



Micro Commercial Components



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2SD1899-M
2SD1899-L
2SD1899-K

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/Rohs Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Capable of 1.0Watts of Power Dissipation.
- Collector-current 3.0A
- Collector-base Voltage 60V
- Operating and storage junction temperature range:-55°C to +150°C
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

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

OFF CHARACTERISTICS

| | | | | |
|---------------|---|----|----|---------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=1.0mA, I_B=0$) | 60 | | Vdc |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=100\mu A, I_E=0$) | 60 | | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A, I_C=0$) | 7 | | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=60Vdc, I_E=0A$) | | 10 | μA |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=7.0Vdc, I_C=0A$) | | 10 | μA |

ON CHARACTERISTICS

| | | | | |
|---------------|---|-----|------|-----|
| $h_{FE(1)}$ | DC Current Gain* ($I_C=600mA, V_{CE}=2.0Vdc$) | 100 | 400 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=1500mA, I_B=150mA$) | | 0.25 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage ($I_C=1500mA, I_B=150mA$) | | 1.2 | Vdc |

SMALL-SIGNAL CHARACTERISTICS

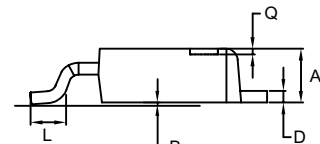
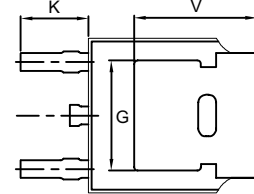
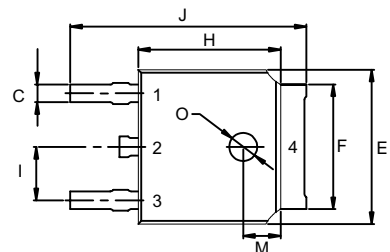
| | | | | |
|----------|---|----------|--|-----|
| f_T | Transistor Frequency ($I_C=1500mA, V_{CE}=5Vdc$) | 120(Typ) | | MHz |
| C_{OB} | Collector Output Capacitance ($V_{CB}=10Vdc, I_E=0, f=1MHz$) | 30(typ) | | pF |

CLASSIFICATION OF $h_{FE(1)}$

| Rank | M | L | K |
|-------|---------|---------|---------|
| Range | 100-200 | 160-320 | 200-400 |

