

2SK2668
(FP3W90HVX2)

900V 3A

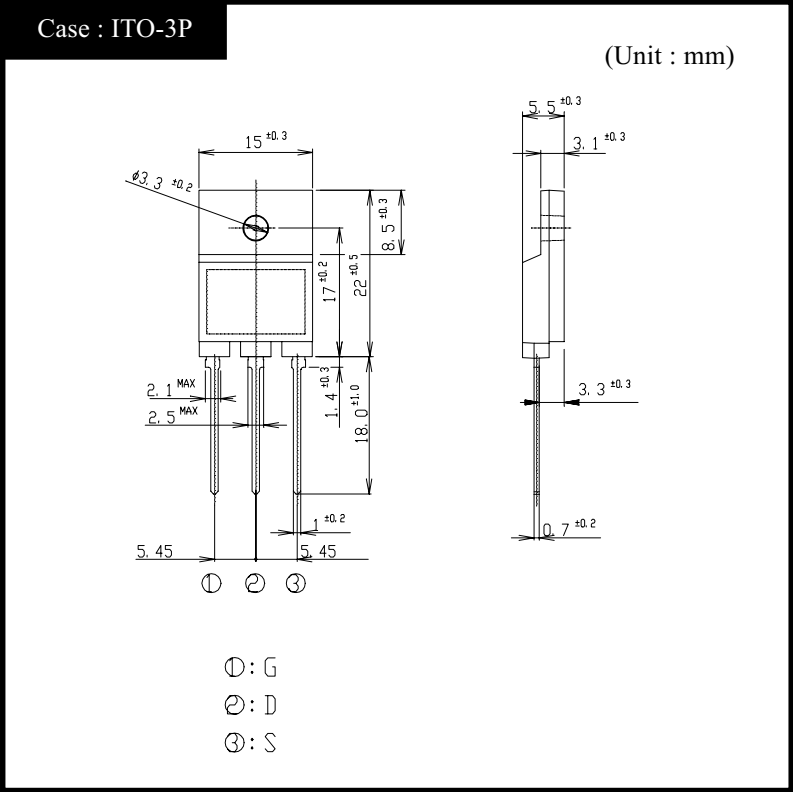
FEATURES

- Input capacitance (Ciss) is small.
Especially, input capacitance at 0 bias is small.
- The static Rds(on) is small.
- The switching time is fast.
- Avalanche resistance guaranteed.

APPLICATION

- Switching power supply of AC 240V input
- High voltage power supply
- Inverter

OUTLINE DIMENSIONS



RATINGS

●Absolute Maximum Ratings (Tc = 25°C)

