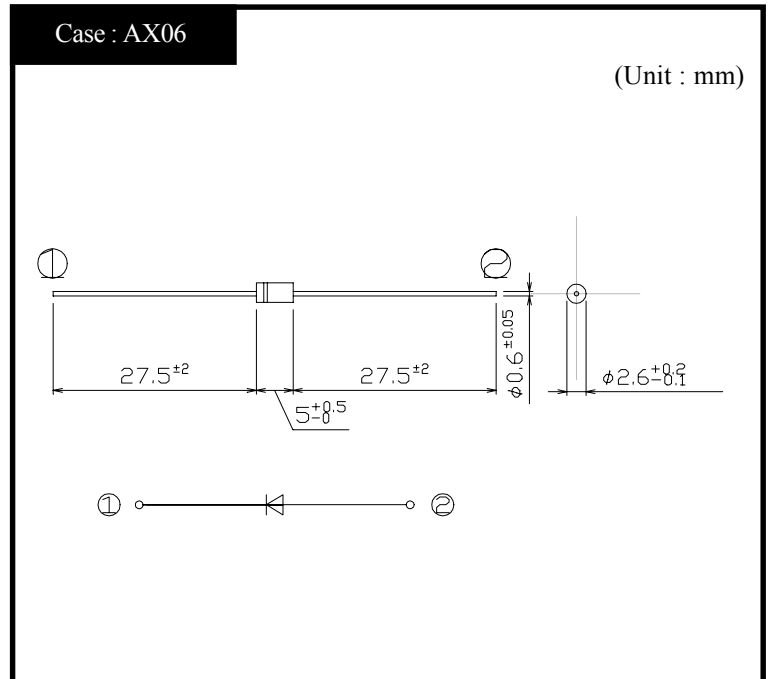


SHINDENGEN

Sidac

K1V(A)11

OUTLINE DIMENSIONS



RATINGS

● Absolute Maximum Ratings

| Item | Symbol | Conditions | Ratings | Unit |
|---|-----------|--|---------|------------------|
| Storage Temperature | T_{stg} | | -40~125 | °C |
| Operating Junction Temperature | T_j | | 125 | °C |
| Maximum Off-state Voltage | V_{DRM} | | 90 | V |
| RMS On-state Current | I_T | $T_l = 98^\circ\text{C}$, 50Hz sine wave ($\theta = 180^\circ$) | 1 | A |
| Surge On-state Current | I_{TSM} | $T_j = 25^\circ\text{C}$, 50Hz sine wave ($\theta = 180^\circ$), non-repetitive 1-cycle peak value | 16 | A |
| Pulse On-state Current | I_{TRM} | $T_a = 25^\circ\text{C}$, pulse width $t_o = 10 \mu\text{s}$, sine wave, repetitive peak value $f = 1 \text{ kHz}$ | 15 | A |
| | | $T_a = 25^\circ\text{C}$, pulse width $t_o = 10 \mu\text{s}$, sine wave, repetitive peak value $f = 60 \text{ Hz}$ | 60 | |
| Critical Rate of Rise of On-state Current | di_T/dt | | 50 | A/ μs |

● Electrical Characteristics ($T_l=25^\circ\text{C}$)

| Item | Symbol | Conditions | Ratings | Unit |
|----------------------|---------------|----------------------------|---------|---------------|
| Breakover Voltage | V_{BO} | $I_B = 0$, 50Hz sine wave | 104~118 | V |
| Off-state Current | I_{DRM} | $V_D = V_{DRM}$ | Max 10 | μA |
| Breakover Current | I_{BO} | | Max 0.5 | mA |
| Holding Current | I_H | | TYP 50 | mA |
| On-state Voltage | V_T | $I_T = 1\text{A}$ | Max 1.6 | V |
| Switching Resistance | R_S | | Min 0.1 | k Ω |
| Thermal Resistance | θ_{jl} | Junction to lead | Max 20 | °C/W |

