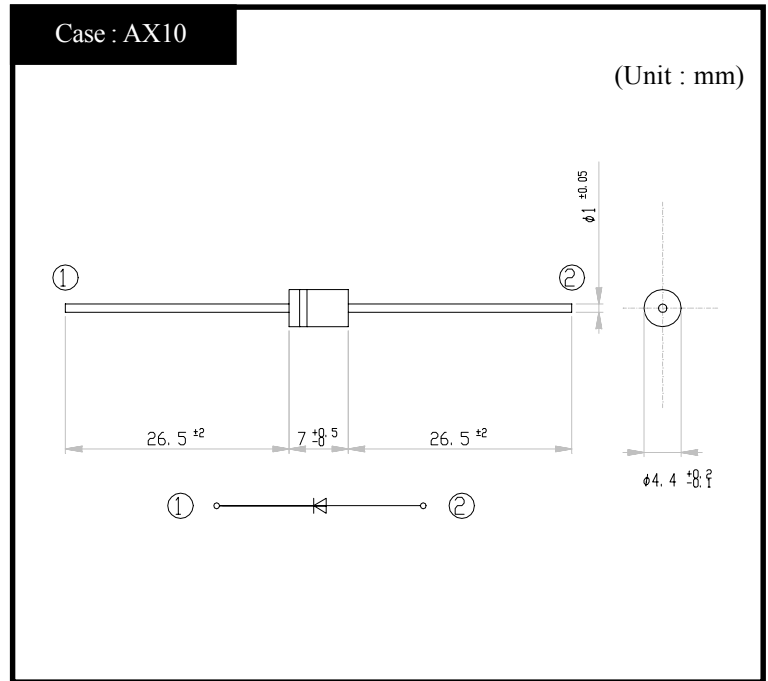


SHINDENGEN

Sidac

K1V10

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 | $T_l = 112^{\circ}C$, 50Hz sine wave ($\theta = 180^{\circ}$) | 1 | A |
| Surge On-state Current | I_{TSM} | $T_j = 25^{\circ}C$, 50Hz sine wave ($\theta = 180^{\circ}$), non-repetitive 1-cycle peak value | 20 | A |
| Pulse On-state Current | I_{TRM} | $T_a = 25^{\circ}C$, pulse width $t_o = 10 \mu s$, sine wave, repetitive peak value $f = 1 kHz$ | 25 | A |
| | | $T_a = 25^{\circ}C$, pulse width $t_o = 10 \mu s$, sine wave, repetitive peak value $f = 60 Hz$ | 80 | |
| Critical Rate of Rise of On-state Current | di_T/dt | | 80 | A/ μs |

