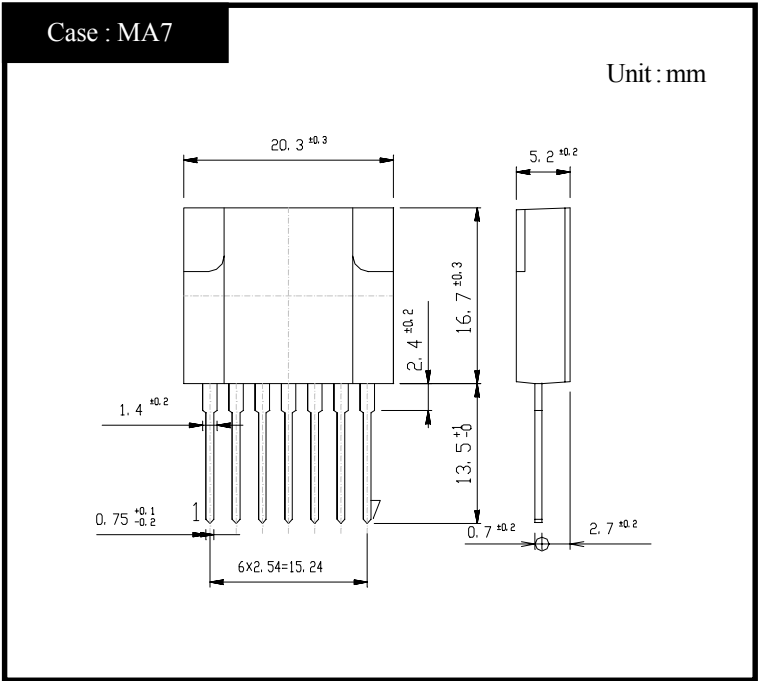


MA4510

OUTLINE DIMENSIONS



RATINGS

●Absolute Maximum Ratings

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-30~125	°C
Operating Temperature	Top		-20~125	°C
Junction Temperature	Tj		150	°C
Peak Input Voltage	Vin	②+,③-,⑤-	500	V
Input Current	Iin	DC ②+,③-	3	A
		Pulse ②+,③- Duty1/2	5	A
Maximum Power Dissipation	PD	Ta=25°C	3	W
	PD	Heatsink Tc=100°C	13	W
Dielectric Strength	Vdis	Terminals To Case AC 1 min	2	kV
Insulation Resistance		Terminals To Case 500VDC	100	MΩ
Max Voltage ④ to ⑥	V④•⑥	④+,⑥-	6	V
Max Current ⑥ to ④	I⑥•④	⑥+,④- (Peak) Duty Max 1/2	200	mA
Reverse Current	Iz	⑤+,④-	MAX 20	mA

●Electrical Characteristics (Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit
Q1	Zero Gate Voltage Drcain Current	Idss	MAX 250	μ A
	Static Drain-Source On-State Resistance		TYP (2.0)	Ω
		RDS(on)	MAX (2.3)	Ω
		θ jc	MAX 3.8	°C/W
D1	Reverse Current	IR	MAX 10	μ A
	Forward Voltage	VF	MAX 1.7	V
Q2	Fold Back Detection Voltage		TYP 0.7	V

●Standard Operating Condition•Design Standard For Application Circuit

Item	Conditions	Ratings	Unit
Input Rated Voltage		AC90~132	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=132V, I _O =0.25A	12.0±0.6	V	Fig 1, ② Refer
Over Current Protection	Foldback Current	Vin=132V, V _O =10V	MAX 3.8	A	Fig 1, ③ Refer
	Short Circuit	Vin=132V, R _O =0.5 Ω	Nodamage To Any Device, Automatic Recovery.	—	Fig 1, ④ Refer