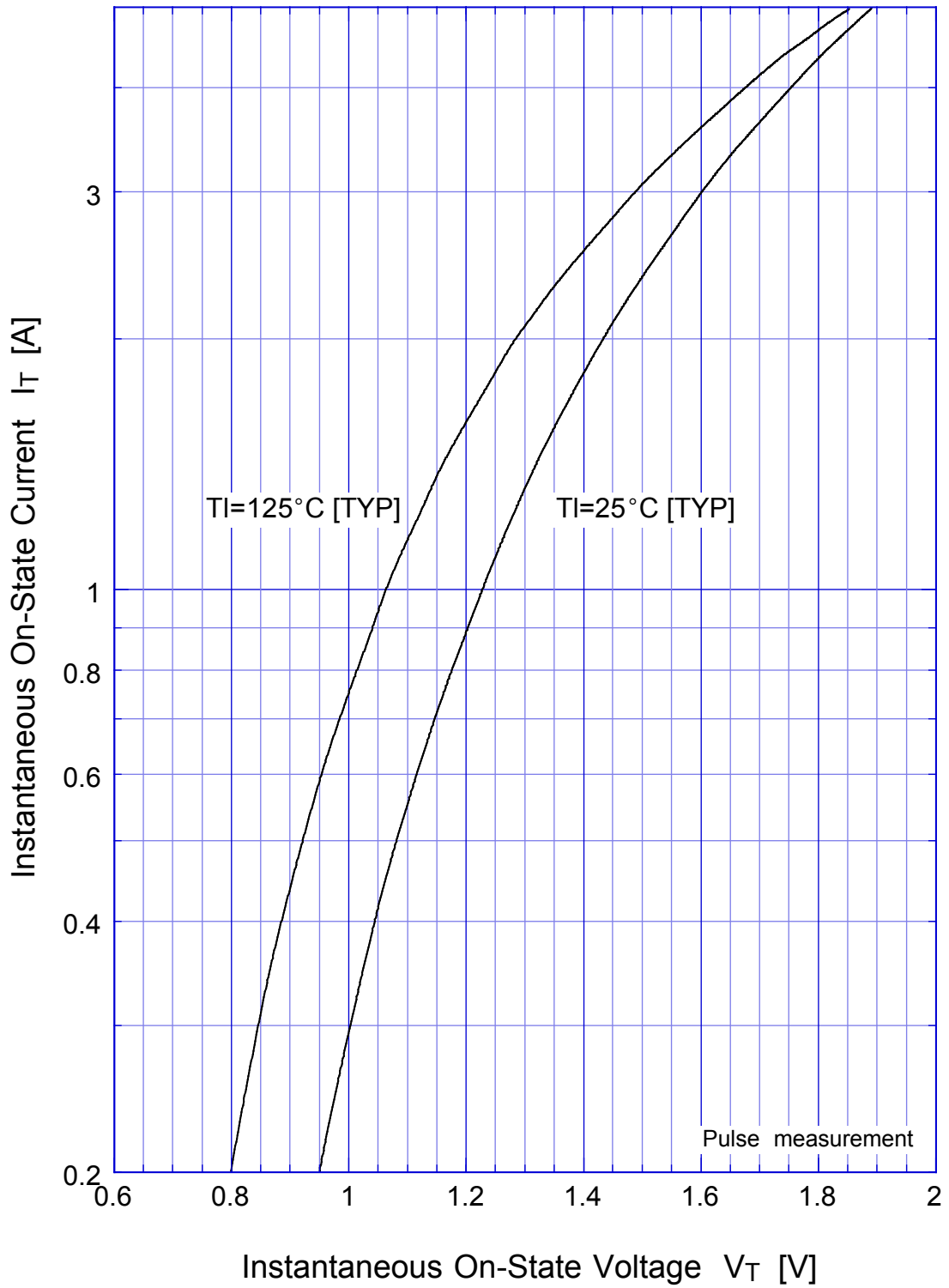
● Standard Design with P.C.B.

| Item | Symbol | Conditions | Standard | Unit |
|----------------------|--------|---|----------|------|
| RMS On-state Current | I_T | Assembled in P.C.B., $T_a = 25^\circ\text{C}$, soldering land 3mm ϕ | 0.6 | A |

