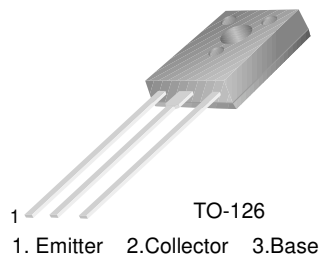


KSC2258/2258A

High Voltage General Amplifier TV Video Output Amplifier

- High BV_{CEO}



KSC2258/2258A

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|-----------|--|------------|------------------|
| V_{CBO} | Collector-Base Voltage | | |
| | : KSC2258 | 250 | V |
| | : KSC2258A | 300 | V |
| V_{CEO} | Collector-Emitter Voltage | | |
| | : KSC2258 | 250 | V |
| | : KSC2258A | 300 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current (DC) | 100 | mA |
| I_{CP} | Collector Current (Pulse) | 150 | mA |
| P_C | Collector Dissipation ($T_C=25^\circ\text{C}$) | 4 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | - 55 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|--------------------------------------|--|------|------|------|---------------|
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = 0.1\text{mA}, I_C = 0$ | 6 | | | V |
| I_{CER} | Collector Cut-off Current | $V_{CE} = 250\text{V}, R_{BE} = 100\text{K}\Omega$ | | | 100 | μA |
| h_{FE1} | DC Current Gain | $V_{CE} = 20\text{V}, I_C = 40\text{mA}$ | 40 | | | |
| h_{FE2} | | $V_{CE} = 50\text{V}, I_C = 5\text{mA}$ | 30 | | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = 50\text{mA}, I_B = 5\text{mA}$ | | | 1.2 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $V_{CE} = -20\text{V}, I_C = 40\text{mA}$ | | | 1.2 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$ | | 100 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB} = 50\text{V}, f = 1\text{MHz}$ | | 3 | 4.5 | pF |

