



2SA1352/2SC3416

Ultrahigh-Definition CRT Display Video Output Applications

Applications

- Color TV chroma output, high-voltage driver applicatons.

Features

- High breakdown voltage : $V_{CEO} \leq 200V$.
- Small reverse transfer capacitance and excellent high frequency characteristics :
 $C_{re} = 1.2pF$ (NPN), $1.7pF$ (PNP).
- Adoption of FBET process.

() : 2SA1352

Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|------------------------------|-----------|--------------------|-------------|------------|
| Collector-to-Base Voltage | V_{CBO} | | (-)200 | V |
| Collector-to-Emitter Voltage | V_{CEO} | | (-)200 | V |
| Emitter-to-Base Voltage | V_{EBO} | | (-)5 | V |
| Collector Current | I_C | | (-)100 | mA |
| Collector Current (Pulse) | I_{CP} | | (-)200 | mA |
| Collector Dissipation | P_C | | 1.2 | W |
| | | $T_c = 25^\circ C$ | 5 | W |
| Junction Temperature | T_j | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

Electrical Characteristics at $T_a = 25^\circ C$

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|---|---------------|----------------------------------|---------|-------|--------|---------|
| | | | min | typ | max | |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = (-)150V, I_E = 0$ | | | (-)0.1 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = (-)4V, I_C = 0$ | | | (-)0.1 | μA |
| DC Current Gain | h_{FE} | $V_{CE} = (-)40V, I_C = (-)10mA$ | 40 | | 320 | |
| Gain-Bandwidth Product | f_T | $V_{CE} = (-)30V, I_C = (-)10mA$ | | 70 | | MHz |
| Collector-to-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = (-)20mA, I_B = (-)2mA$ | | | (-)0.6 | V |
| Base-to-Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = (-)20mA, I_B = (-)2mA$ | | | (-)1.0 | V |
| Collector-to-Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = (-)10\mu A, I_E = 0$ | (-)200 | | | V |
| Collector-to-Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = (-)1mA, R_{BE} = \infty$ | (-)200 | | | V |
| Emitter-to-Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = (-)10\mu A, I_C = \infty$ | (-)5 | | | V |
| Common Base Output Capacitance | C_{ob} | $V_{CB} = (-)30V, f = 1MHz$ | | 1.7 | | pF |
| | | | | (2.6) | | pF |
| Reverse Transfer Capacitance | C_{re} | $V_{CB} = (-)30V, f = 1MHz$ | | 1.2 | | pF |
| | | | | (1.7) | | pF |

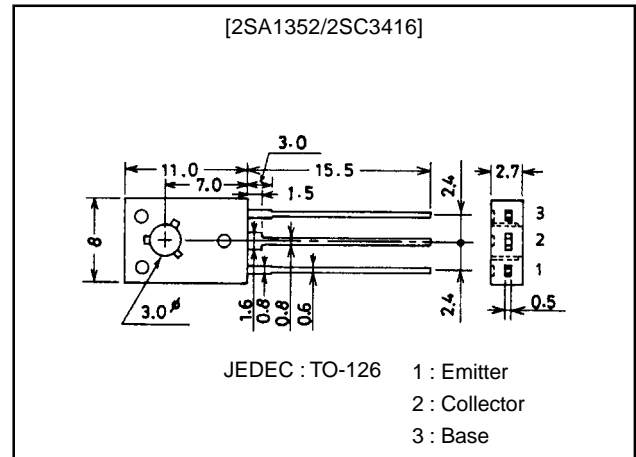
* : 2SA1352/2SC3416 are classified by 10mA h_{FE} as follows :

