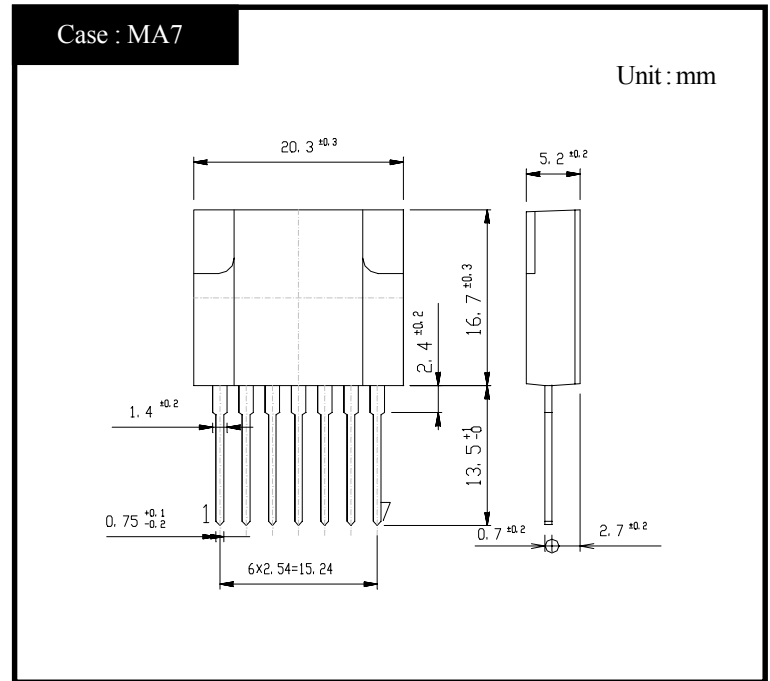


MA4810

OUTLINE DIMENSIONS



RATINGS

● Absolute Maximum Ratings

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------|------------------|--------------------------------|---------|------|
| Storage Temperature | T _{stg} | | -30~125 | °C |
| Operating Temperature | T _{op} | | -20~125 | °C |
| Junction Temperature | T _j | | 150 | °C |
| Peak Input Voltage | V _{in} | ②+,③-,⑤- | 800 | V |
| Input Current | I _{in} | DC ②+,③- | 3 | A |
| | | Pulse ②+,③- Duty 1/2 | 6 | A |
| Maximum Power Dissipation | P _D | T _a =25°C | 3 | W |
| | | Heatsink T _c =100°C | 17 | W |
| Dielectric Strength | V _{dis} | Terminals To Case AC 1 min | 2 | kV |
| Insulation Resistance | | Terminals To Case 500VDC | 100 | MΩ |
| Max Voltage ④ to ⑥ | V(④•⑥) | ④+,⑥- | 6 | V |
| Max Current ⑥ to ④ | I(⑥•④) | ⑥+,④- (Peak) Duty Max 1/2 | 200 | mA |
| Reverse Current | I _Z | ⑤+,④- | MAX 20 | mA |

● Electrical Characteristics (T_c=25°C)

| Item | Symbol | Conditions | Ratings | Unit |
|------|---|---|-----------|------|
| Q1 | Zero Gate Voltage Drain Current | I _{DSS} V _{DS} =800V, V _{GS} =0V, ②+,③- | MAX 250 | μA |
| | Static Drain-Source On-State Resistance | R _{DS(on)} I _D =1.5A, ②+,③- V _{GS} =10V, ⑤+,③- | TYP (4.1) | Ω |
| | | | MAX 5.0 | Ω |
| | Thermal Resistance | θ _{jc} Junction to Case | MAX 2.9 | °C/W |
| D1 | Reverse Current | I _R V _i =800V, ①+,②- | MAX 10 | μA |
| | Forward Voltage | V _F I _F =0.6A, ②+,①- | MAX 1.7 | V |
| Q2 | Fold Back Detection Voltage | ③+,④- | TYP 0.7 | V |