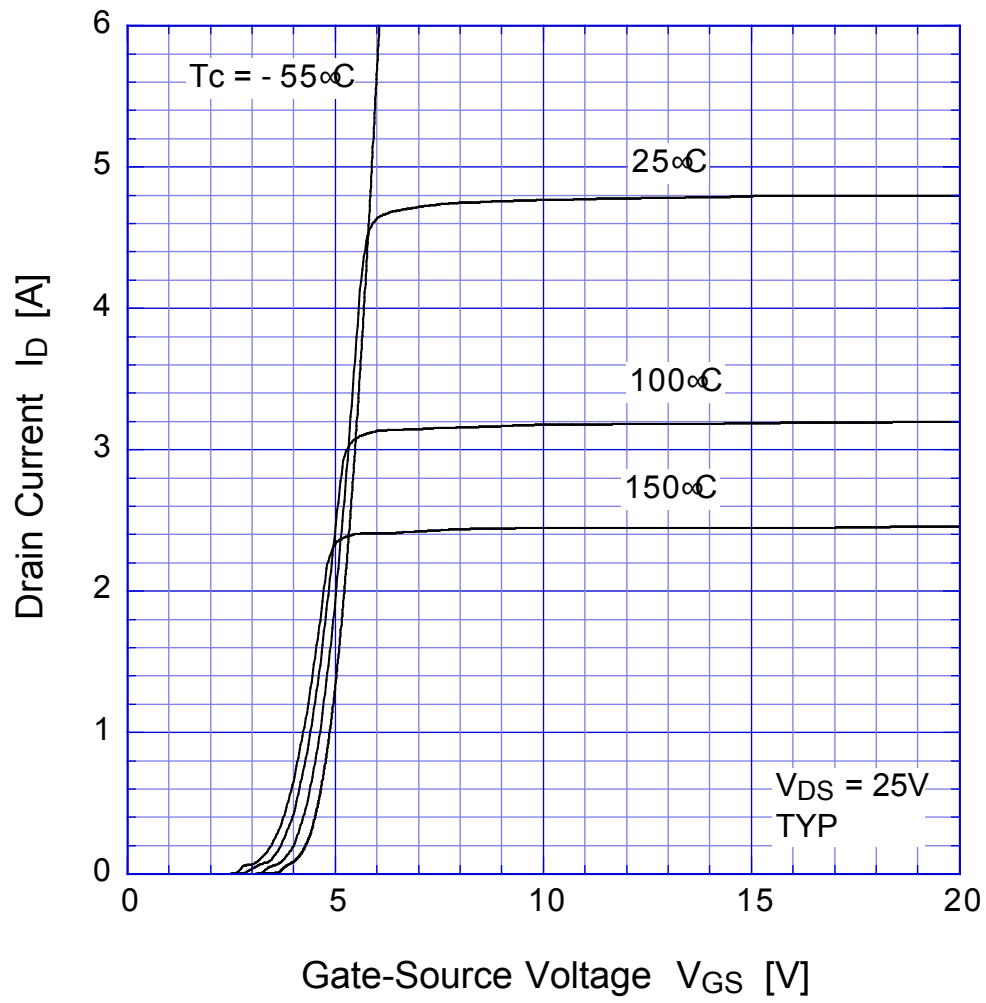
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	°C
Channel Temperature	T _{ch}		150	
Drain-Source Voltage	V _{DSS}		900	V
Gate-Source Voltage	V _{GSS}		±30	
Continuous Drain Current (DC)	I _D		3	
Continuous Drain Current (Peak)	I _{DP}	Pulse width ≤ 10 μs, Duty cycle ≤ 1/100	6	A
Continuous Source Current (DC)	I _S		3	
Total Power Dissipation	P _T		40	W
Repetitive Avalanche Current	I _{AR}	T _{ch} = 150°C	3	A
Single Avalanche Energy	E _{AS}	T _{ch} = 25°C	48	
Repetitive Avalanche Energy	E _{AR}	T _{ch} = 25°C	4.8	mJ
Dielectric Strength	V _{dis}	Terminals to case, AC 1 minute	2	
Mounting Torque	TOR	(Recommended torque : 0.5 N·m)	0.8	N·m