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

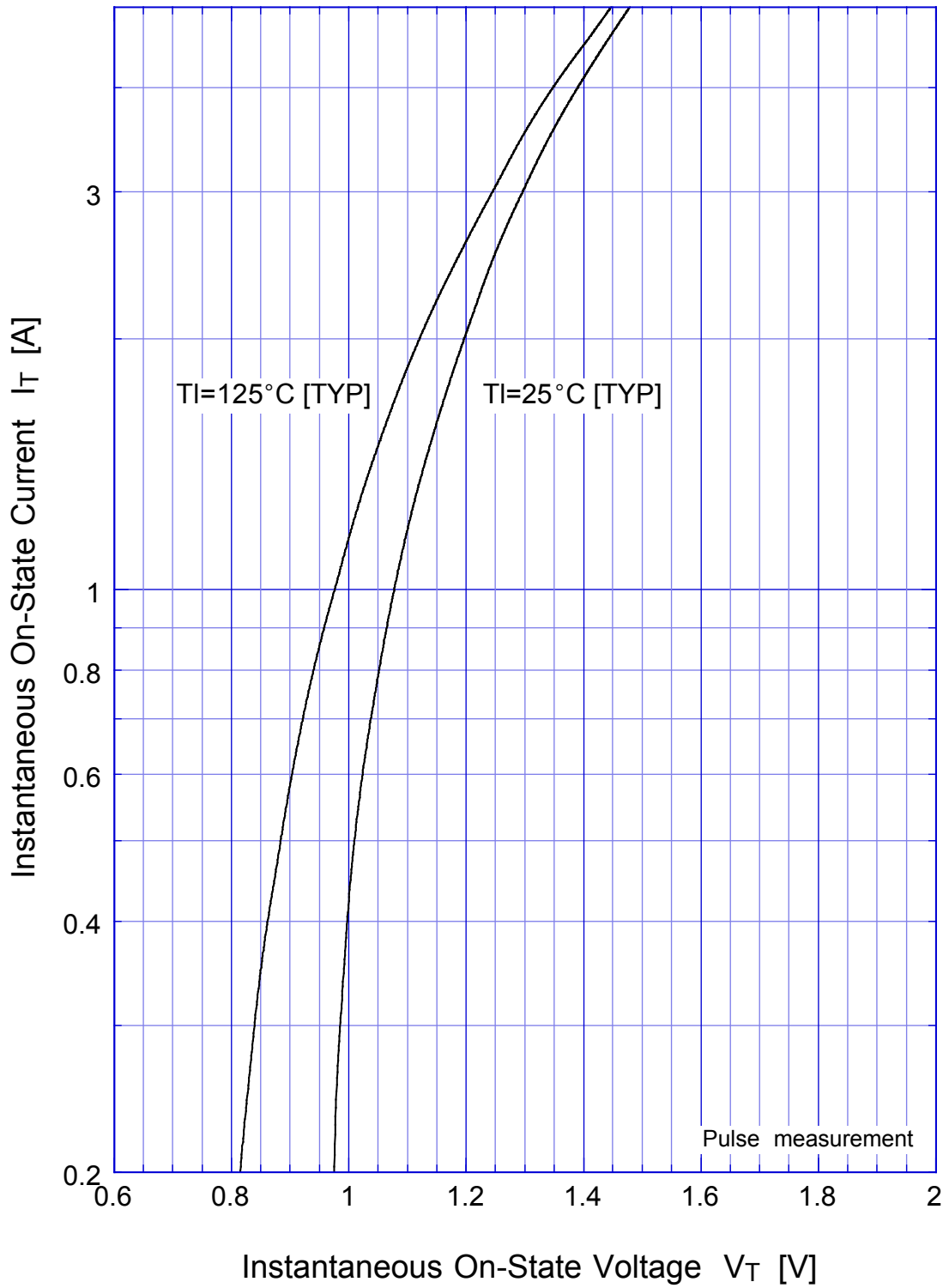
| Item | Symbol | Conditions | Ratings | Unit |
|----------------------|---------------|----------------------------|---------|------------|
| Breakover Voltage | V_{BO} | $I_B = 0$, 50Hz sine wave | 95~113 | V |
| Off-state Current | I_{DRM} | $V_D = V_{DRM}$ | Max 10 | μA |
| Breakover Current | I_{BO} | | Max 0.5 | mA |
| Holding Current | I_H | | TYP 50 | mA |
| On-state Voltage | V_T | $I_T = 1A$ | Max 1.5 | V |
| Switching Resistance | R_S | | Min 0.1 | k Ω |
| Thermal Resistance | θ_{jl} | Junction to lead | Max 15 | °C/W |

● Standard Design with P.C.B.

| Item | Symbol | Conditions | Standard | Unit |
|----------------------|--------|--|----------|------|
| RMS On-state Current | I_T | Assembled in P.C.B., $T_a = 25^{\circ}C$, soldering land 3mm ϕ | 1.2 | A |