●Standard Operating Condition•Design Standard For Application Circuit

| Item | Conditions | Ratings | Unit |
|------------------------|------------|----------|------|
| Input Rated Voltage | | AC90~276 | V |
| Output Nominal Voltage | | 12 | V |
| Output Nominal Current | | 2.5 | A |

●Standard Operating Condition•Standard Operating Characteristics (Ta=25°C)

| Item | Conditions | Ratings | Unit | | |
|---|---------------------------------|--------------------------------|---------|----------------|----------------|
| Minimum Input Full Load Output Voltage | Vin=90V, I _O =2.5A | 12.0±0.6 | V | Fig 1, ① Refer | |
| Maximum Input Light Load Output Voltage | Vin=276V, I _O =0.25A | 12.0±0.6 | V | Fig 1, ② Refer | |
| Over Current Protection | Foldback Current | Vin=276V, V _O =10V | MAX 3.8 | A | Fig 1, ③ Refer |
| | Short Circuit | Vin=276V, R _O =0.5Ω | | - | Fig 1, ④ Refer |

Figure in ○=Terminal Sign

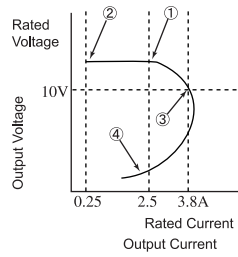
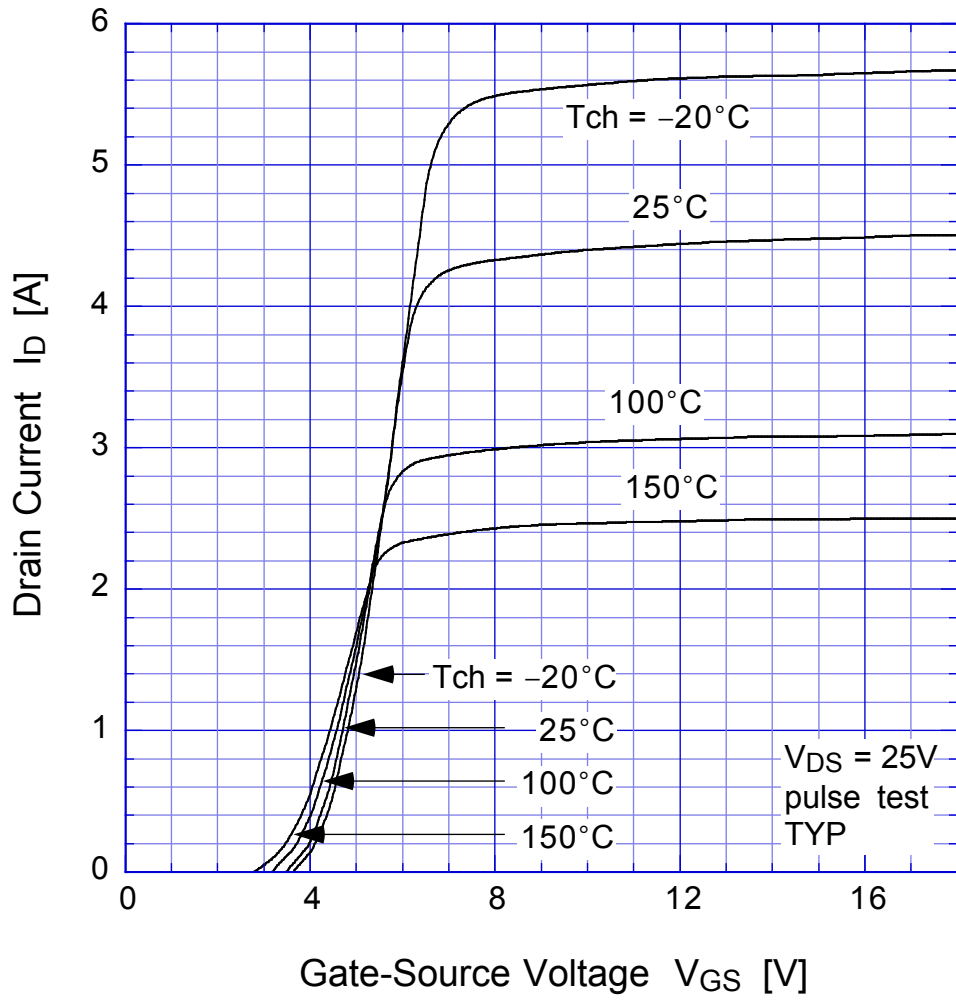


