



Micro Commercial Components



Micro Commercial Components
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**KSD471A-O
 KSD471A-Y
 KSD471A-G**

**NPN Silicon
 Transistors**

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Collector Dissipation : $I_c = 1A$
- Collector Current : $P_c = 800mW$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|-----------------------------|-------------|------|
| V_{CEO} | Collector-Emitter Voltage | 30 | V |
| V_{CBO} | Collector-Base Voltage | 40 | V |
| V_{EBO} | Emitter-Base Voltage | 5.0 | V |
| I_c | Collector Current | 1 | A |
| P_c | Collector power dissipation | 800 | mW |
| T_j | Junction Temperature | 150 | °C |
| T_{STG} | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|--------|-----------|-----|-----|-----|-------|
|--------|-----------|-----|-----|-----|-------|

OFF CHARACTERISTICS

| | | | | | |
|---------------|---|-----|-----|-----|---------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_c=100\mu A, I_E=0$) | 40 | --- | --- | Vdc |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_c=10mA, I_B=0$) | 30 | --- | --- | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A, I_C=0$) | 5.0 | --- | --- | Vdc |
| I_{CBO} | Collector-Base Cutoff Current ($V_{CB}=30Vdc, I_E=0$) | --- | --- | 0.1 | μA |

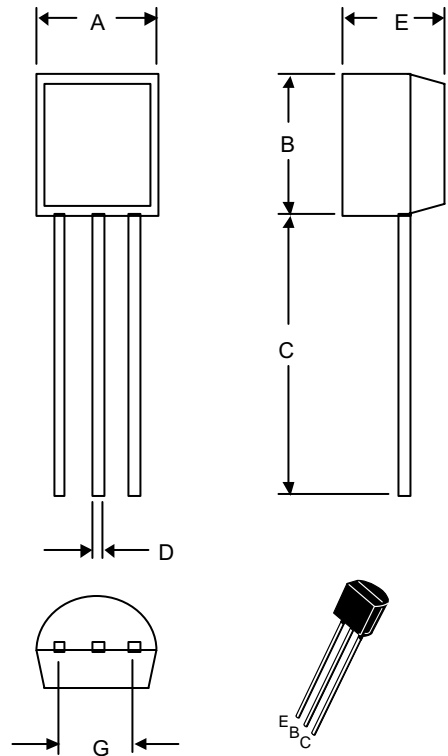
ON CHARACTERISTICS

| | | | | | |
|---------------|--|-----|-----|-----|-----|
| h_{FE} | Forward Current Transfer ratio* ($I_c=0.1A, V_{CE}=1.0Vdc$) | 70 | --- | 400 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_c=1A, I_B=0.1A$) | --- | --- | 0.5 | Vdc |
| f_T | Transition Frequency ($V_{CE}=6Vdc, I_c=10mA$) | --- | 130 | --- | MHz |
| C_{ob} | Collector Output Capacitance ($V_{CB}=6Vdc, I_E=0, f=1.0MHz$) | --- | 16 | --- | pF |

CLASSIFICATION OF h_{FE}

| Rank | O | Y | G |
|-------|--------|---------|---------|
| Range | 70-140 | 120-240 | 200-400 |

TO-92



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|-------|------|
| | INCHES | | MM | | |
| A | .170 | .190 | 4.33 | 4.83 | |
| B | .170 | .190 | 4.30 | 4.83 | |
| C | .550 | .590 | 13.97 | 14.97 | |
| D | .010 | .020 | 0.36 | 0.56 | |
| E | .130 | .160 | 3.30 | 3.96 | |
| G | .096 | .104 | 2.44 | 2.64 | |