●Electrical Characteristics T_c = 25°C

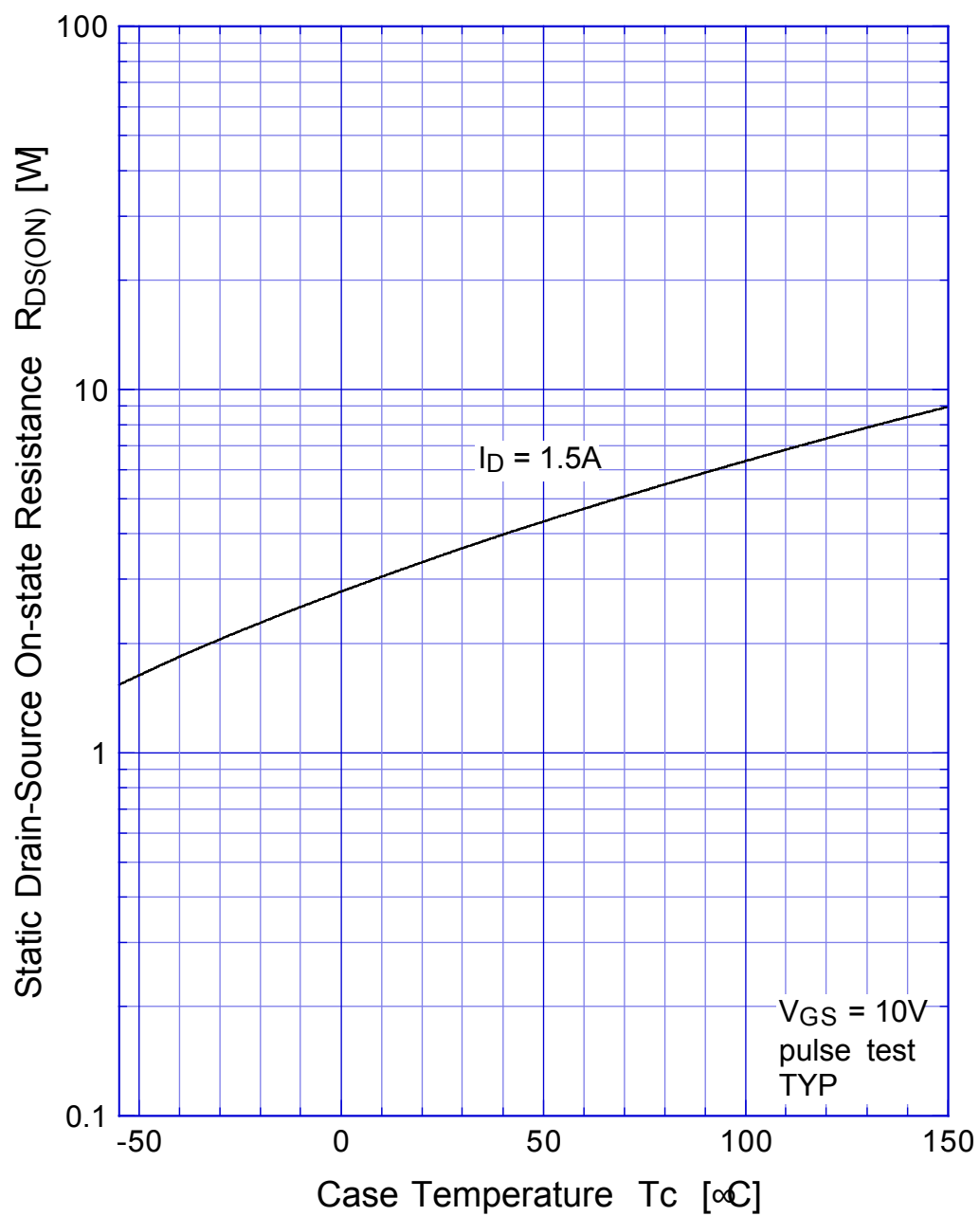
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	V _{(BR)DSS}	I _D = 1mA, V _{GS} = 0V	900			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 900V, V _{GS} = 0V			250	μA
Gate-Source Leakage Current	I _{GSS}	V _{GS} = ±30V, V _{DS} = 0V			±0.1	
Forward Transconductance	g _{fs}	I _D = 1.5A, V _{DS} = 10V	1.5	2.5		S
Static Drain-Source On-state Resistance	R _{DS(ON)}	I _D = 1.5A, V _{GS} = 10V		3.5	4.7	Ω
Gate Threshold Voltage	V _{TH}	I _D = 1mA, V _{DS} = 10V	2.5	3.0	3.5	V
Source-Drain Diode Forward Voltage	V _{SD}	I _S = 1.5A, V _{GS} = 0V			1.5	
Thermal Resistance	θ _{jc}	junction to case			3.12	°C/W
Total Gate Charge	Q _g	V _{DD} = 400V, V _{GS} = 10V, I _D = 3A		30		nC
Input Capacitance	C _{iss}	V _{DS} = 25V, V _{GS} = 0V, f = 1MHz		630		pF
Reverse Transfer Capacitance	C _{rss}			16		
Output Capacitance	C _{oss}			67		
Turn-On Time	t _{on}	I _D = 1.5A, R _L = 100Ω, V _{GS} = 10V		40	70	ns
Turn-Off Time	t _{off}			140	230	