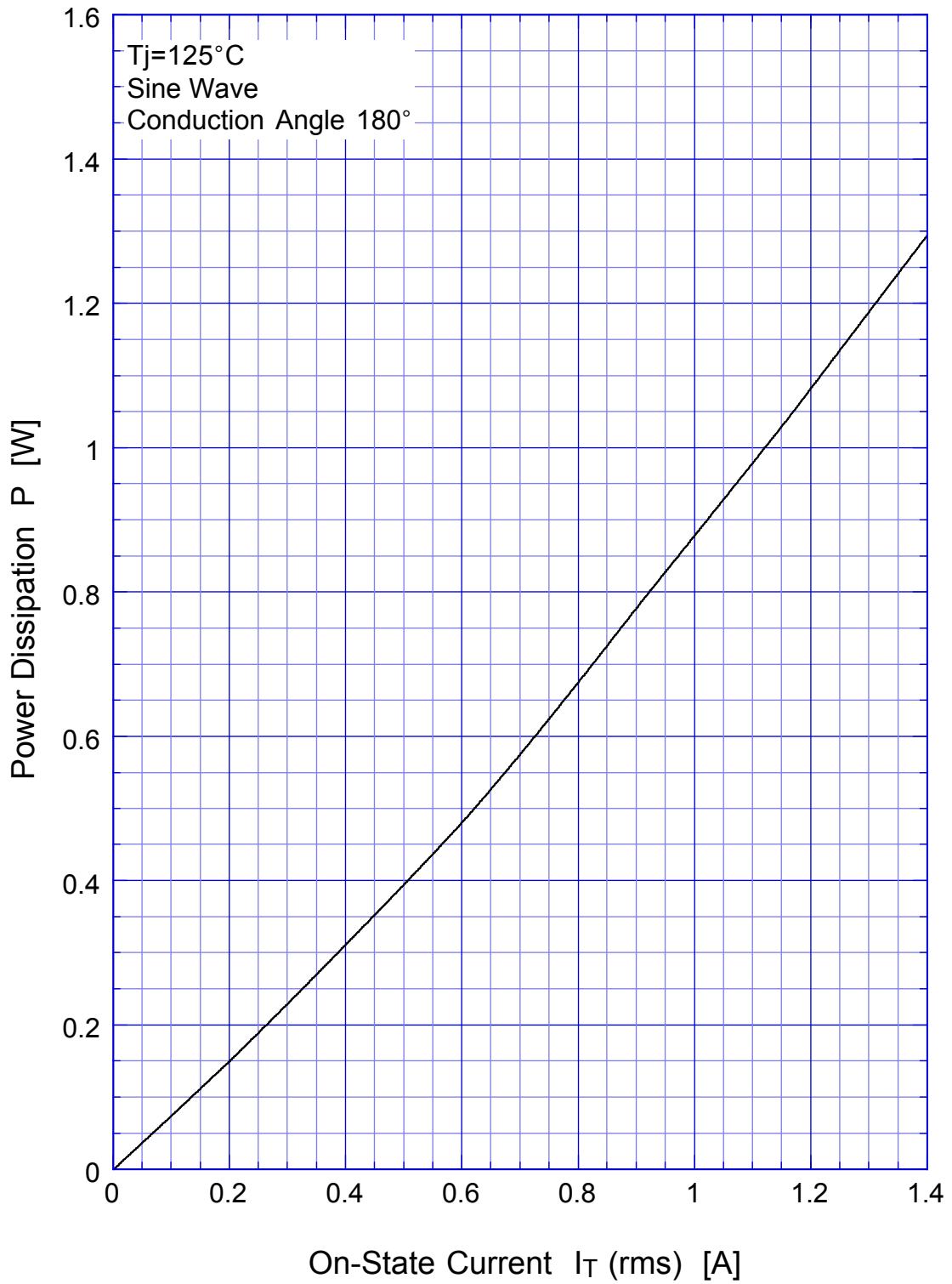
K1V10
K1V11
K1V12

Typical On-State Voltage



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Power Dissipation