Figure in ○=Terminal Sign

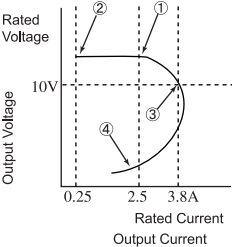
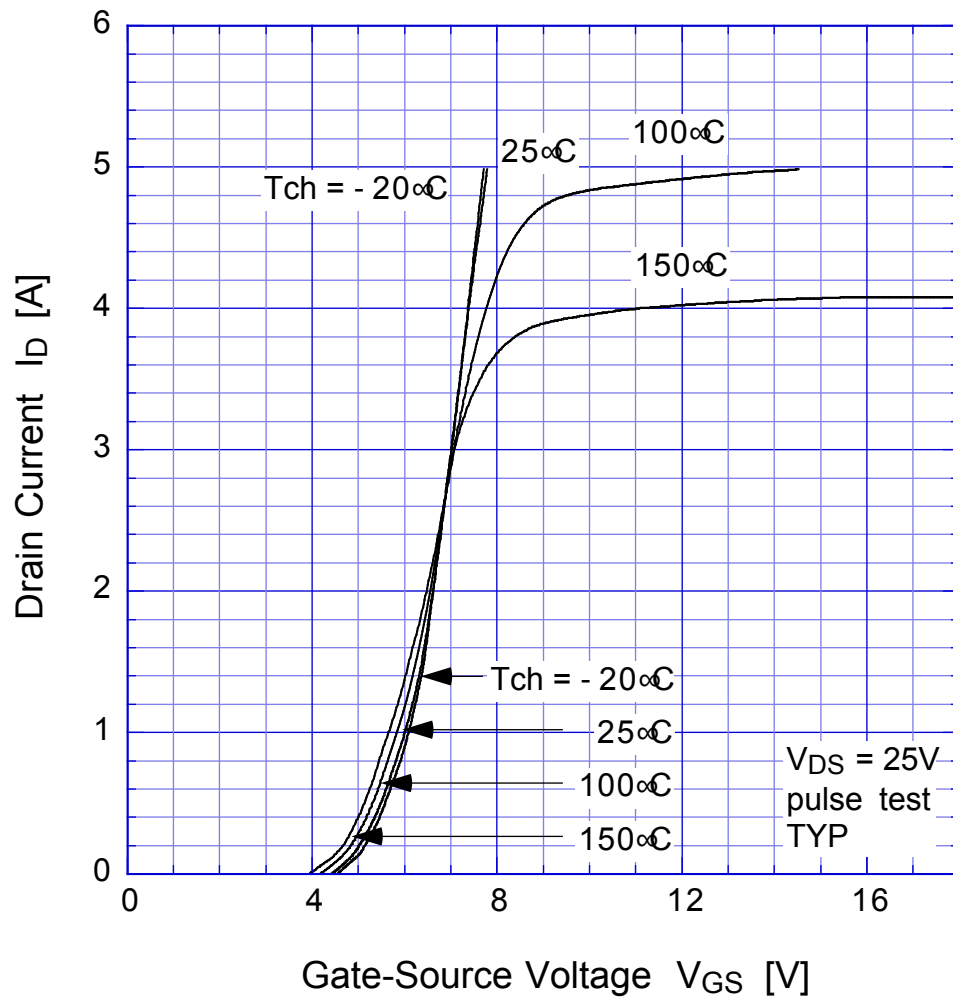