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Transfer Characteristics

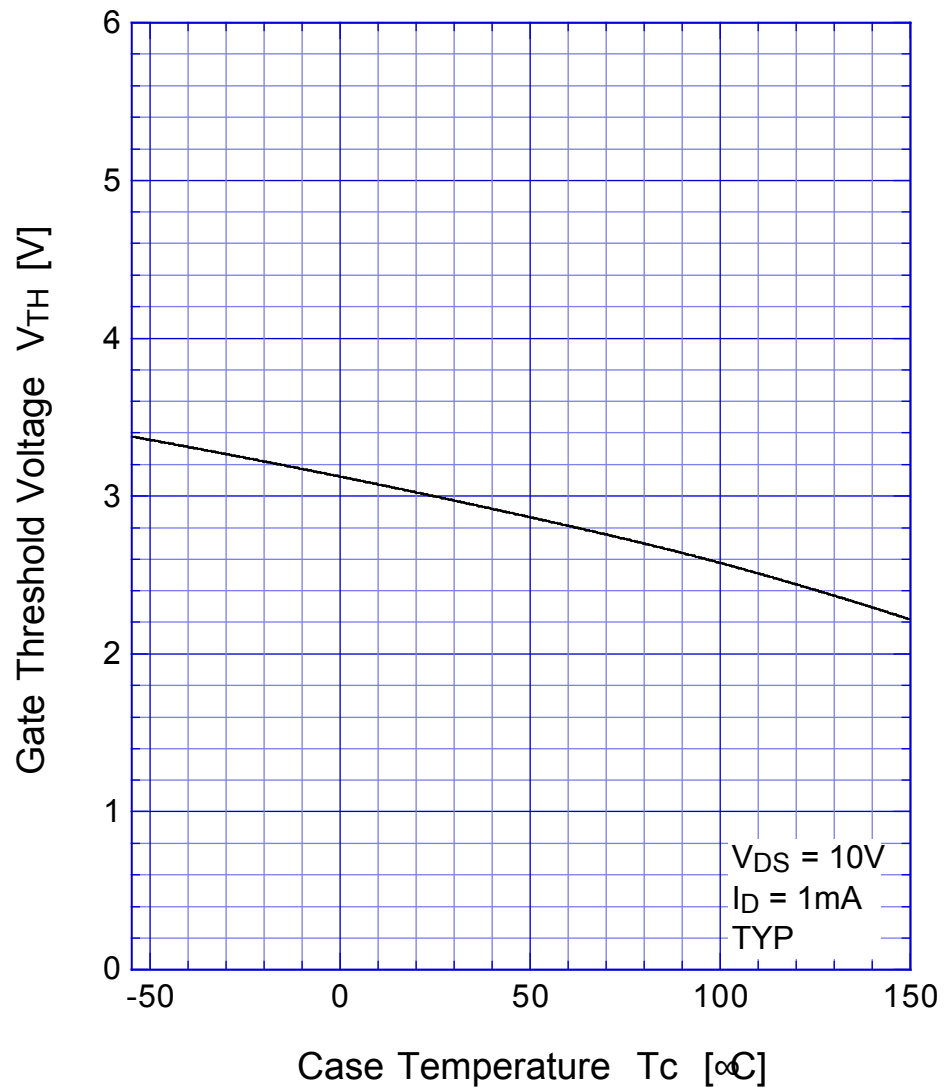


2SK2668 Static Drain-Source