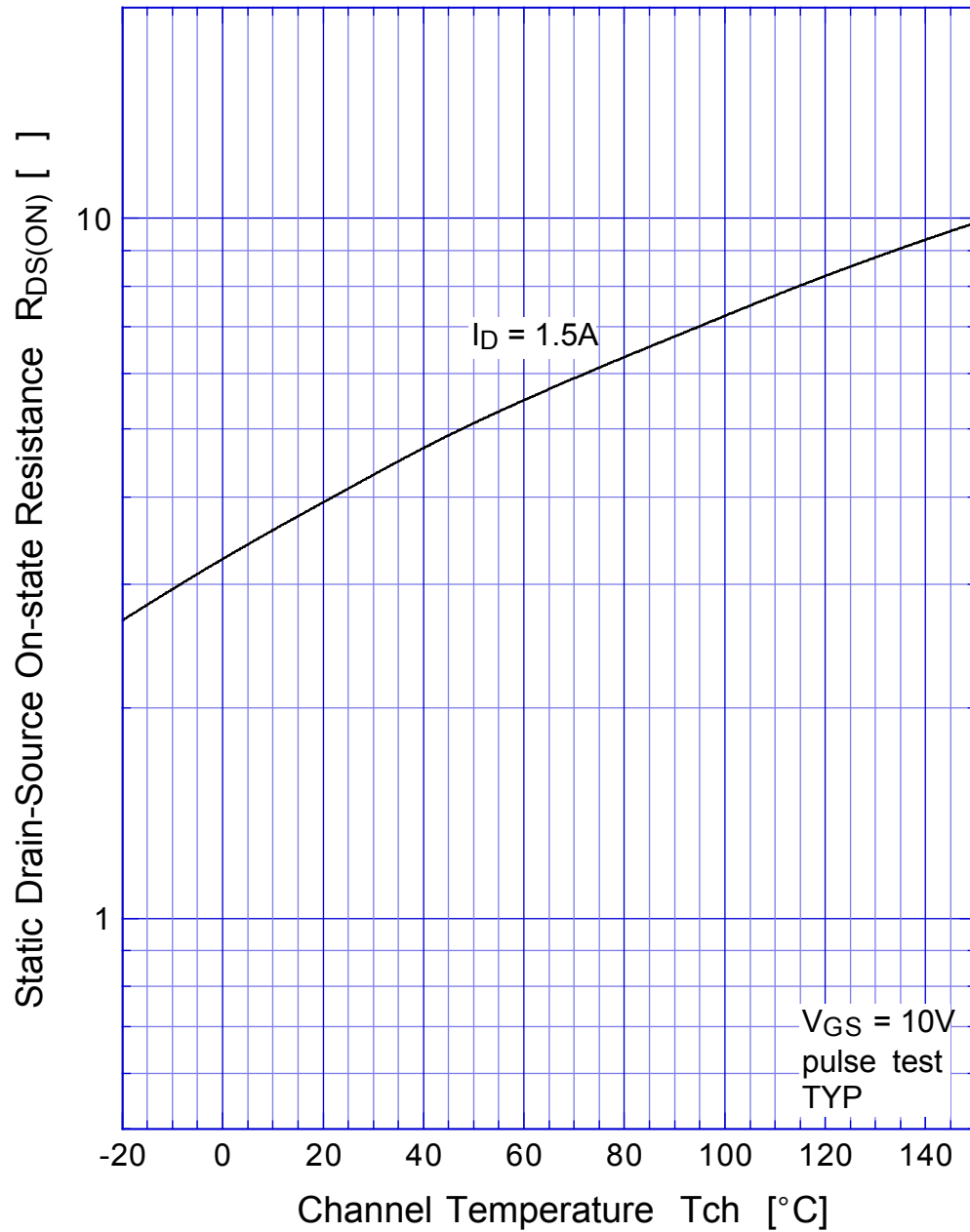
Fig1. Output Voltage/Current