K1V(A)10

K1V(A)11

K1V(A)12 Typical On-State Voltage

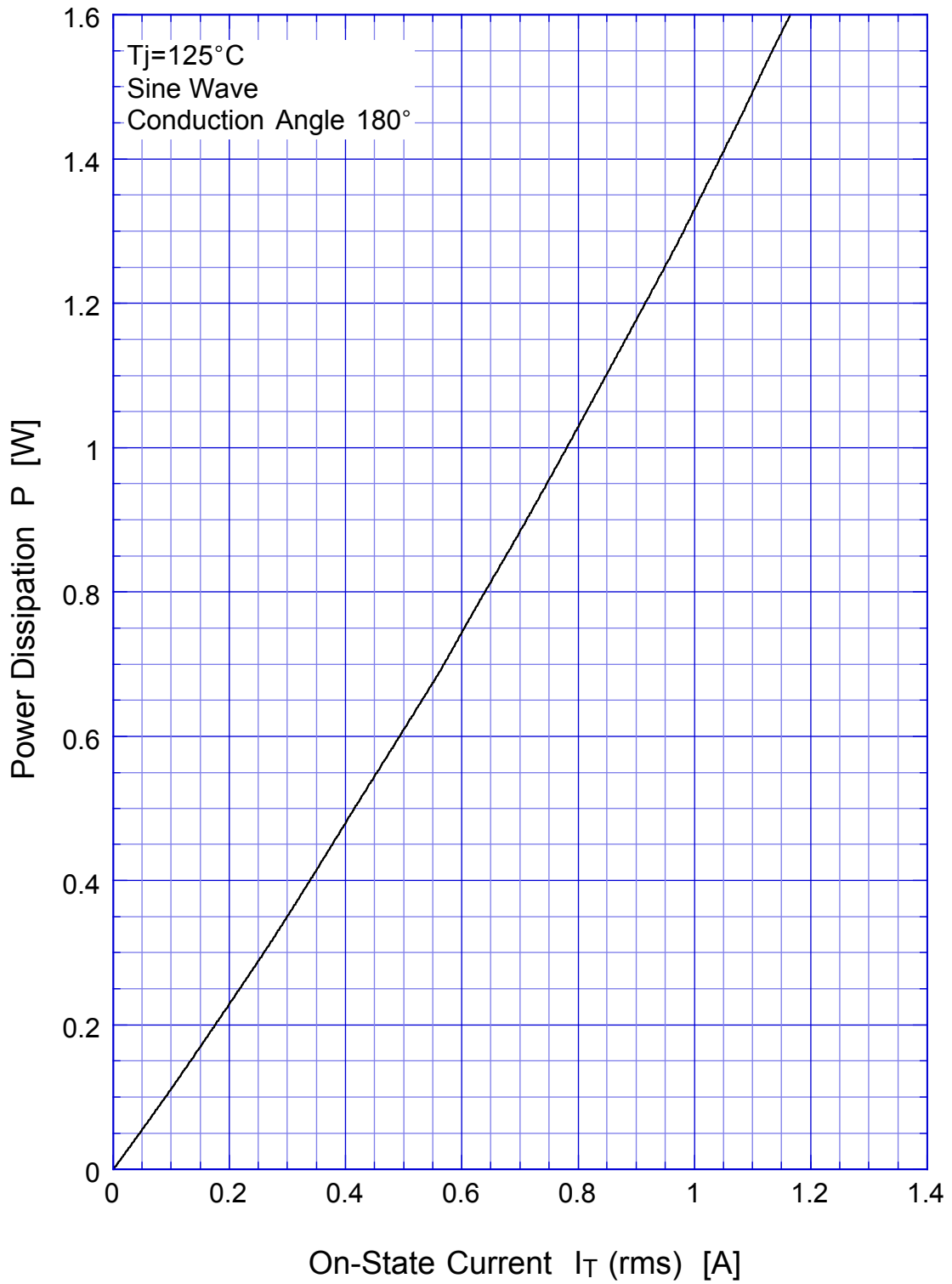


K1V(A)10

K1V(A)11

K1V(A)12

