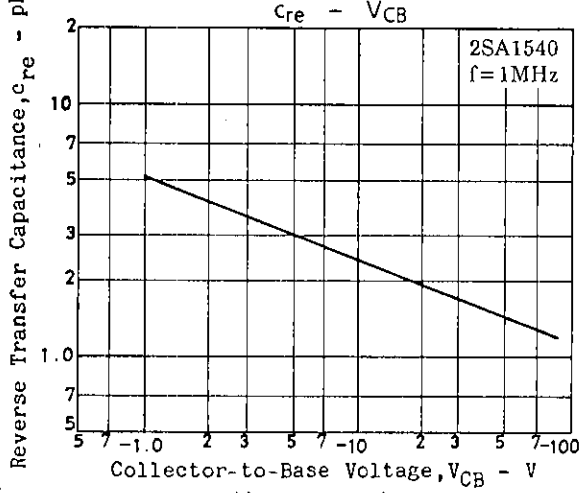
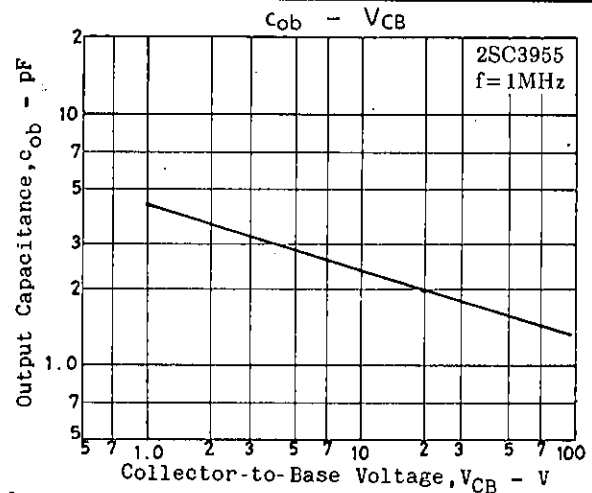
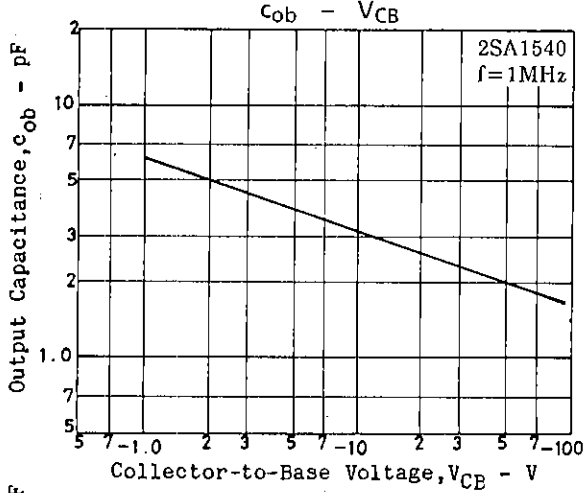
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2SA1540/2SC3955



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