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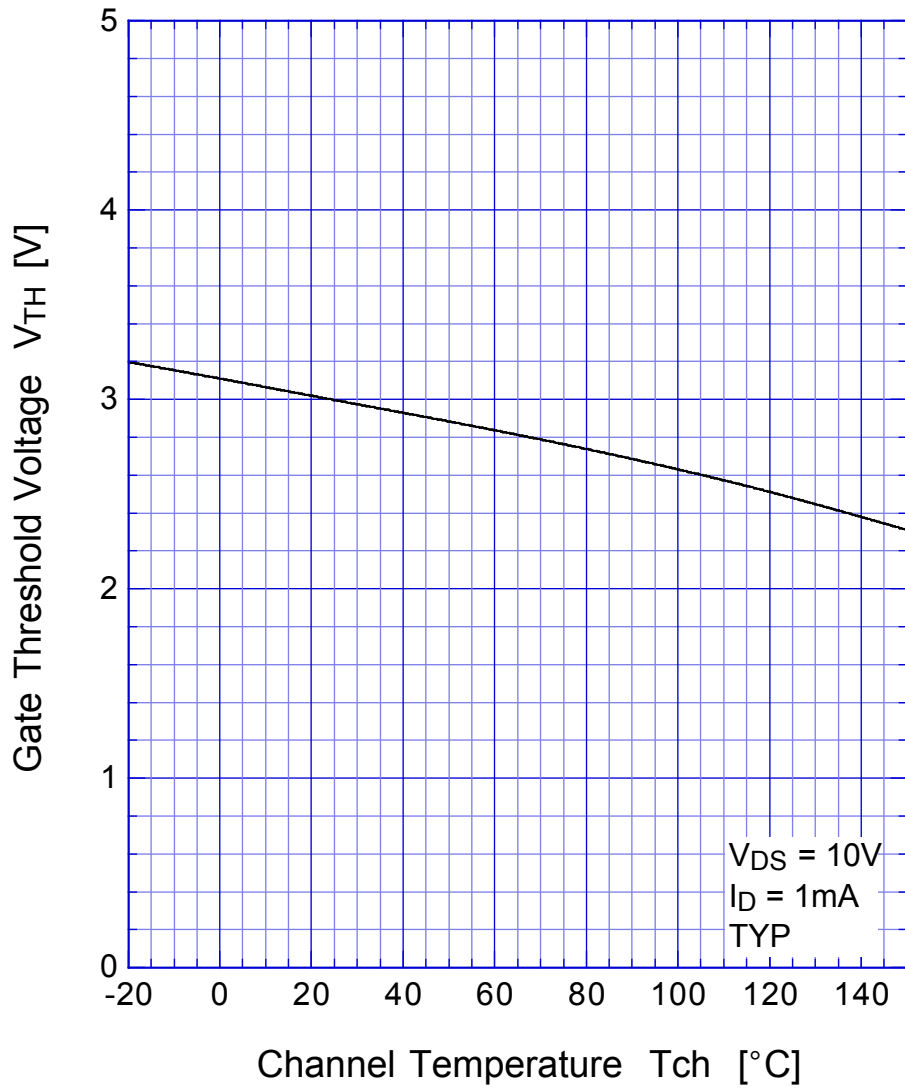
Transfer Characteristics