On-state Resistance



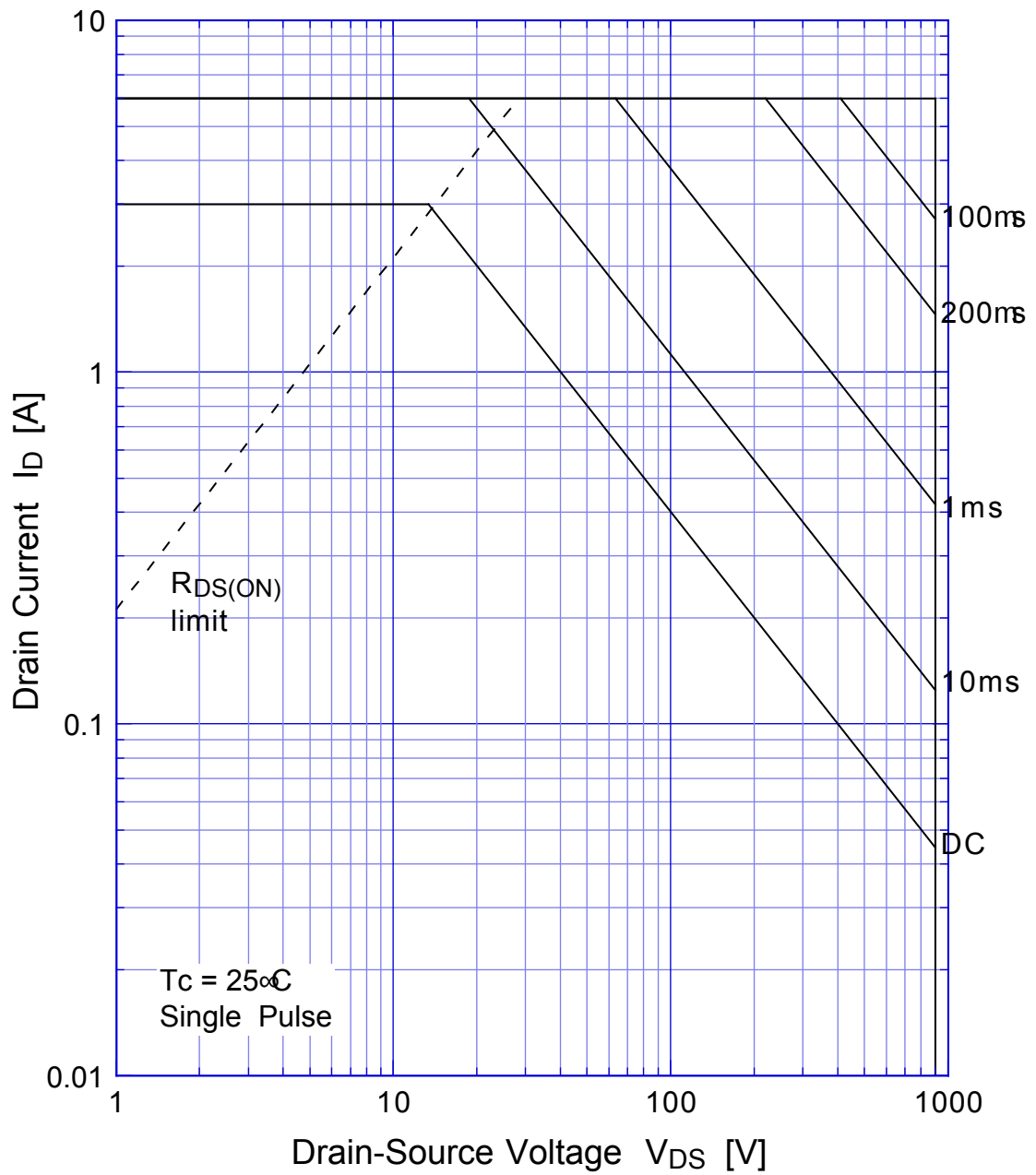
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Gate Threshold Voltage