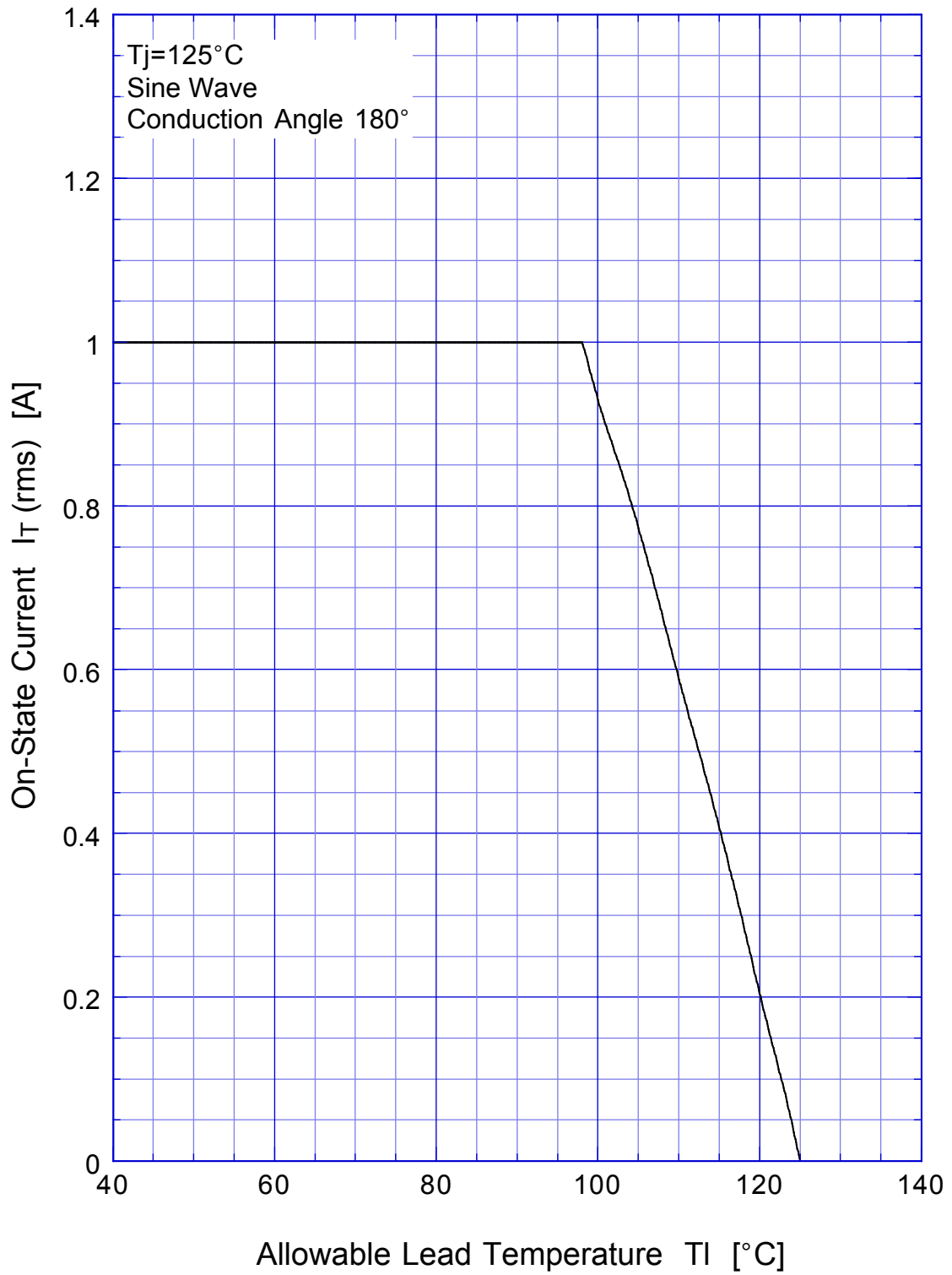
Power Dissipation



K1V(A)10

K1V(A)11

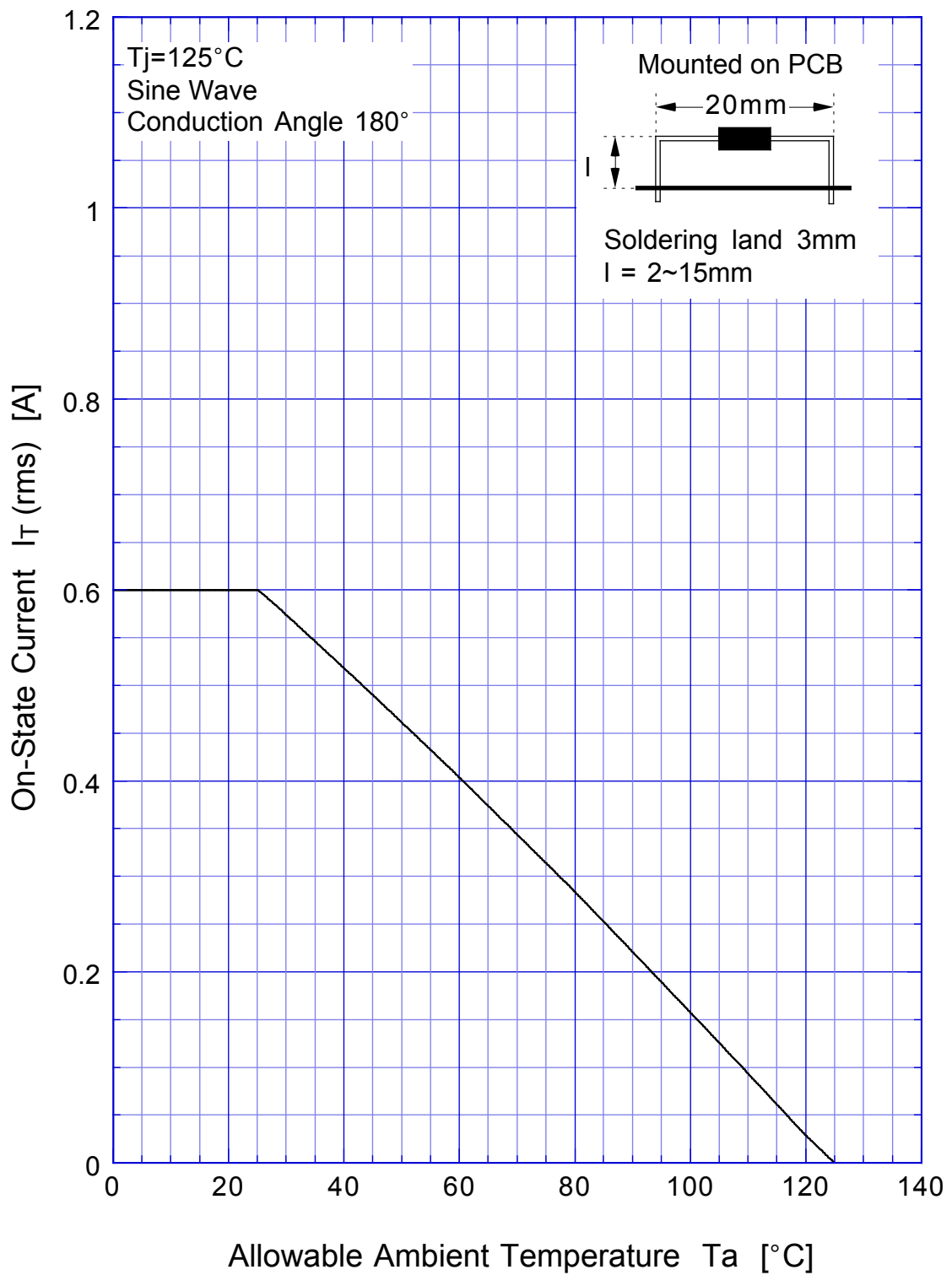
K1V(A)12 Maximum Lead Temperature



