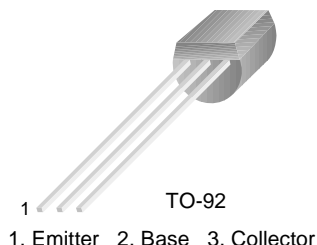


KSC1008

Low Frequency Amplifier Medium Speed Switching

- Complement to KSA708
- High Collector-Base Voltage : $V_{CBO}=80V$
- Collector Current : $I_C=700mA$
- Collector Power Dissipation : $P_C=800mW$
- Suffix "-C" means Center Collector (1. Emitter 2. Collector 3. Base)



NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_a=25^\circ C$ unless otherwise noted

| Symbol | Parameter | Ratings | Units |
|-----------|-----------------------------|-----------|------------|
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{CEO} | Collector-Emitter Voltage | 60 | V |
| V_{EBO} | Emitter-Base Voltage | 8 | V |
| I_C | Collector Current | 700 | mA |
| P_C | Collector Power Dissipation | 800 | mW |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 ~ 150 | $^\circ C$ |

Electrical Characteristics $T_a=25^\circ C$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Typ. | Max. | Units |
|---------------|--------------------------------------|-----------------------------|------|------|------|---------|
| BV_{CBO} | Collector-Base Breakdown Voltage | $I_C=100\mu A, I_E=0$ | 80 | | | V |
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C=10mA, I_B=0$ | 60 | | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E=10\mu A, I_C=0$ | 8 | | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CB}=60V, I_E=0$ | | | 0.1 | μA |
| I_{EBO} | Emitter Cut-off Current | $V_{EB}=5V, I_C=0$ | | | 0.1 | μA |
| h_{FE} | DC Current Gain | $V_{CE}=2V, I_C=50mA$ | 40 | | 400 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=500mA, I_B=50mA$ | | 0.2 | 0.4 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=500mA, I_B=50mA$ | | 0.86 | 1.1 | V |
| f_T | Current Gain Bandwidth Product | $V_{CE}=10V, I_C=50mA$ | 30 | 50 | | MHz |
| C_{ob} | Output Capacitance | $V_{CB}=10V, I_E=0, f=1MHz$ | | 8 | | pF |

h_{FE} Classification

| Classification | R | O | Y | G |
|----------------|---------|----------|-----------|-----------|
| h_{FE} | 40 ~ 80 | 70 ~ 140 | 120 ~ 240 | 200 ~ 400 |