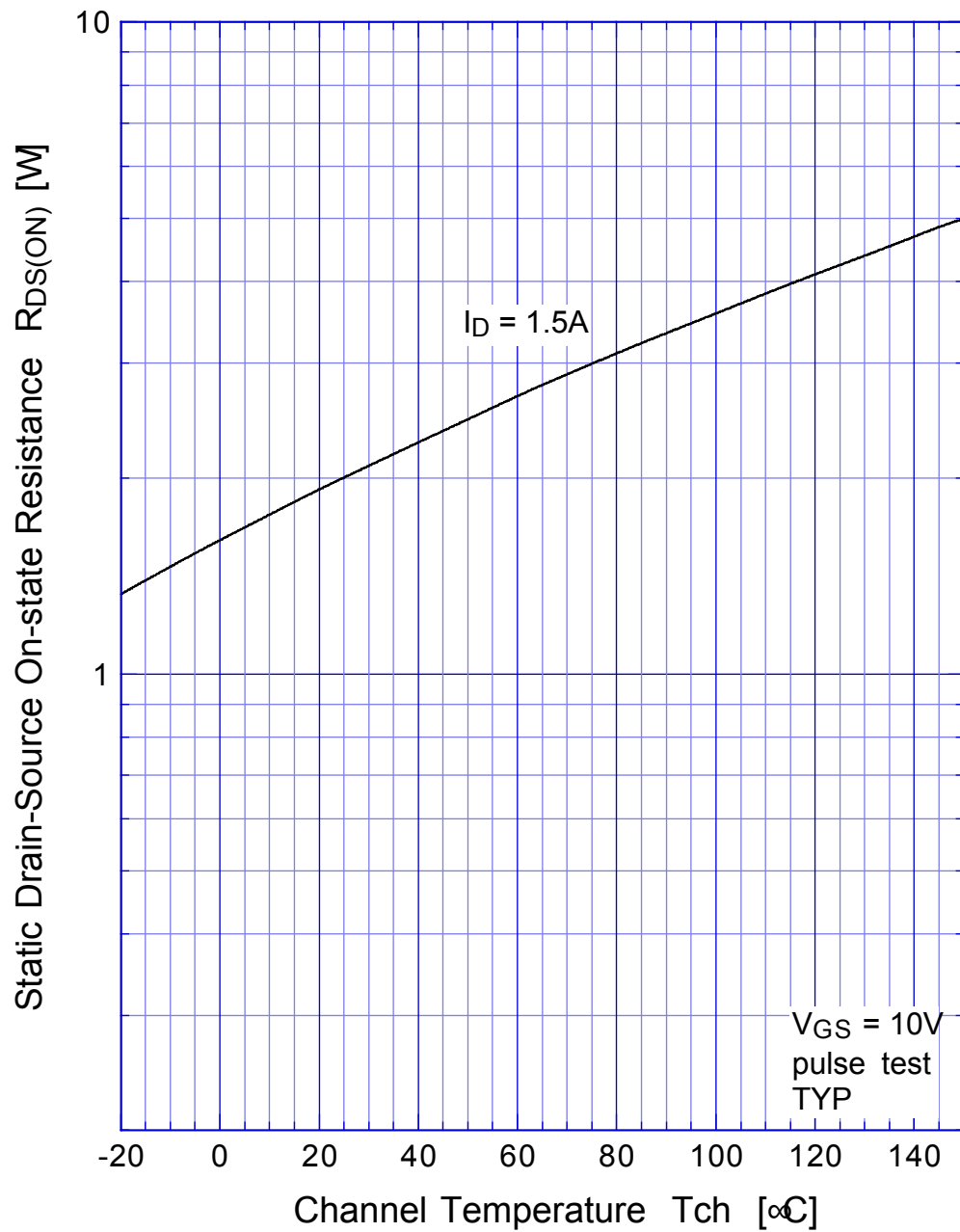
Fig1. Output Voltage/Current

MA4510

Transfer Characteristics

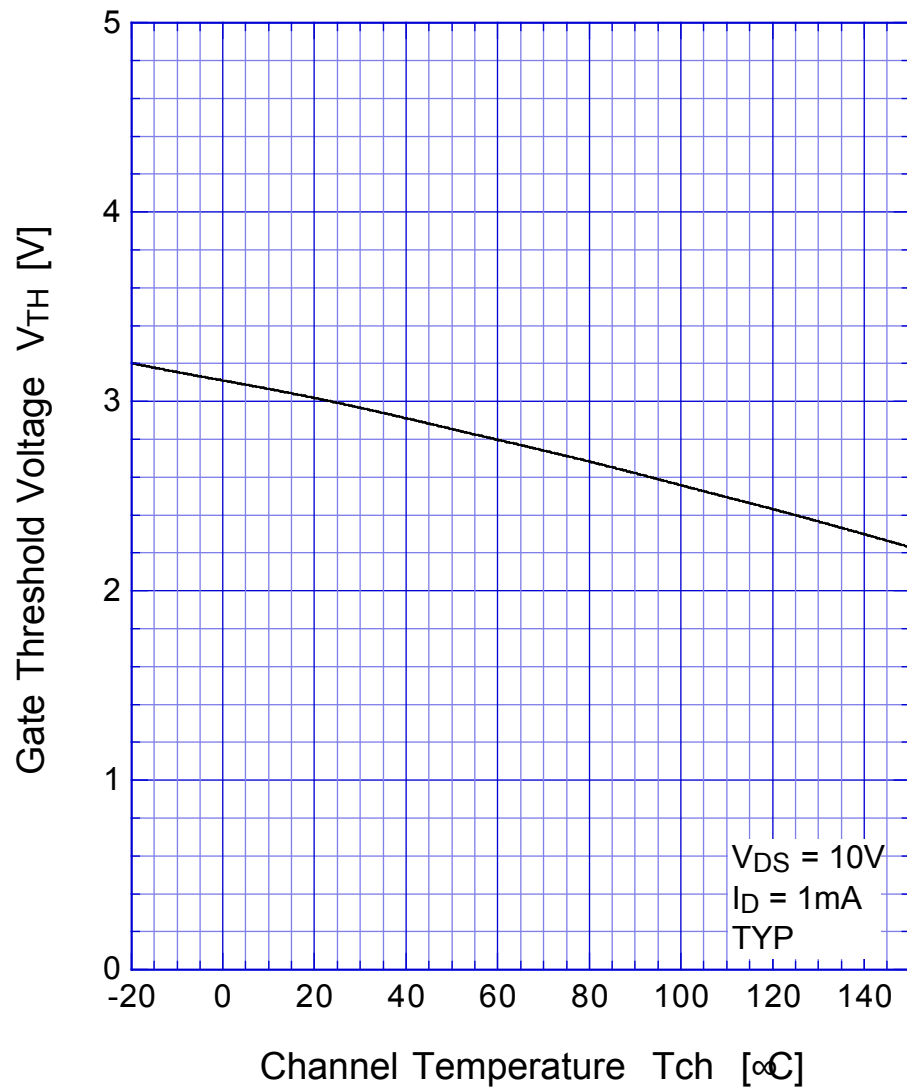