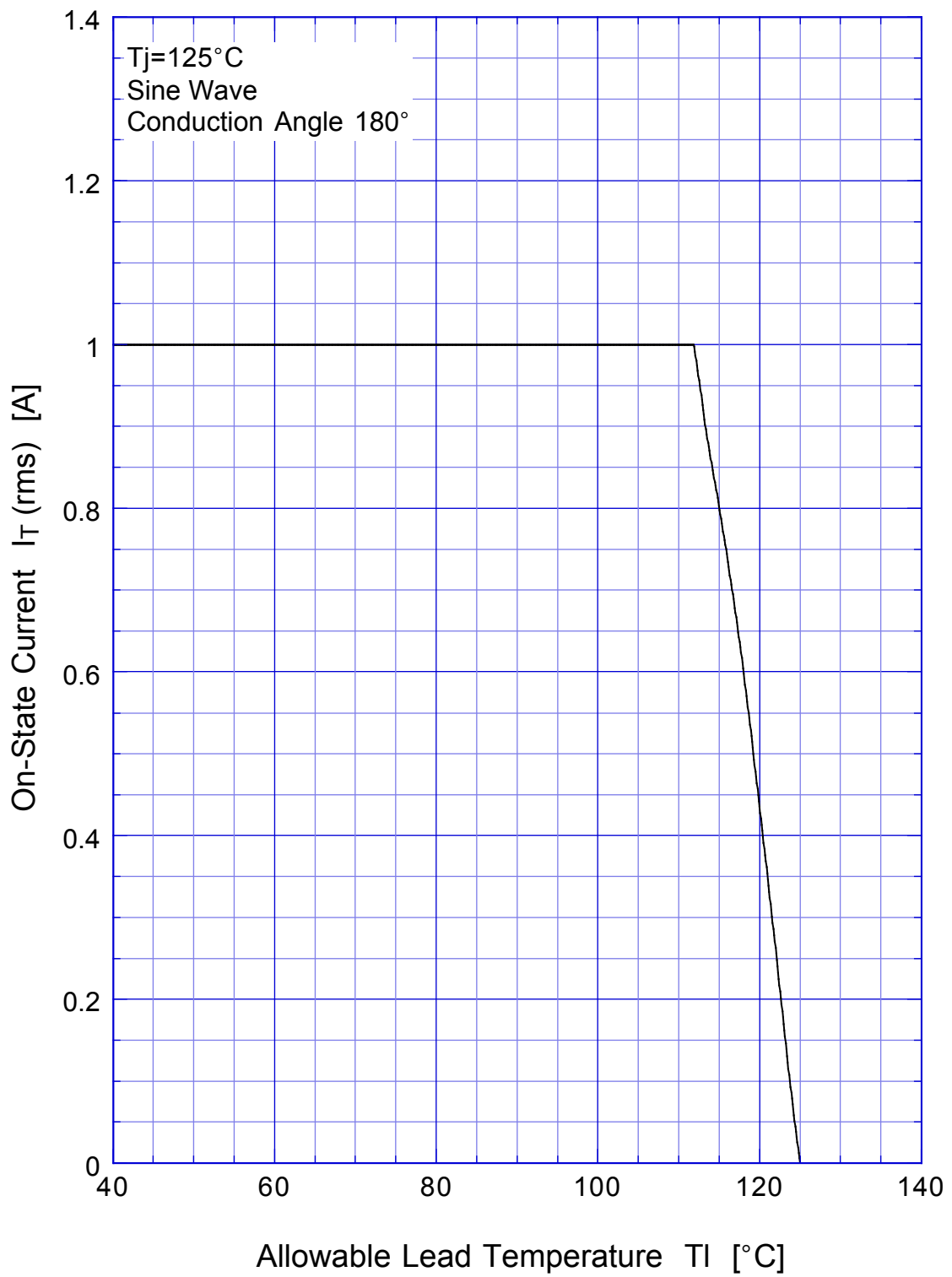


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Maximum Lead Temperature

