

PNP SILICON SWITCHING TRANSISTOR

Qualified per MIL-PRF-19500/348

Devices

2N3467
2N3467L

2N3468
2N3468L

Qualified Level

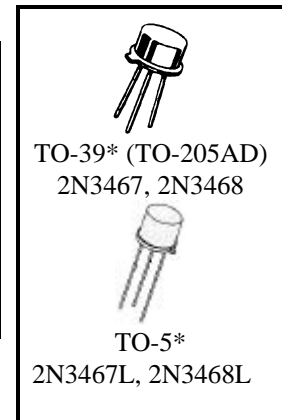
JAN
JANTX
JANTXV

MAXIMUM RATINGS

| Ratings | Symbol | 2N3467 2N3467L | 2N3468 2N3468L | Unit |
|--|-------------------|-------------------------------------|-------------------|--------------------|
| Collector-Emitter Voltage | V_{CEO} | 40 | 50 | Vdc |
| Collector-Base Voltage | V_{CBO} | 40 | 50 | Vdc |
| Emitter-Base Voltage | V_{EBO} | 5.0 | | Vdc |
| Collector Current | I_C | 1.0 | | Adc |
| Total Power Dissipation | P_T | @ $T_A = +25^{\circ}\text{C}^{(1)}$ | | W |
| | | @ $T_C = +25^{\circ}\text{C}^{(2)}$ | | W |
| Operating & Storage Junction Temperature Range | T_{op}, T_{stg} | -55 to +175 | | $^{\circ}\text{C}$ |

1) Derate linearly 5.71 mW/ $^{\circ}\text{C}$ for $T_A > +25^{\circ}\text{C}$

2) Derate linearly 28.6 mW/ $^{\circ}\text{C}$ for $T_C > +25^{\circ}\text{C}$



*See appendix A for package outline

ELECTRICAL CHARACTERISTICS

| Characteristics | Symbol | Min. | Max. | Unit |
|-----------------|--------|------|------|------|
|-----------------|--------|------|------|------|

OFF CHARACTERISTICS

| | | | | |
|---|------------------------|---------------|----------|-------------------------|
| Collector-Emitter Breakdown Current $I_C = 10 \text{ mAdc}$ | 2N3467, L 2N3468, L | $V_{(BR)CBO}$ | 40 50 | Vdc |
| Emitter-Base Breakdown Current $I_E = 10 \mu\text{Adc}$ | | $V_{(BR)EBO}$ | 5.0 | Vdc |
| Collector-Emitter Breakdown Current $I_C = 10 \text{ mAdc}$ | 2N3467, L 2N3468, L | $V_{(BR)CEO}$ | 40 50 | Vdc |
| Collector-Base Cutoff Current $V_{CB} = 30 \text{ Vdc}$ | | I_{CBO} | | 100 ηAdc |
| Collector-Emitter Cutoff Current $V_{EB} = 3.0 \text{ Vdc}, V_{CE} = 30$ | | I_{CEX} | | 100 nAdc |

2N3467, L, 2N3468, L, JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

| Characteristics | Symbol | Min. | Max. | Unit |
|---|---------------|------|--------------------|------|
| ON CHARACTERISTICS (3) | | | | |
| Forward-Current Transfer Ratio $I_C = 150 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ 2N3467, L 2N3468, L | h_{FE} | 40 | | |
| $I_C = 500 \text{ mAdc}, V_{CE} = 1.0 \text{ Vdc}$ 2N3467, L 2N3468, L | | 25 | 120 | |
| $I_C = 1.0 \text{ Adc}, V_{CE} = 5.0 \text{ Vdc}$ 2N3467, L 2N3468, L | | 25 | 75 | |
| Collector-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}, I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$ $I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$ | $V_{CE(sat)}$ | | 0.35 0.6 1.2 | Vdc |
| Base-Emitter Saturation Voltage $I_C = 150 \text{ mAdc}, I_B = 15 \text{ mAdc}$ $I_C = 500 \text{ mAdc}, I_B = 50 \text{ mAdc}$ $I_C = 1.0 \text{ Adc}, I_B = 100 \text{ mAdc}$ | $V_{BE(sat)}$ | 0.8 | 1.0 1.2 1.6 | Vdc |

DYNAMIC CHARACTERISTICS

| | | | | |
|--|-----------|------------|------------|-----|
| Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$ | C_{obo} | | 25 | pF |
| Extrapolated Unity Gain Frequency $I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 100\text{NHz}$ 2N3467, L 2N3468, L | f_t | 175 150 | 500 500 | MHz |
| Input Capacitance $V_{EB} = 0.5 \text{ Vdc}, I_C = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$ | C_{ibo} | | 100 | pF |

SWITCHING CHARACTERISTICS

| | | | | | |
|--------------|--|-------|--|----|----|
| Delay Time | $I_C = 500 \text{ mAdc}, I_{B1} = 50 \text{ mAdc}, V_{EB} = 2$ | t_d | | 10 | ns |
| Rise Time | $I_C = 500 \text{ mAdc}, I_{B1} = 50 \text{ mAdc}, V_{EB} = 2$ | t_r | | 30 | ns |
| Storage Time | $I_C = 500 \text{ mAdc}, I_{B1} = I_{B2} = 50 \text{ mAdc}$ | t_s | | 60 | ns |
| Fall Time | $I_C = 100 \text{ mAdc}, I_{B1} = I_{B2} = 50 \text{ mAdc}$ | t_f | | 30 | ns |