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

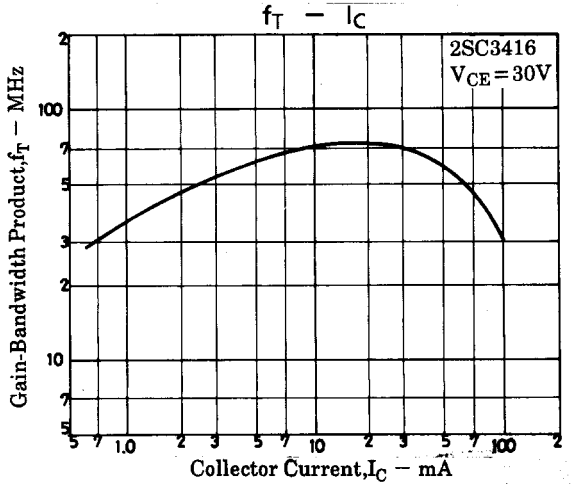
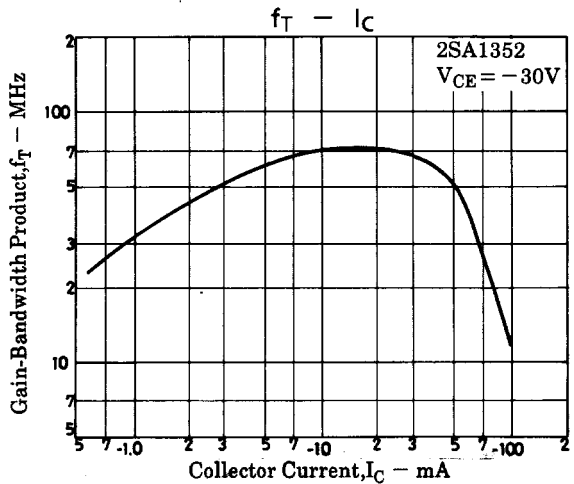
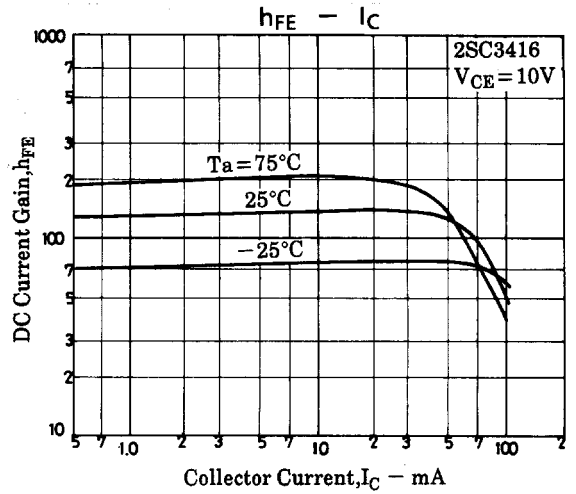
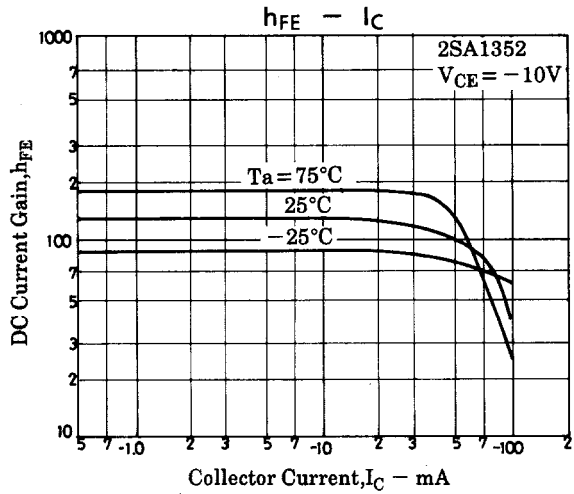