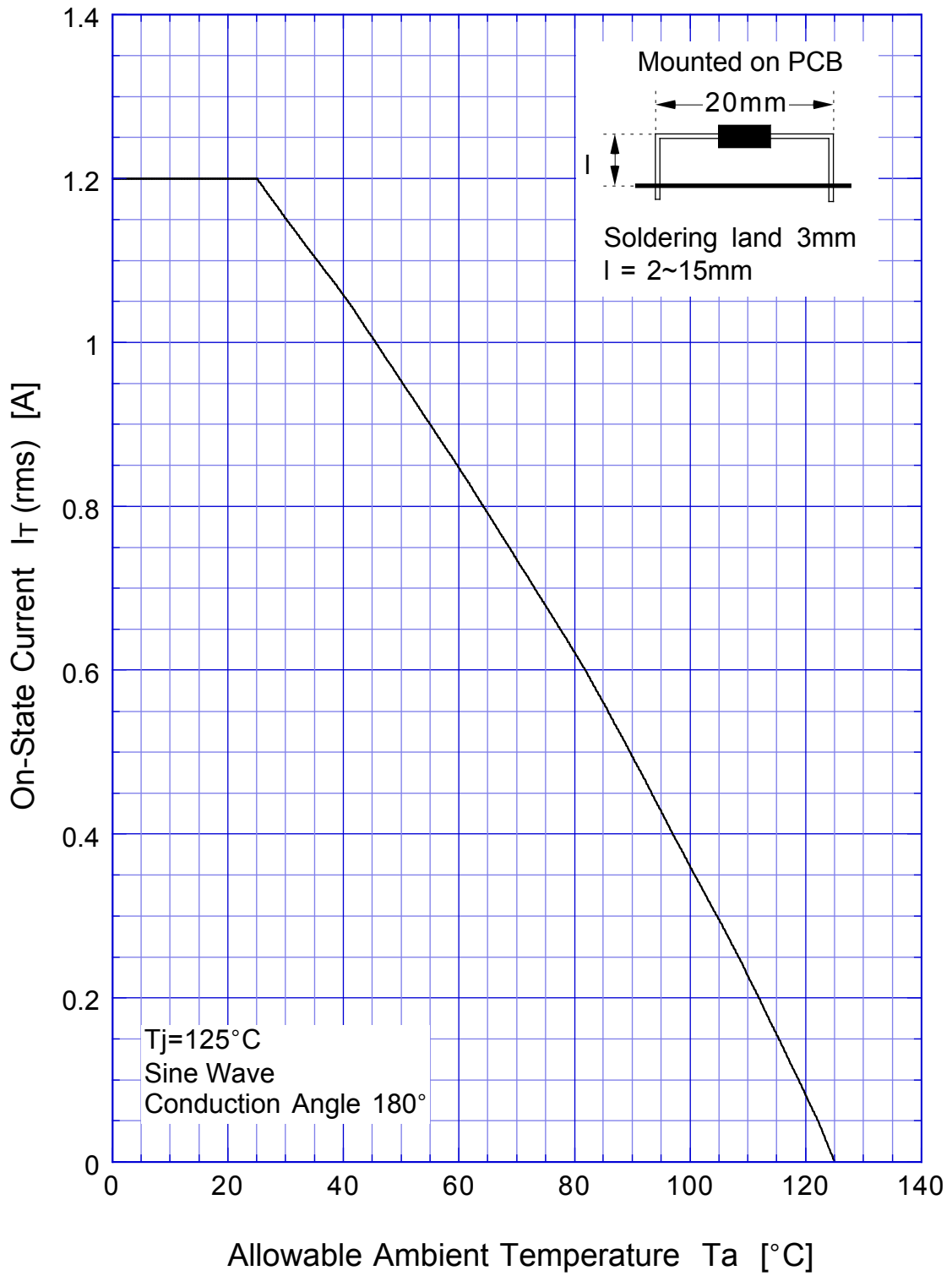


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K1V11

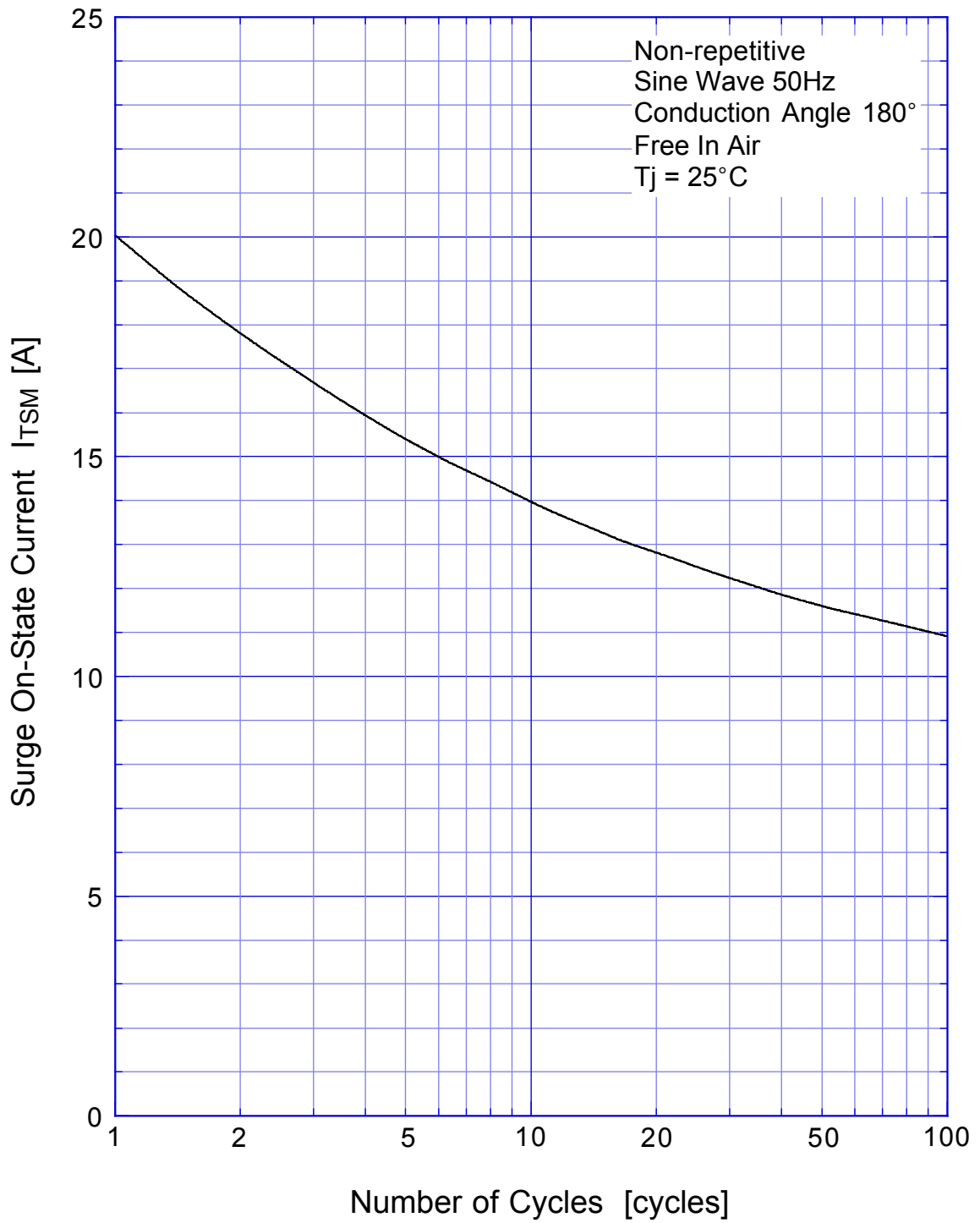
K1V12