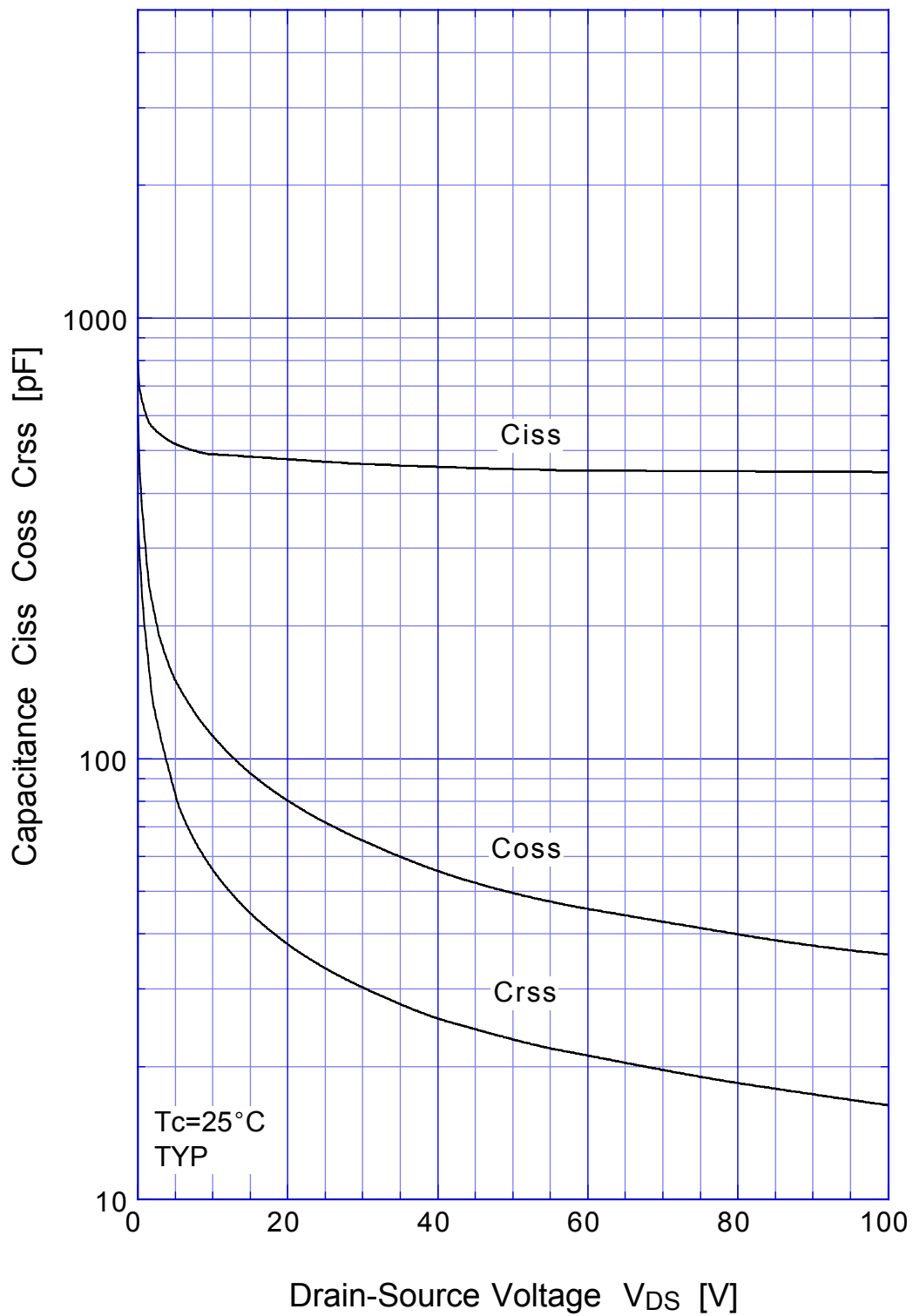


MA4810 Static Drain-Source On-state Resistance

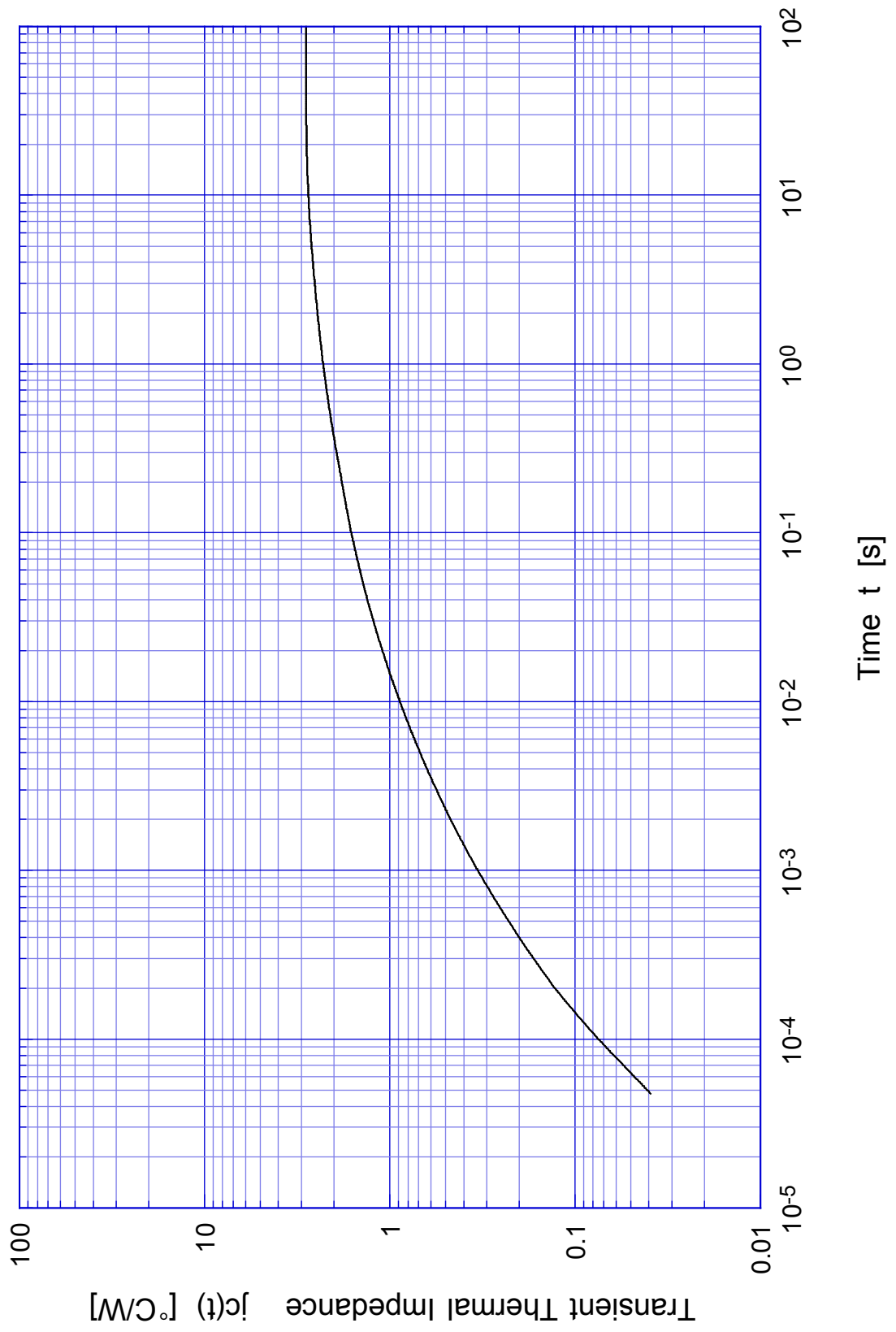