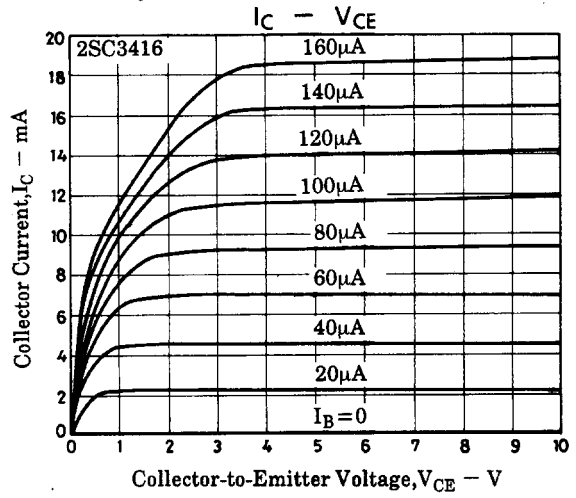
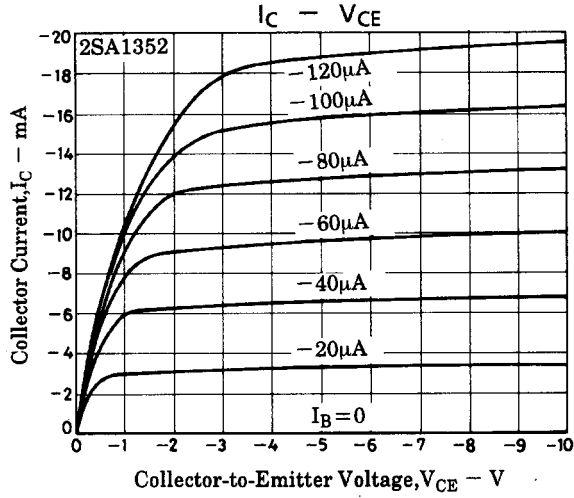
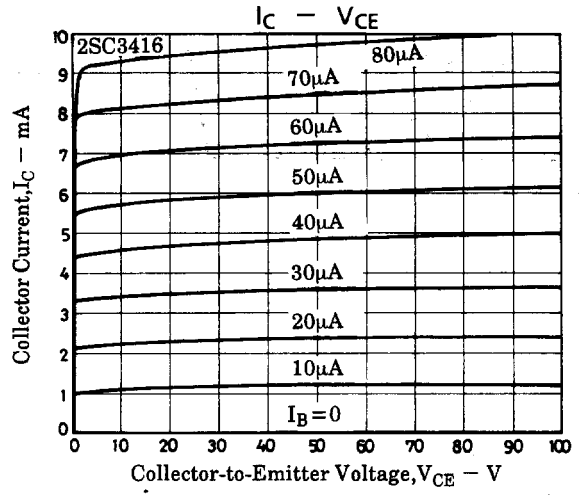
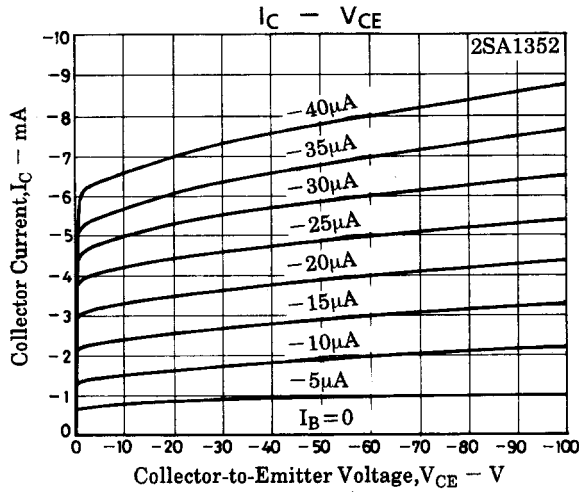
Package Dimensions