K1V(A)10

K1V(A)11

K1V(A)12 Maximum Ambient Temperature

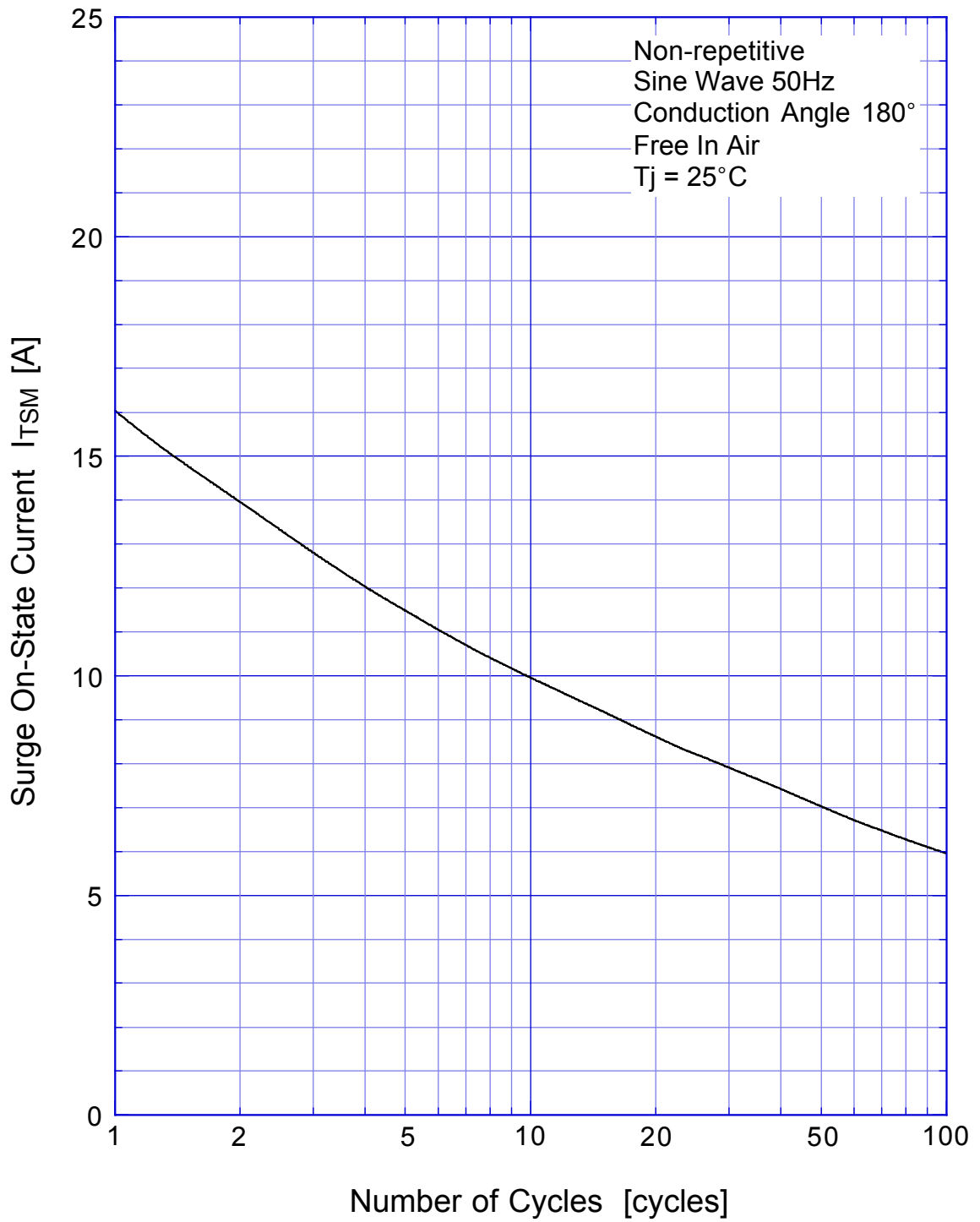


K1V(A)10

K1V(A)11