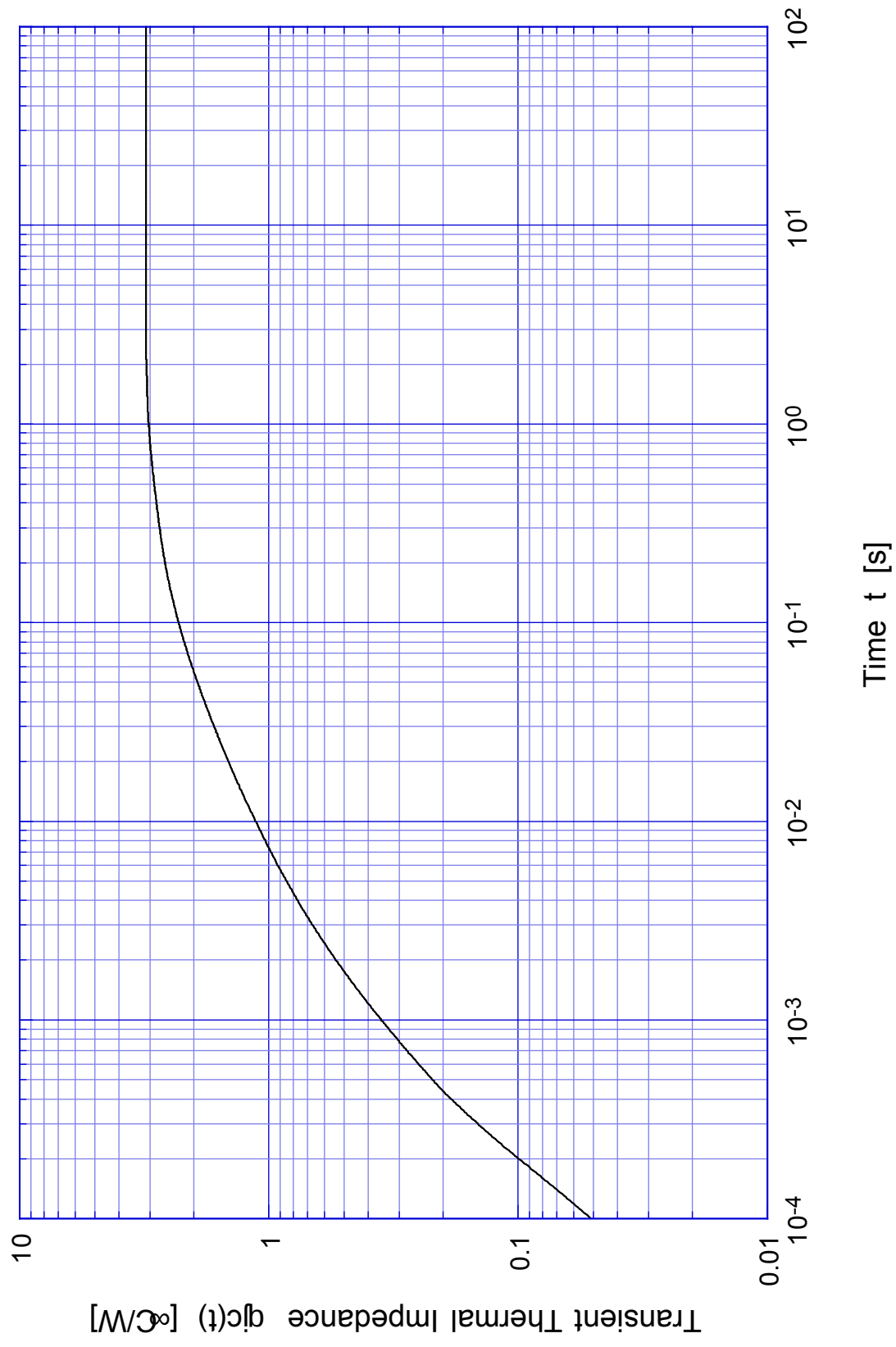


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