Typical Characteristics

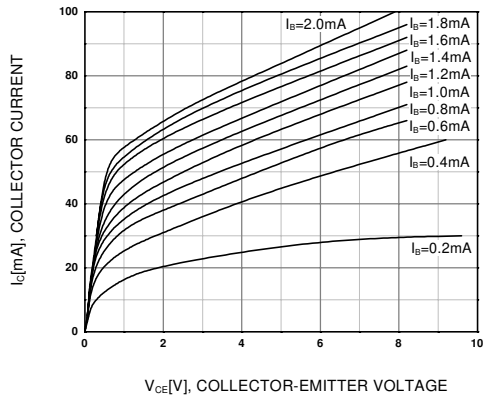


Figure 1. Static Characteristic

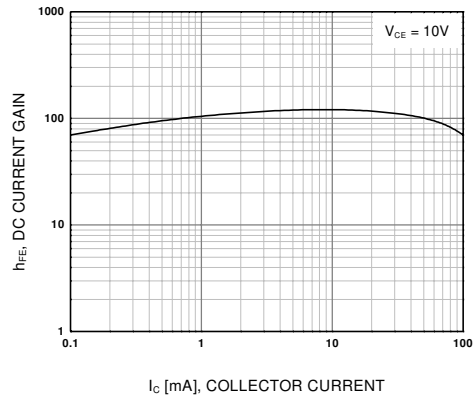


Figure 2. DC current Gain

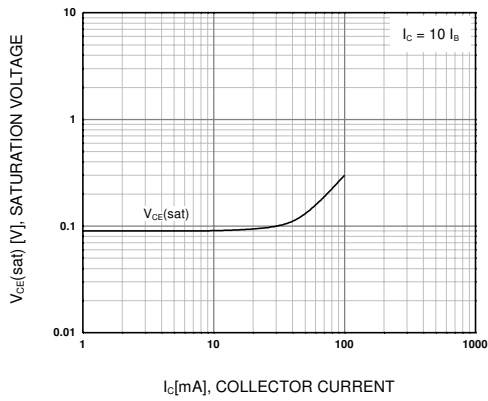


Figure 3. Collector-Emitter Saturation Voltage

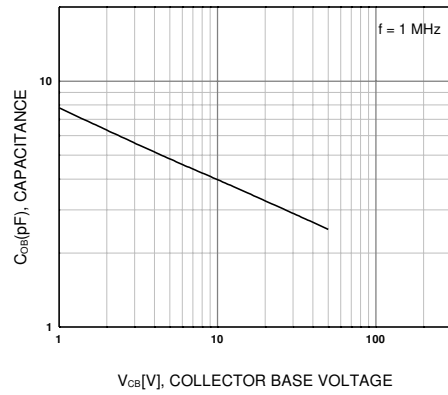


Figure 4. Collector Output Capacitance

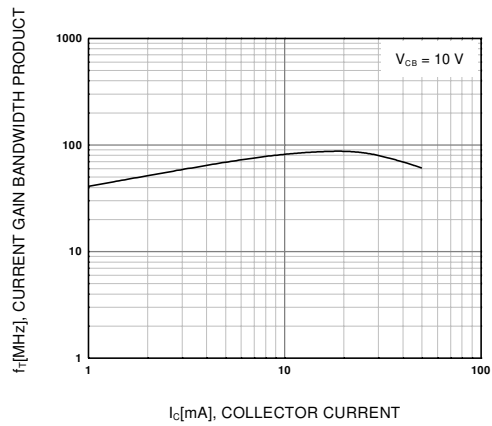


Figure 5. Current Gain Bandwidth Product

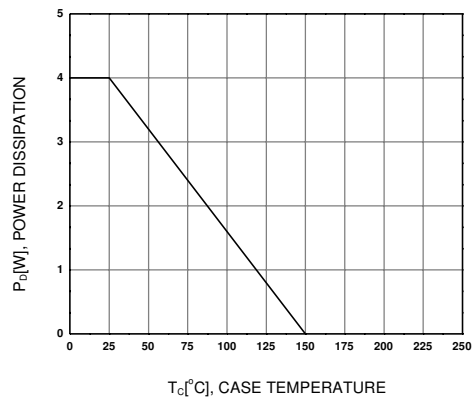
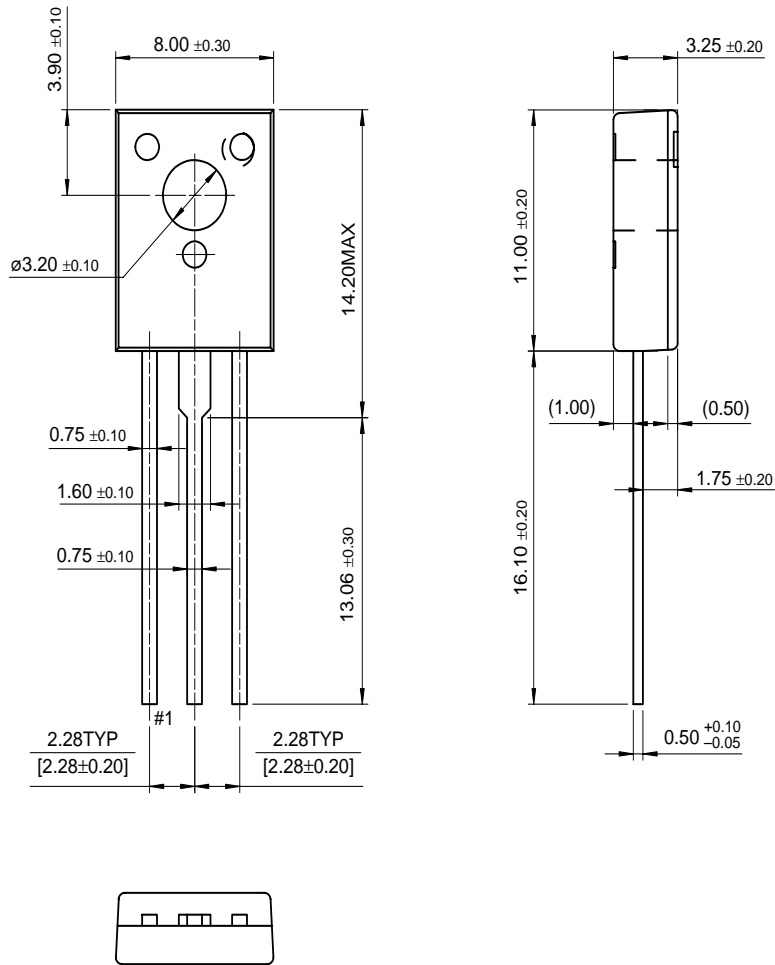


Figure 6. Power Derating

Package Dimensions

KSC2258/2258A

TO-126



Dimensions in Millimeters

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|----------------------|---------------|-------------|
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| CoolFET™ | MICROWIRE™ | TinyLogic™ |
| CROSSVOLT™ | POP™ | UHC™ |
| E ² CMOS™ | PowerTrench® | VCX™ |
| FACT™ | QFET™ | |
| FACT Quiet Series™ | QS™ | |
| FAST® | Quiet Series™ | |
| FASTr™ | SuperSOT™-3 | |
| GTO™ | SuperSOT™-6 | |

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