unit:mm

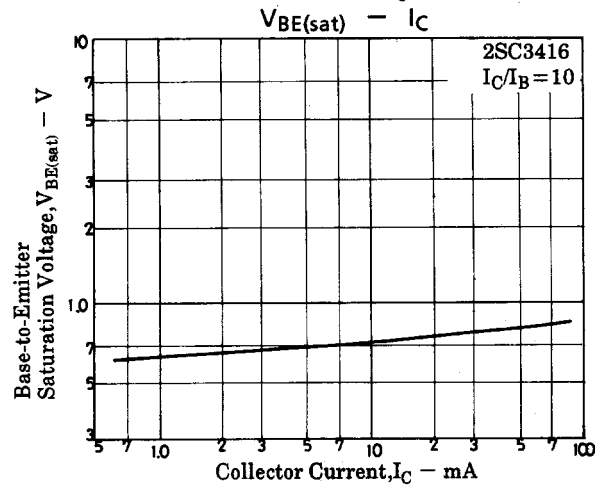
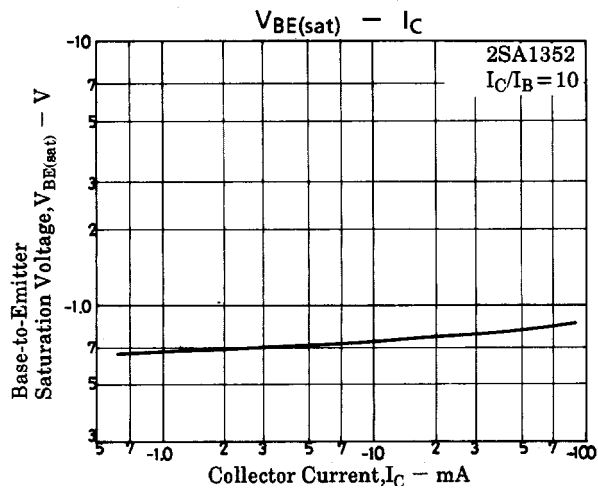
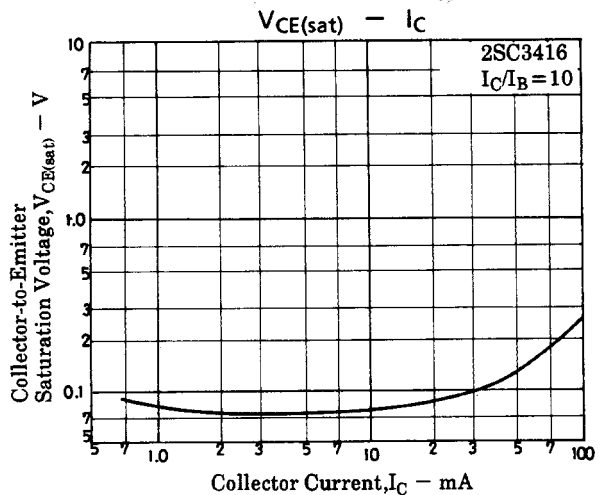
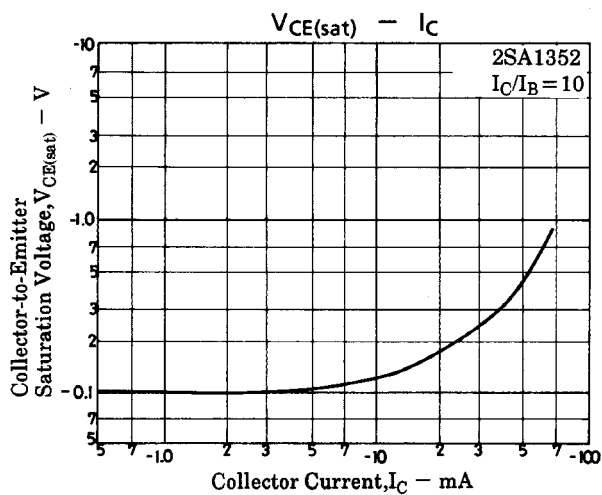