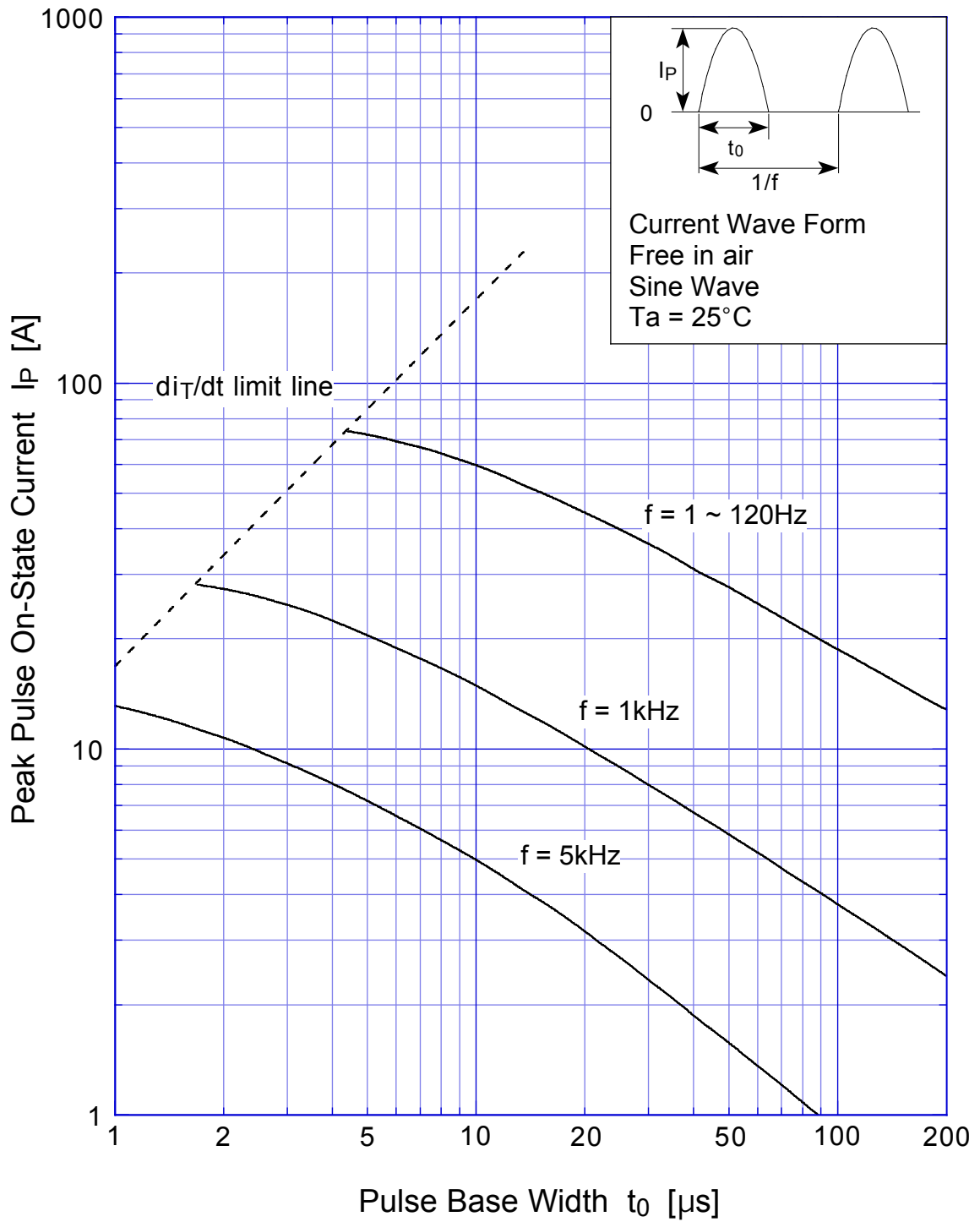
K1V(A)12

Maximum Surge On-State Current



K1V(A)10
K1V(A)11
K1V(A)12

Pulse On-State Current Rating