KSD471A

Typical Characteristics

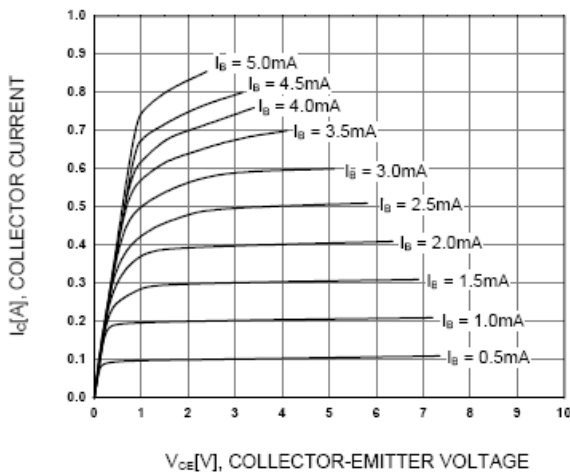


Figure 1. Static Characteristic

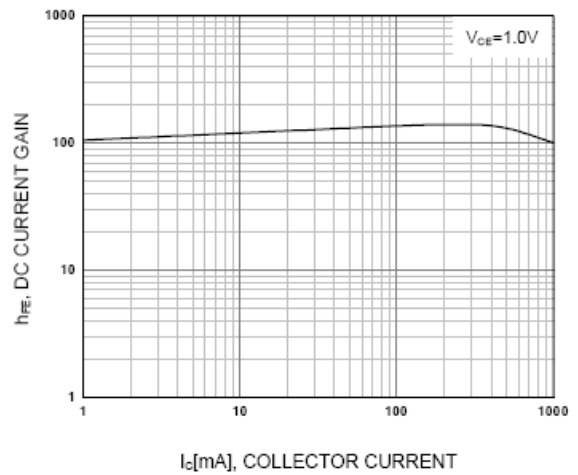


Figure 2. DC current Gain

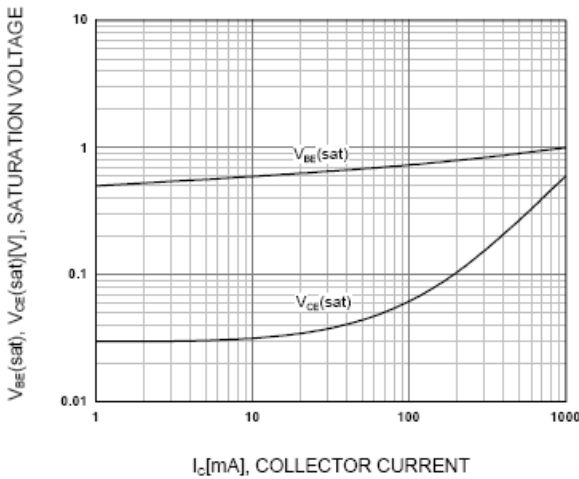


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

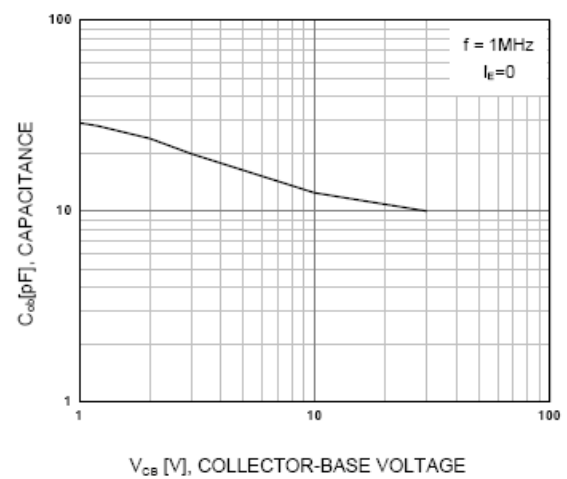


Figure 4. Collector Output Capacitance

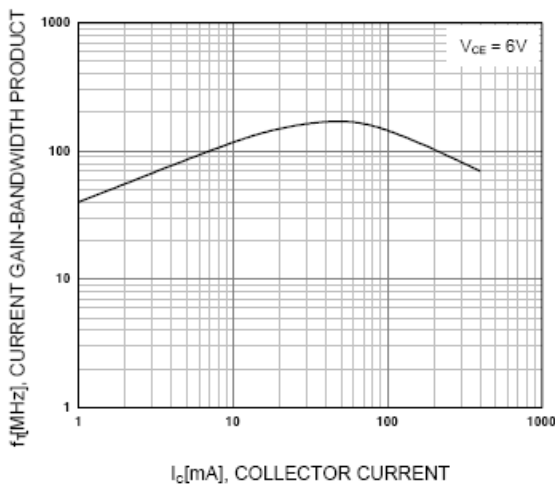


Figure 5. Current Gain Bandwidth Product

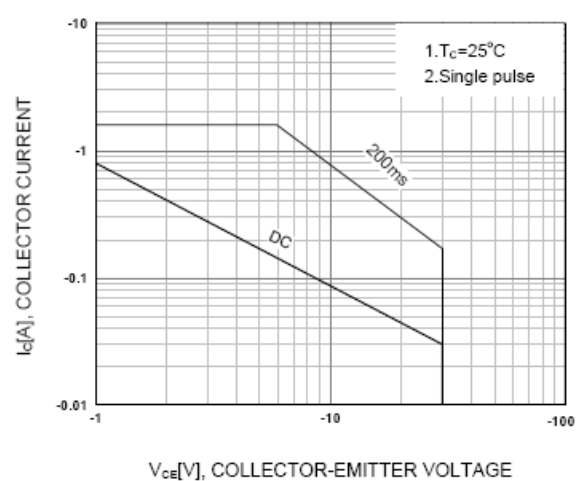


Figure 6. Safe Operating Area



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Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-AP | Ammo Packing: 2Kpcs/Ammo Box |
| Part Number-BP | Bulk: 100Kpcs/Carton |

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