MA4510 Static Drain-Source On-state Resistance



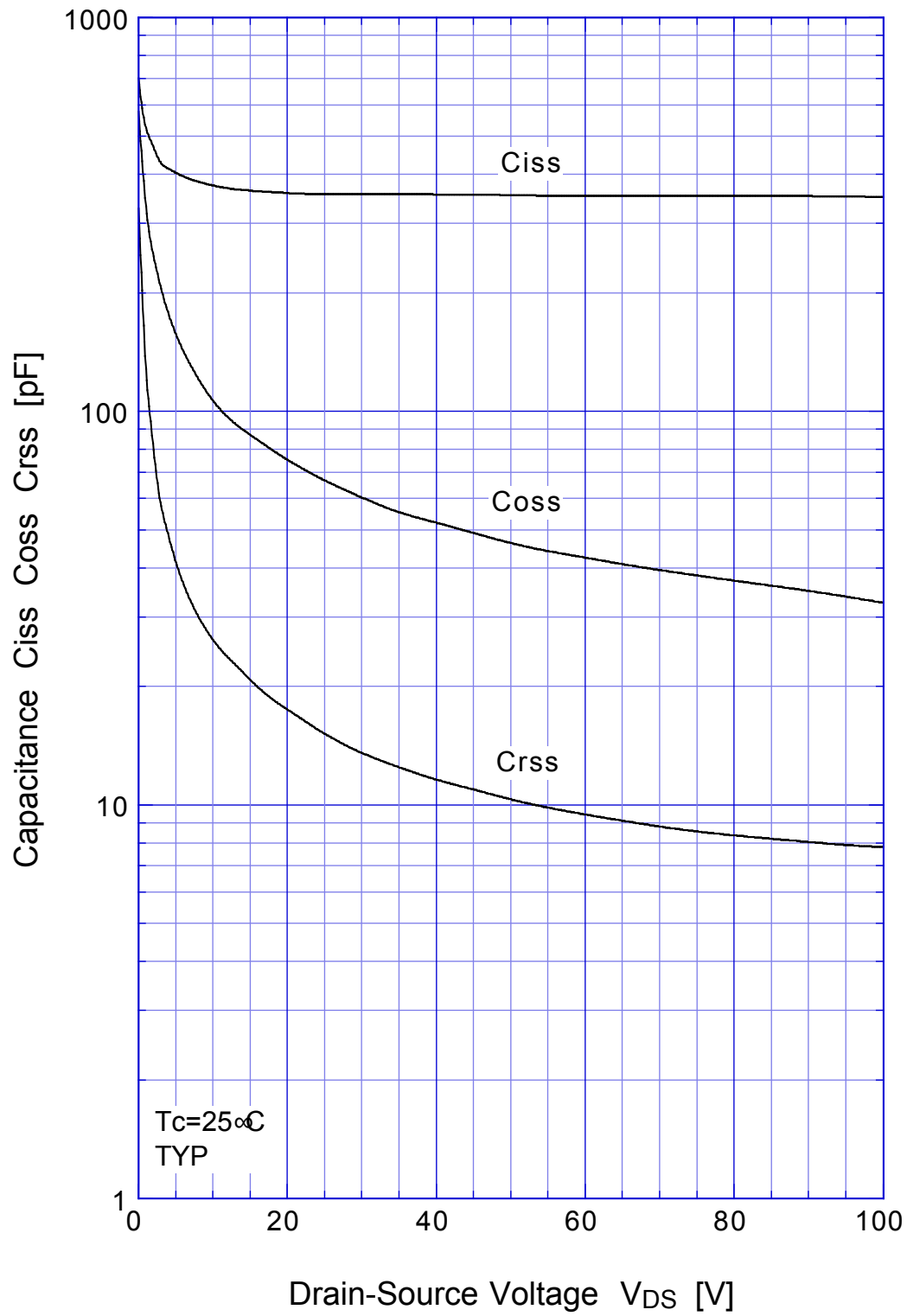
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Gate Threshold Voltage