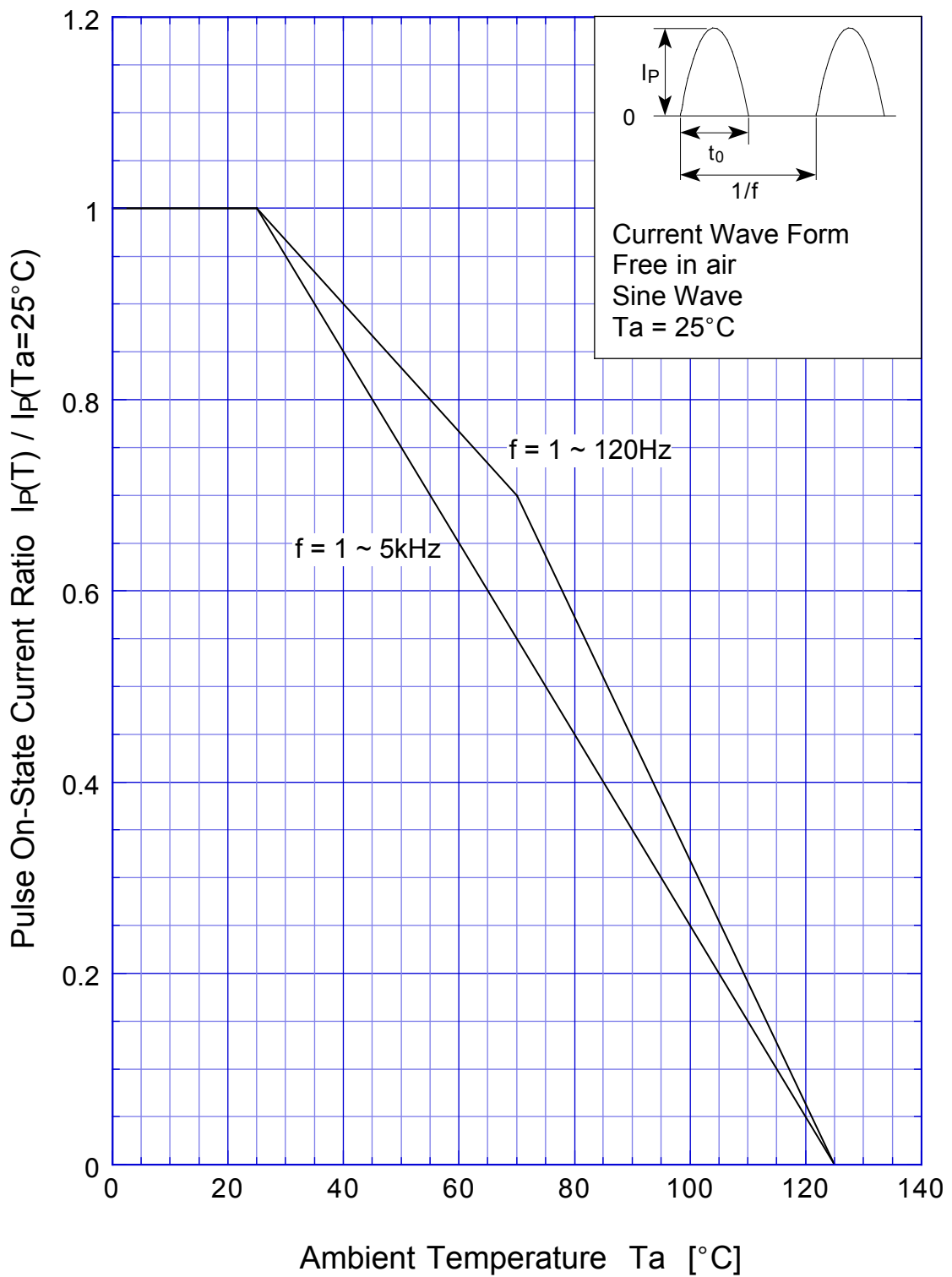


K1V(A)10

K1V(A)11

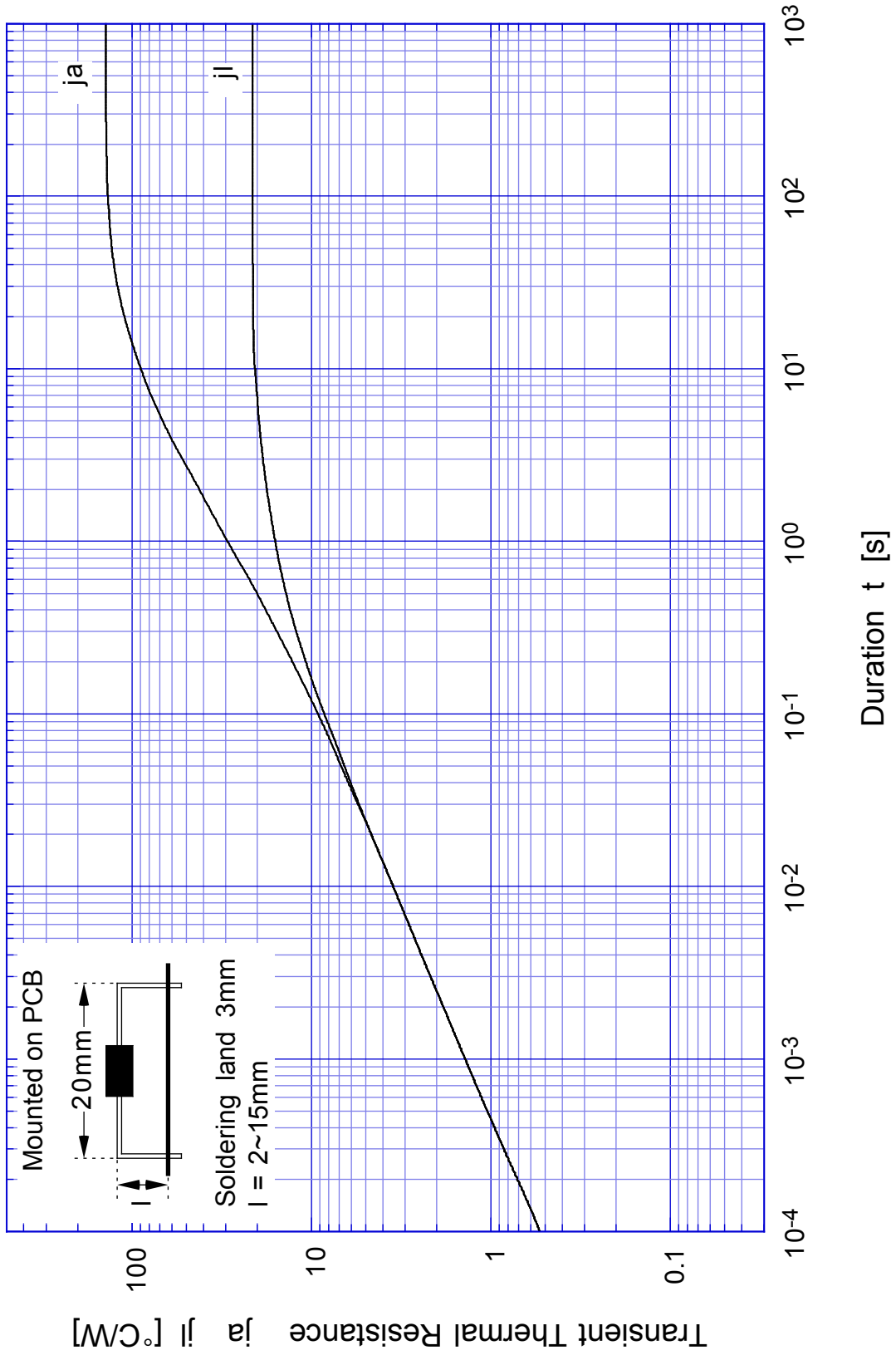
K1V(A)12

Pulse On-State Current Derating



K1V(A)10
K1V(A)11
K1V(A)12

Transient Thermal Resistance



K1V(A)10

K1V(A)11

K1V(A)12 Breakover Voltage - Junction Temperature