Maximum Ambient Temperature



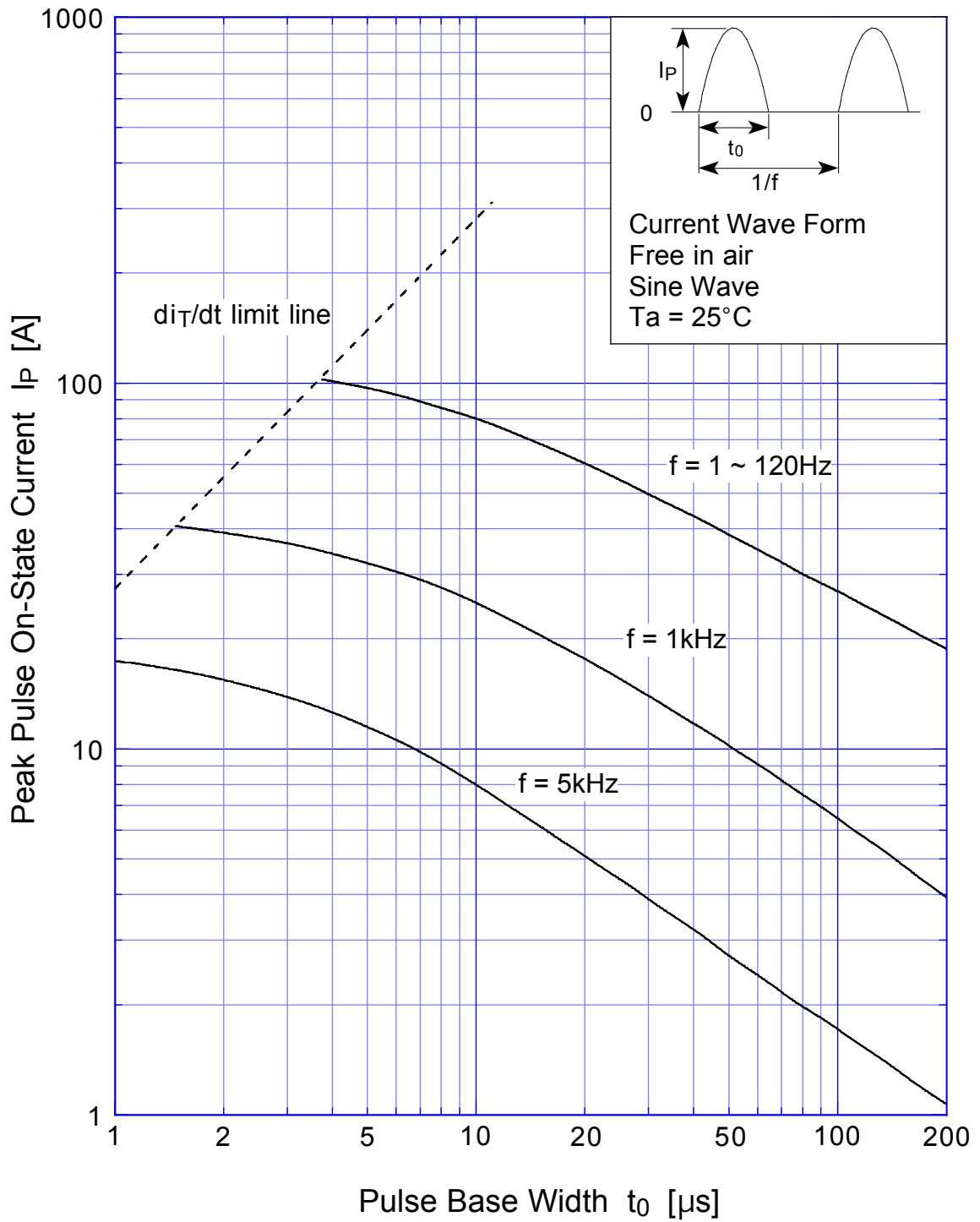
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Maximum Surge On-State Current