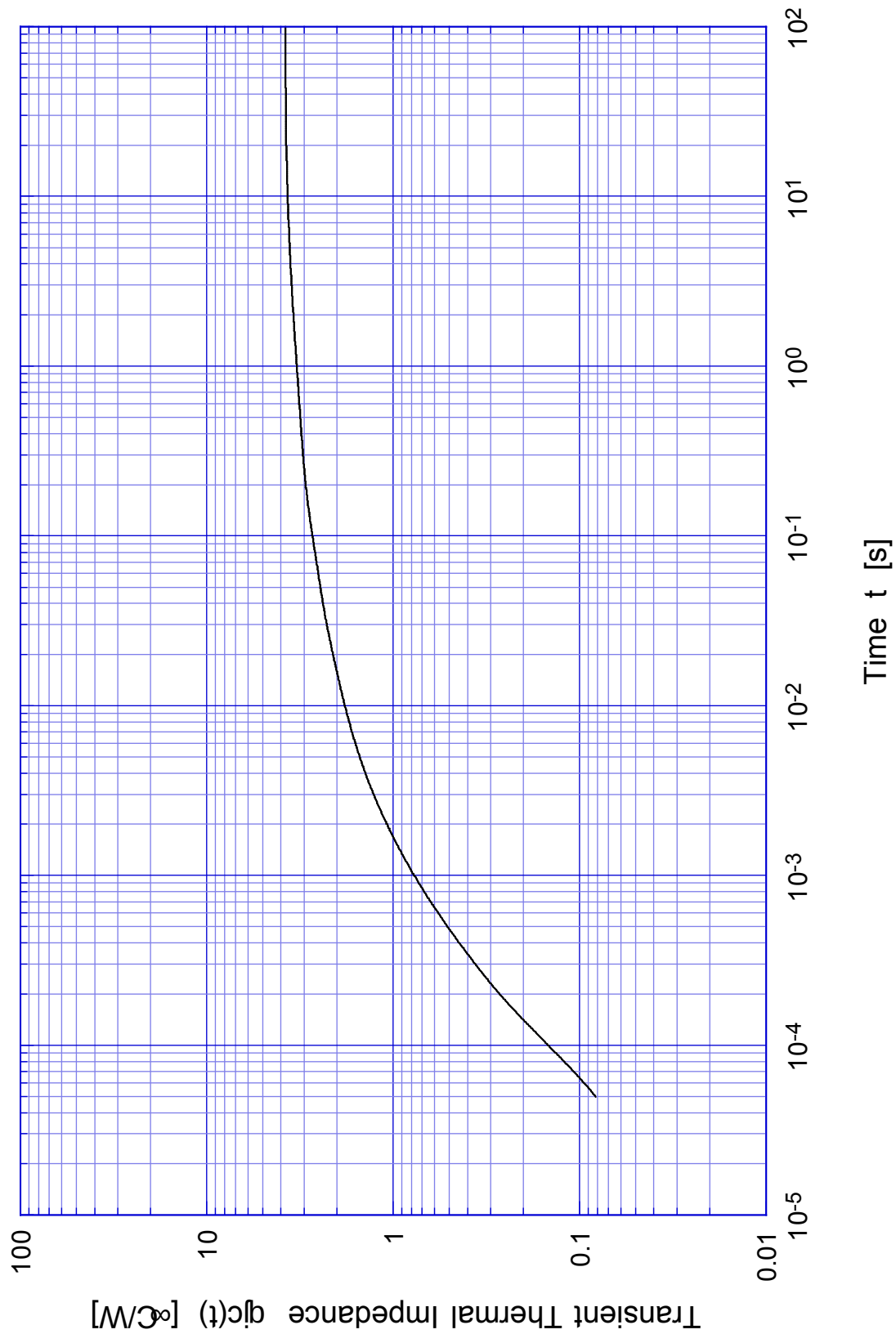


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Capacitance

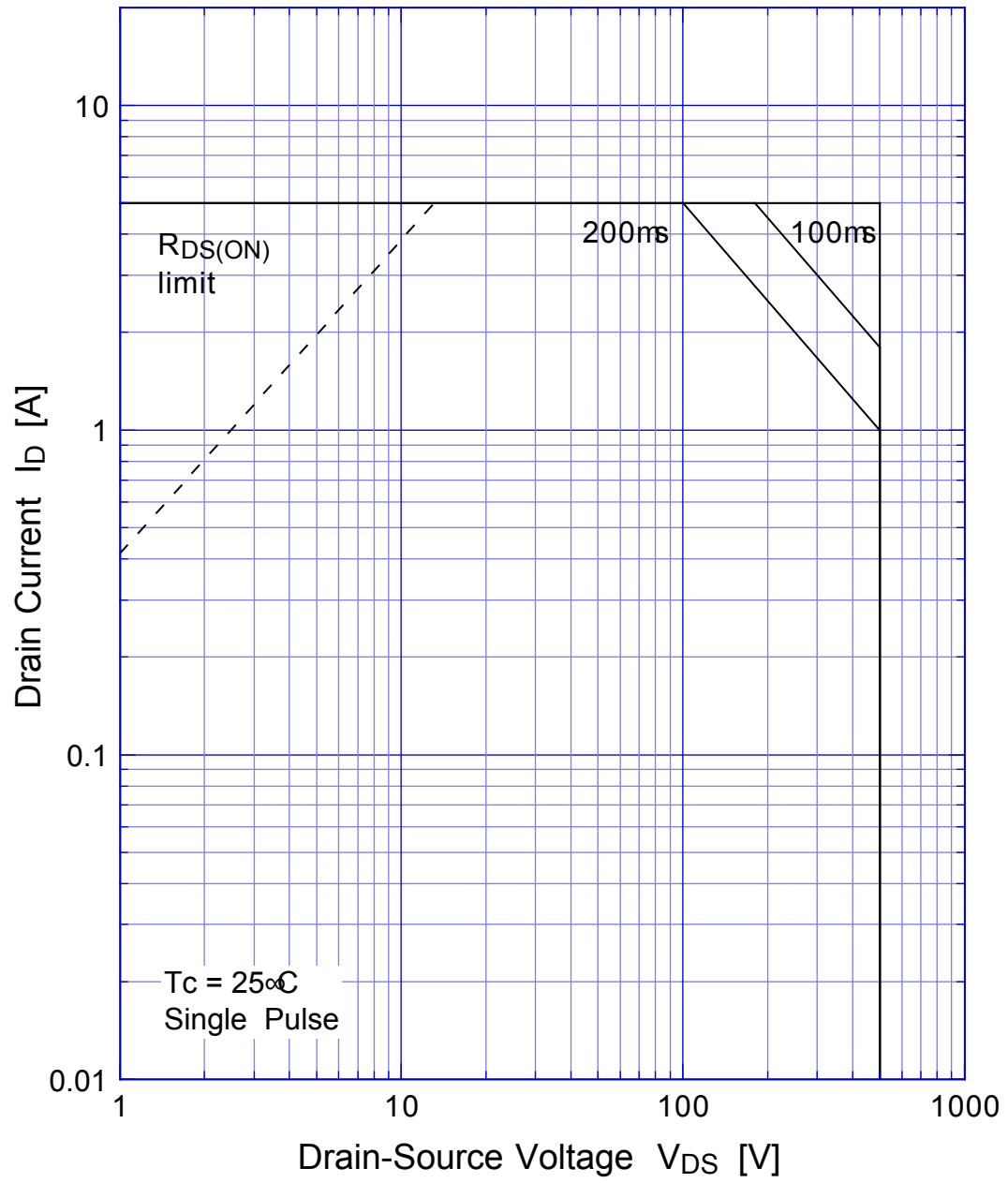