NPN Silicon Epitaxial Transistor

DKAK

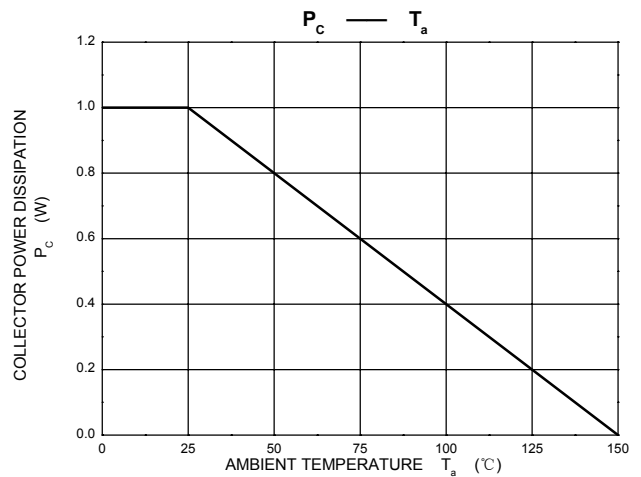
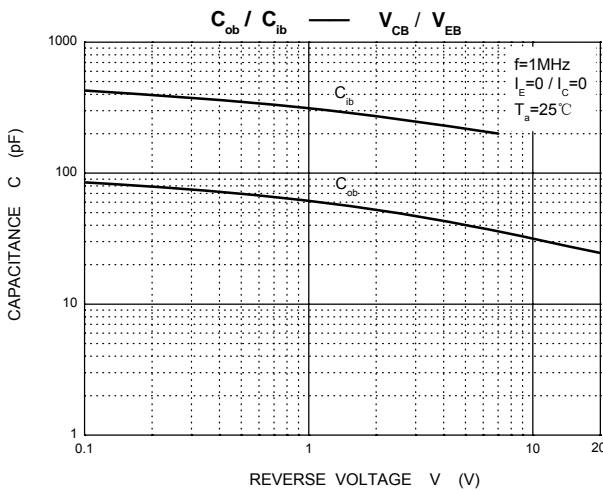
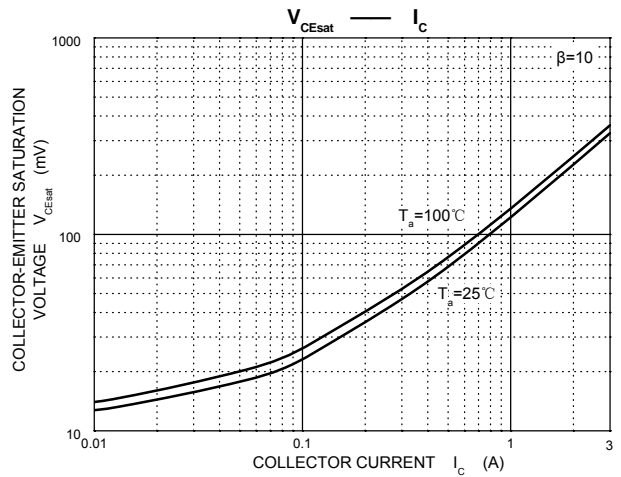
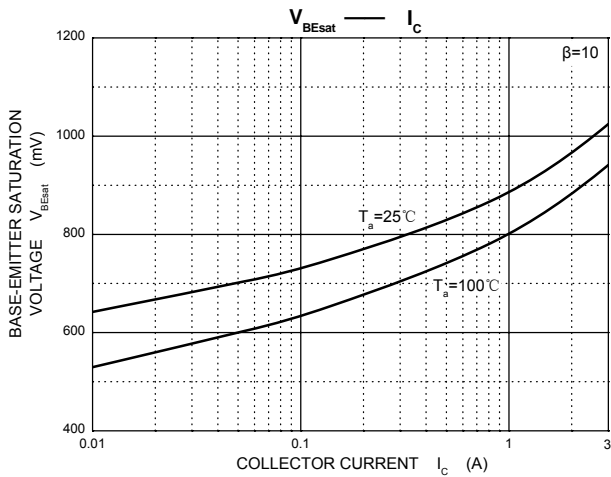
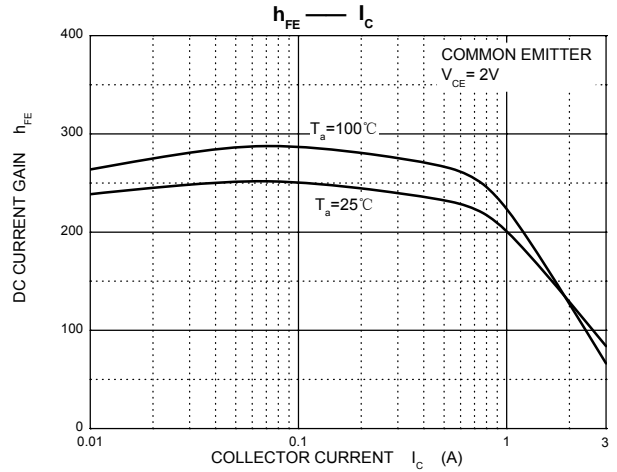
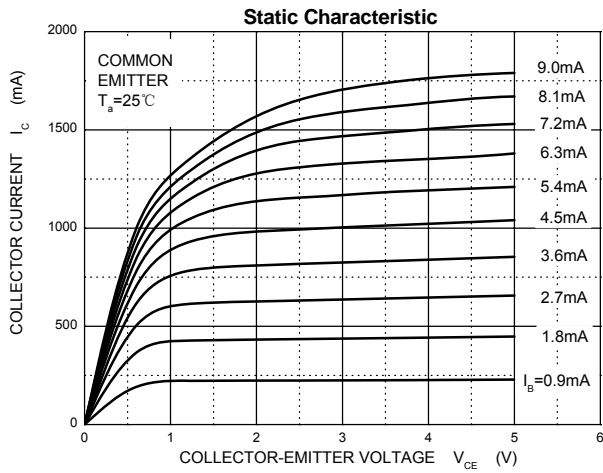


PIN 1. BASE
 PIN 2.4. COLLECTOR
 PIN 3. EMITTER

DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.087 | 0.094 | 2.20 | 2.40 | |
| B | 0.000 | 0.005 | 0.00 | 0.13 | |
| C | 0.026 | 0.034 | 0.66 | 0.86 | |
| D | 0.018 | 0.023 | 0.46 | 0.58 | |
| E | 0.256 | 0.264 | 6.50 | 6.70 | |
| F | 0.201 | 0.215 | 5.10 | 5.46 | |
| G | 0.190 | | 4.83 | | |
| H | 0.236 | 0.244 | 6.00 | 6.20 | |
| I | 0.086 | 0.094 | 2.18 | 2.39 | |
| J | 0.386 | 0.409 | 9.80 | 10.40 | |
| K | 0.114 | | 2.90 | | |
| L | 0.055 | 0.067 | 1.40 | 1.70 | |
| M | 0.063 | | 1.60 | | |
| O | 0.043 | 0.051 | 1.10 | 1.30 | |
| Q | 0.000 | 0.012 | 0.00 | 0.30 | |
| V | 0.211 | | 5.35 | | |

Typical Characteristics





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Ordering Information :

| Device | Packing |
|----------------|-------------------------|
| Part Number-TP | Tape&Reel: 2.5Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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