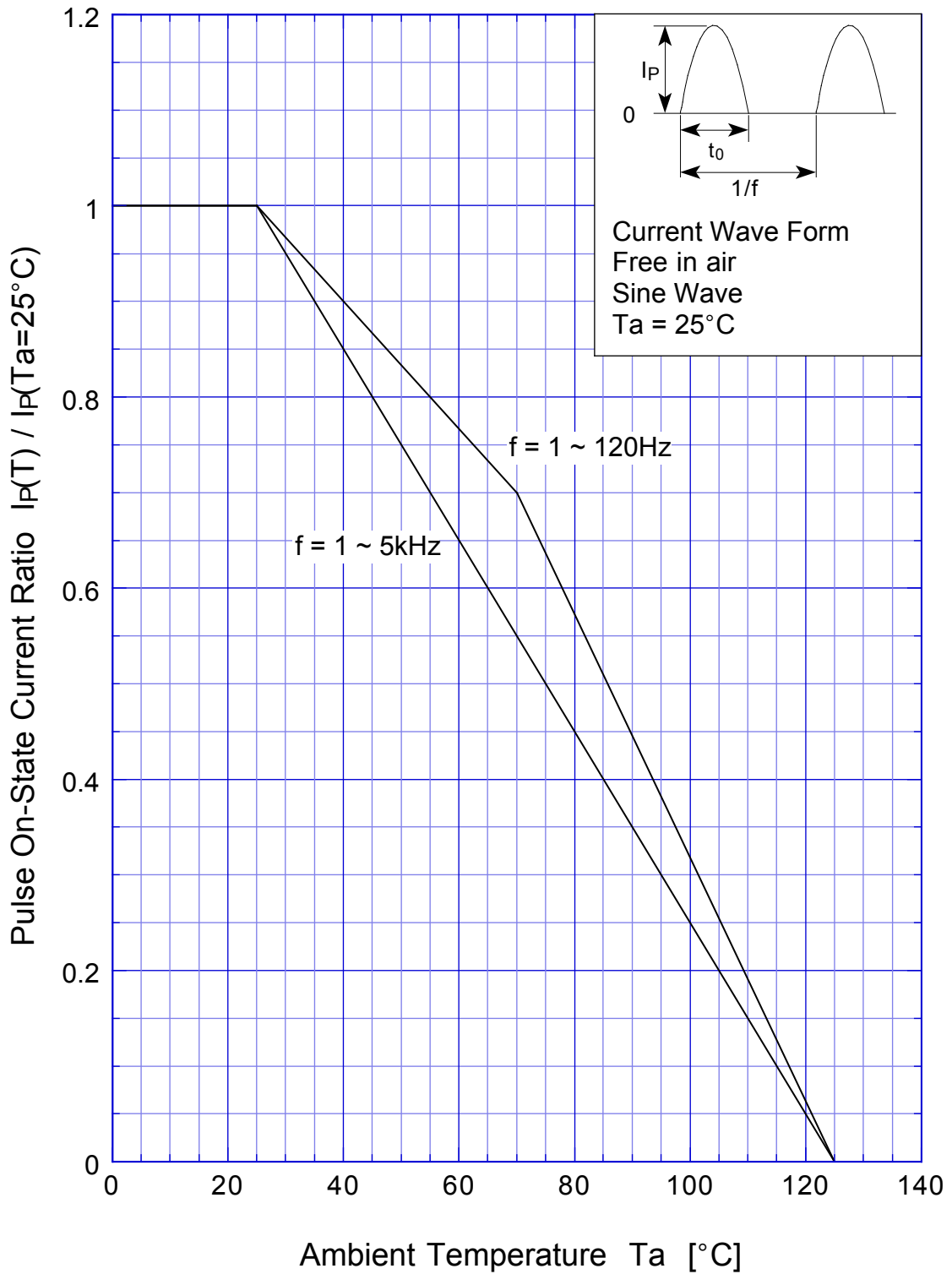
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Pulse On-State Current Rating