MA4510 Transient Thermal Impedance



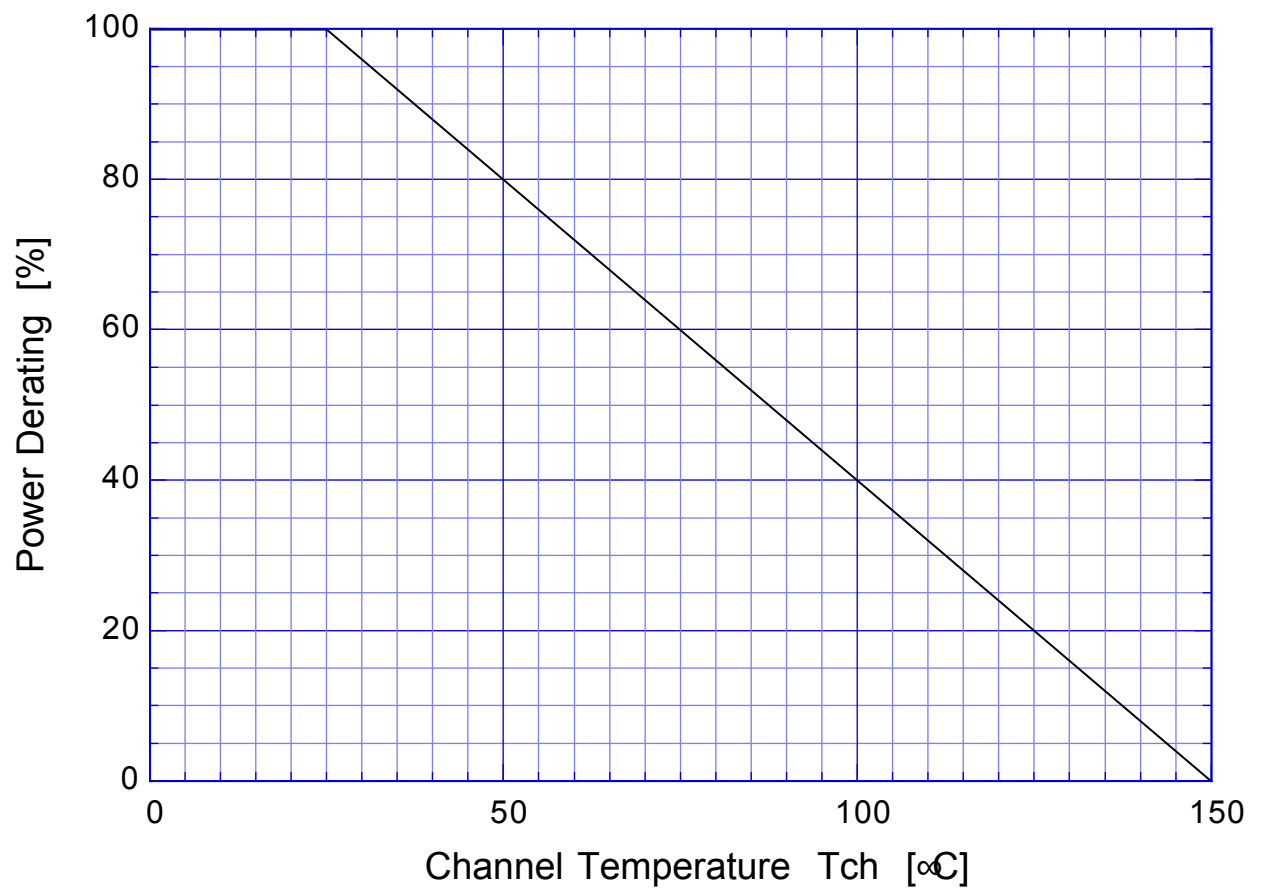
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Safe Operating Area



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Power Derating



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Reverse Bias SOA