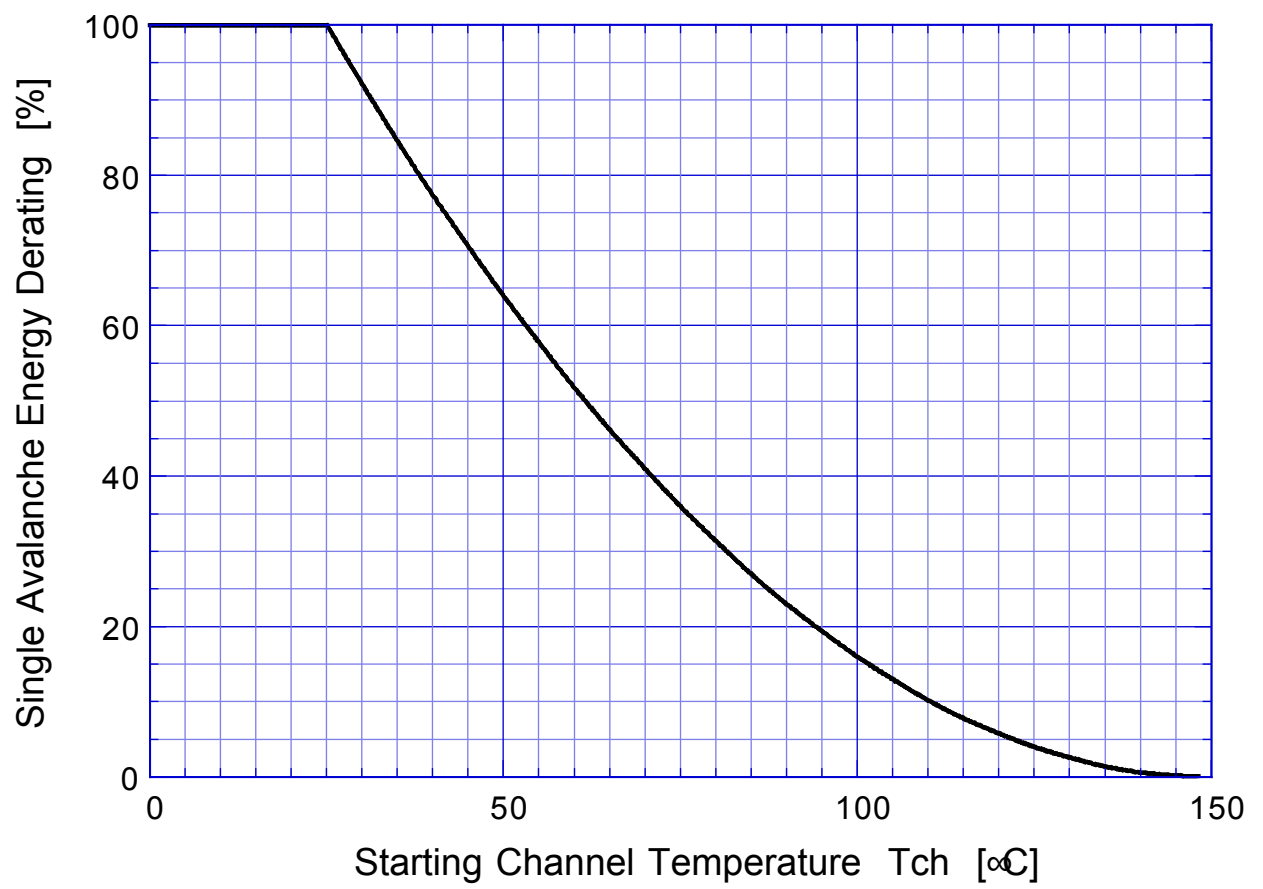
Safe Operating Area