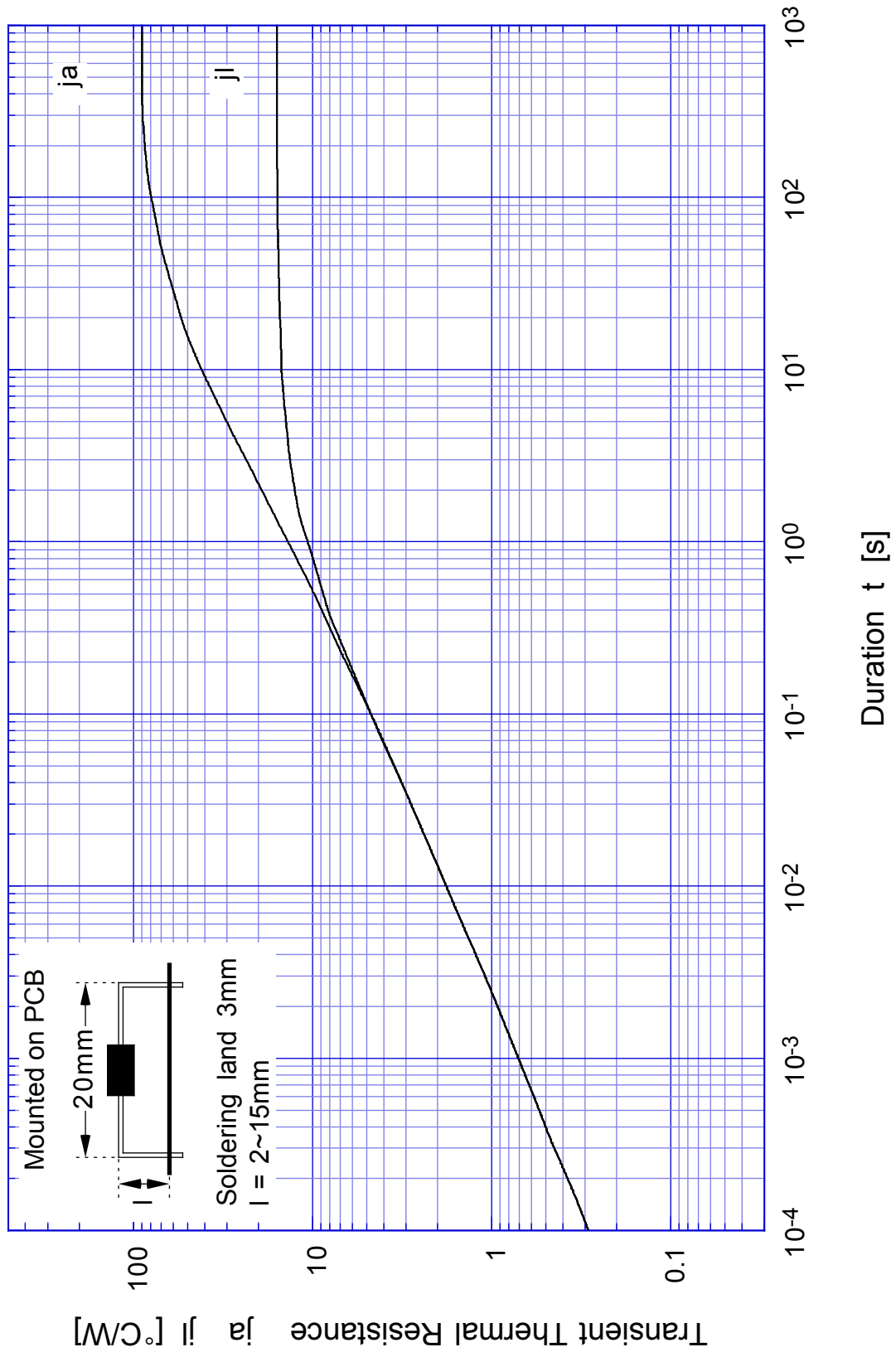
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K1V11
K1V12

Pulse On-State Current Derating



K1V10
K1V11
K1V12

Transient Thermal Resistance



K1V10
K1V11
K1V12

Breakover Voltage - Junction Temperature