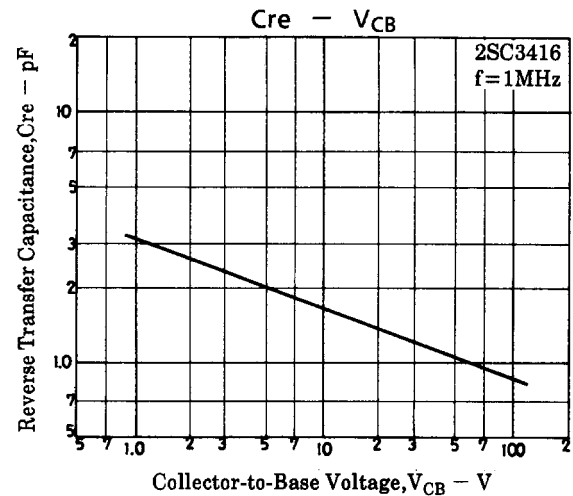
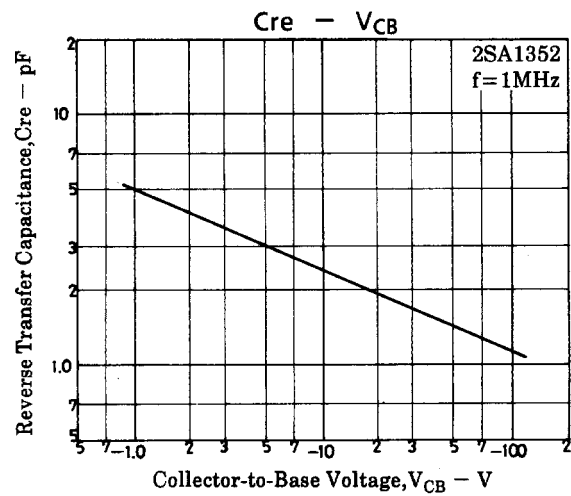
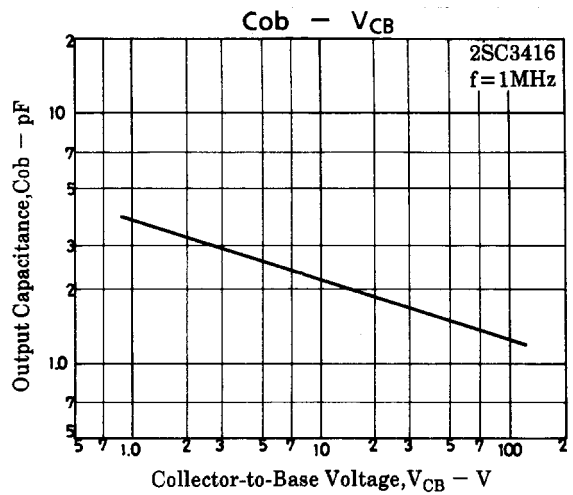
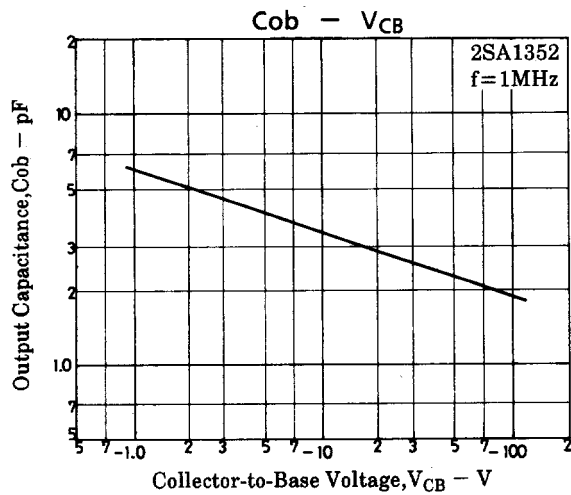
2009B