Typical Characteristics

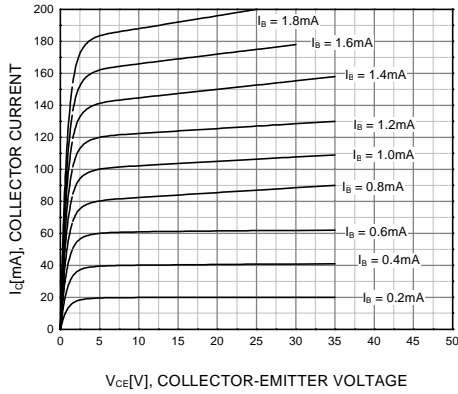


Figure 1. Static Characteristic

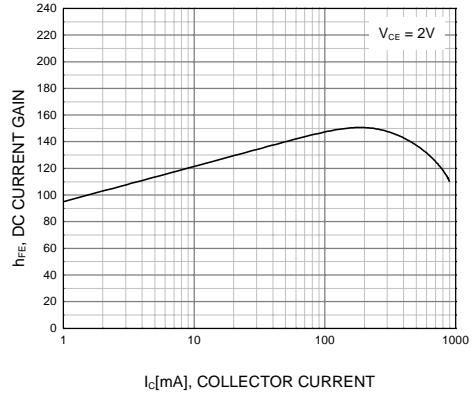


Figure 2. DC current Gain

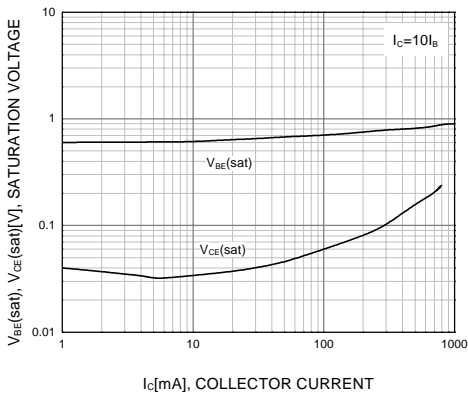


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

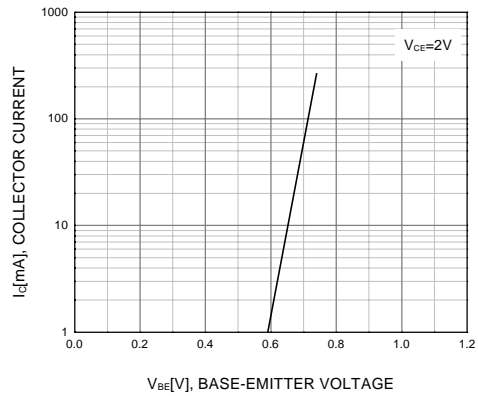


Figure 4. Base-Emitter On Voltage

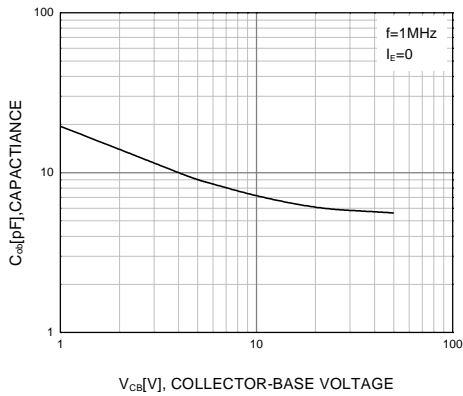
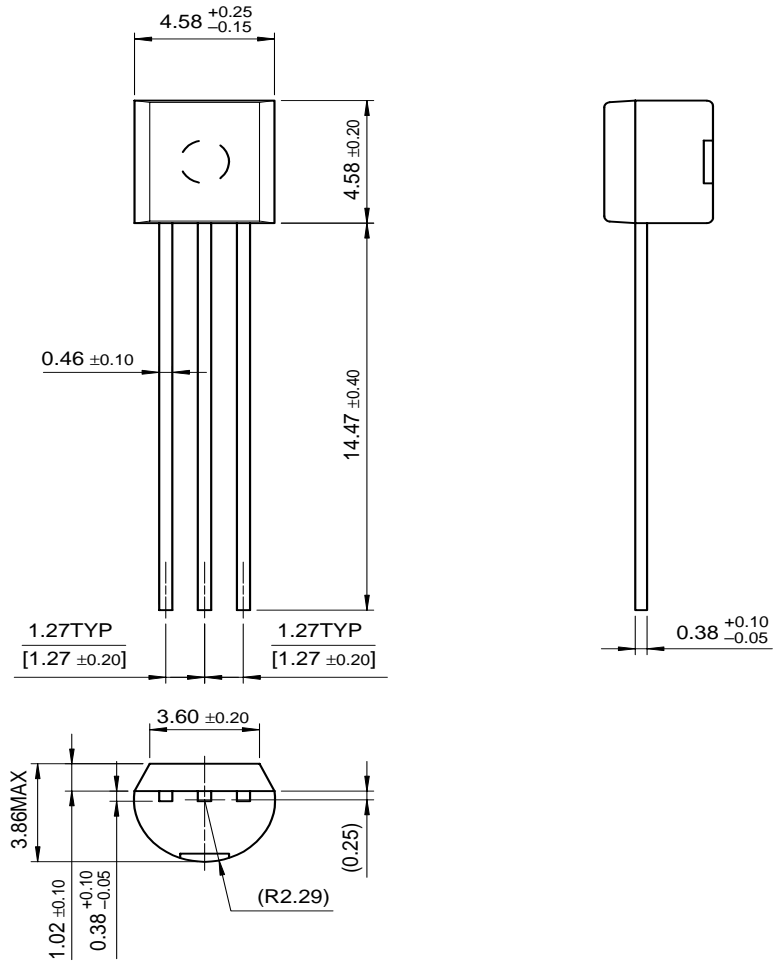


Figure 5. Collector Output Capacitance

Package Dimensions

KSC1008

TO-92



Dimensions in Millimeters

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KSC1008

NPN Epitaxial Silicon Transistor

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Product status/pricing/packaging

| Product | Product status | Pricing* | Package type | Leads | Packing method |
|-------------|-----------------|----------|-----------------------|-------|----------------|
| KSC1008YTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008CYBU | Full Production | \$0.058 | TO-92 | 3 | BULK |
| KSC1008OBU | Full Production | \$0.058 | TO-92 | 3 | BULK |
| KSC1008CYTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008GTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008RBU | Full Production | \$0.058 | TO-92 | 3 | BULK |
| KSC1008GBU | Full Production | \$0.058 | TO-92 | 3 | BULK |
| KSC1008YBU | Full Production | \$0.058 | TO-92 | 3 | BULK |

| | | | | | |
|-------------|-----------------|---------|-----------------------|---|-----------|
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| KSC1008COTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008YTF | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008OTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |
| KSC1008RTA | Full Production | \$0.058 | TO-92 | 3 | TAPE REEL |

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