MA4810 Gate Threshold Voltage



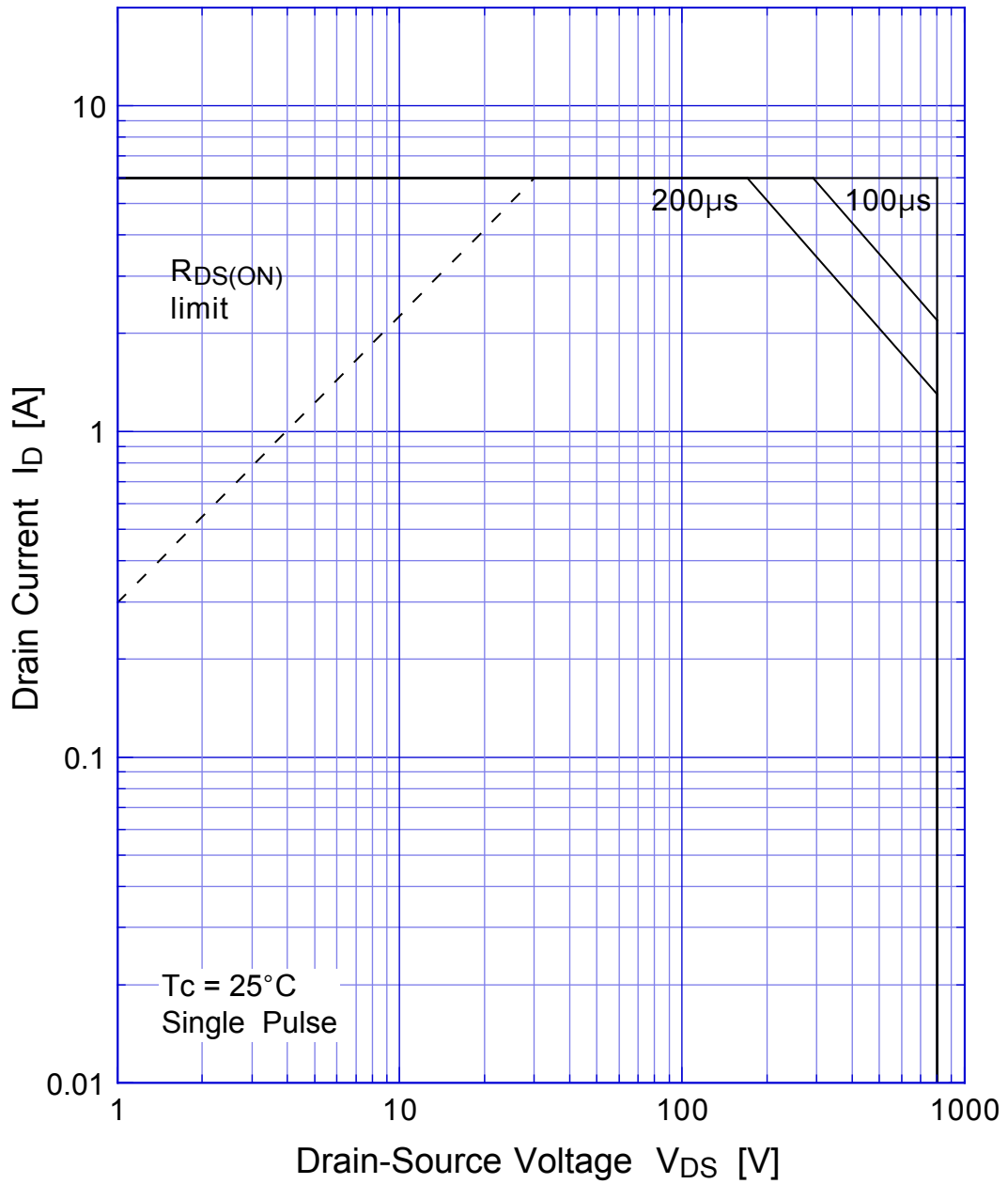


MA4810 Transient Thermal Impedance



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Safe Operating Area



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Power Derating