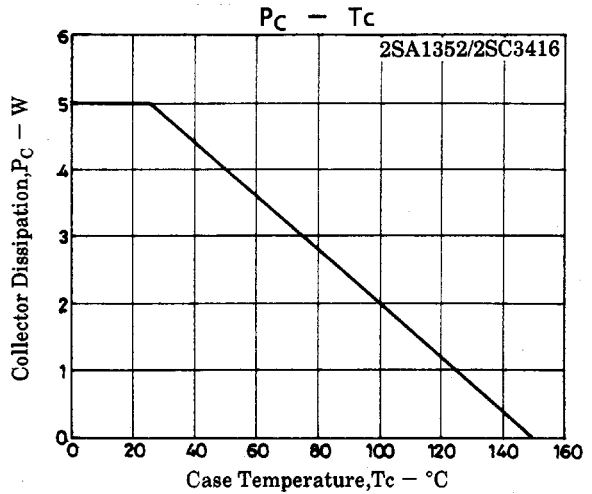
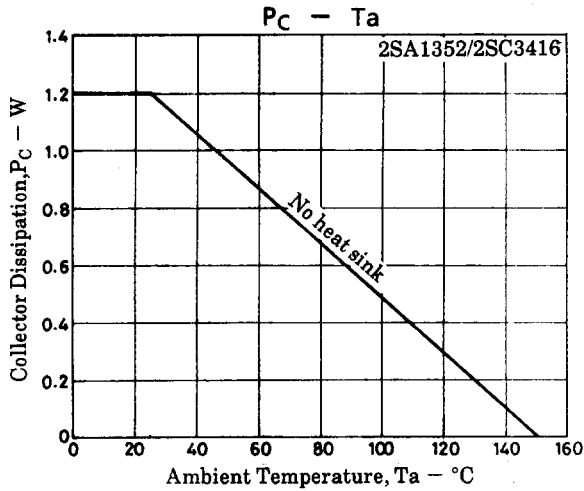
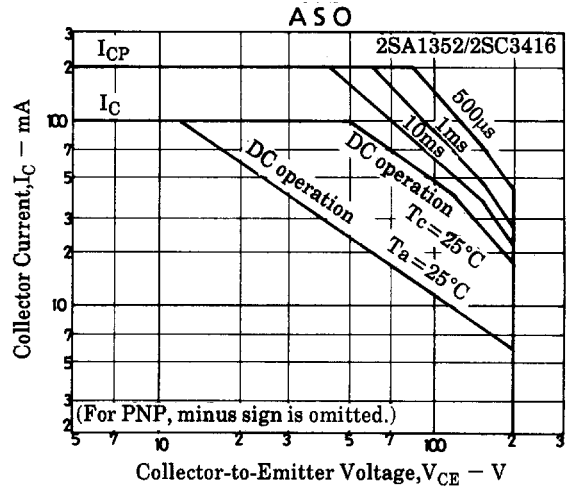
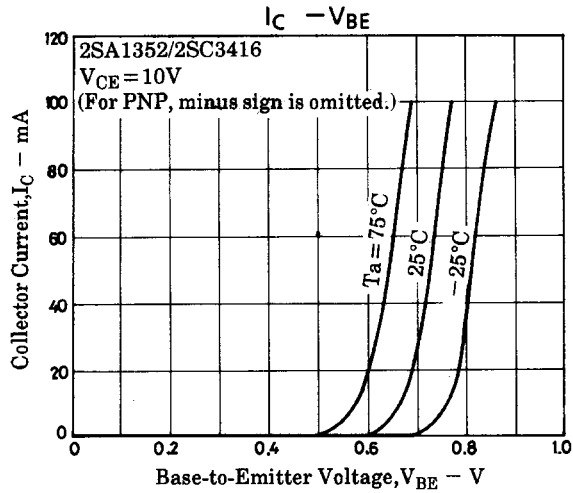
2SA1352/2SC3416



2SA1352/2SC3416



2SA1352/2SC3416



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use.
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of July, 1998. Specifications and information herein are subject to change without notice.