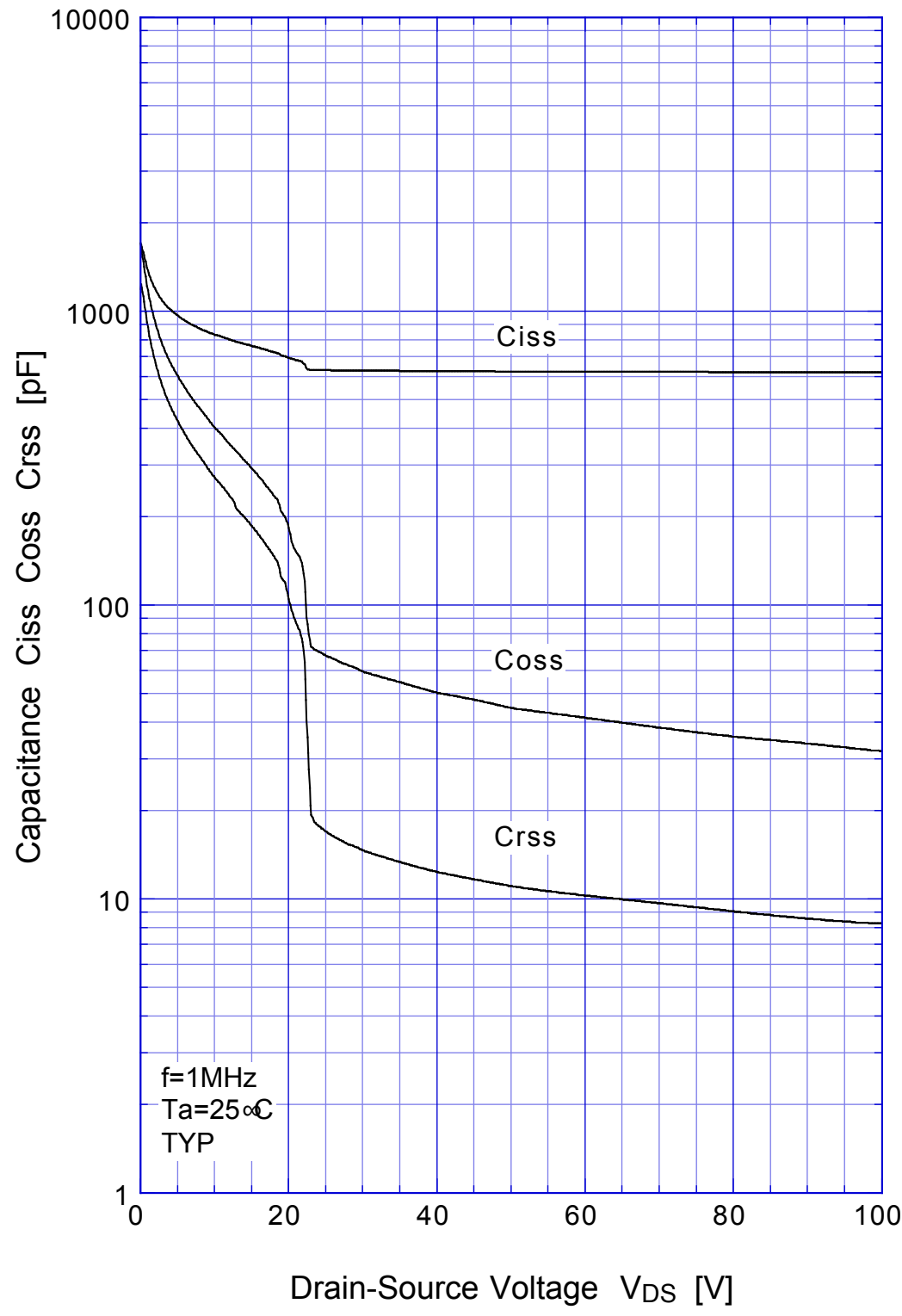
2SK2668 Transient Thermal Impedance



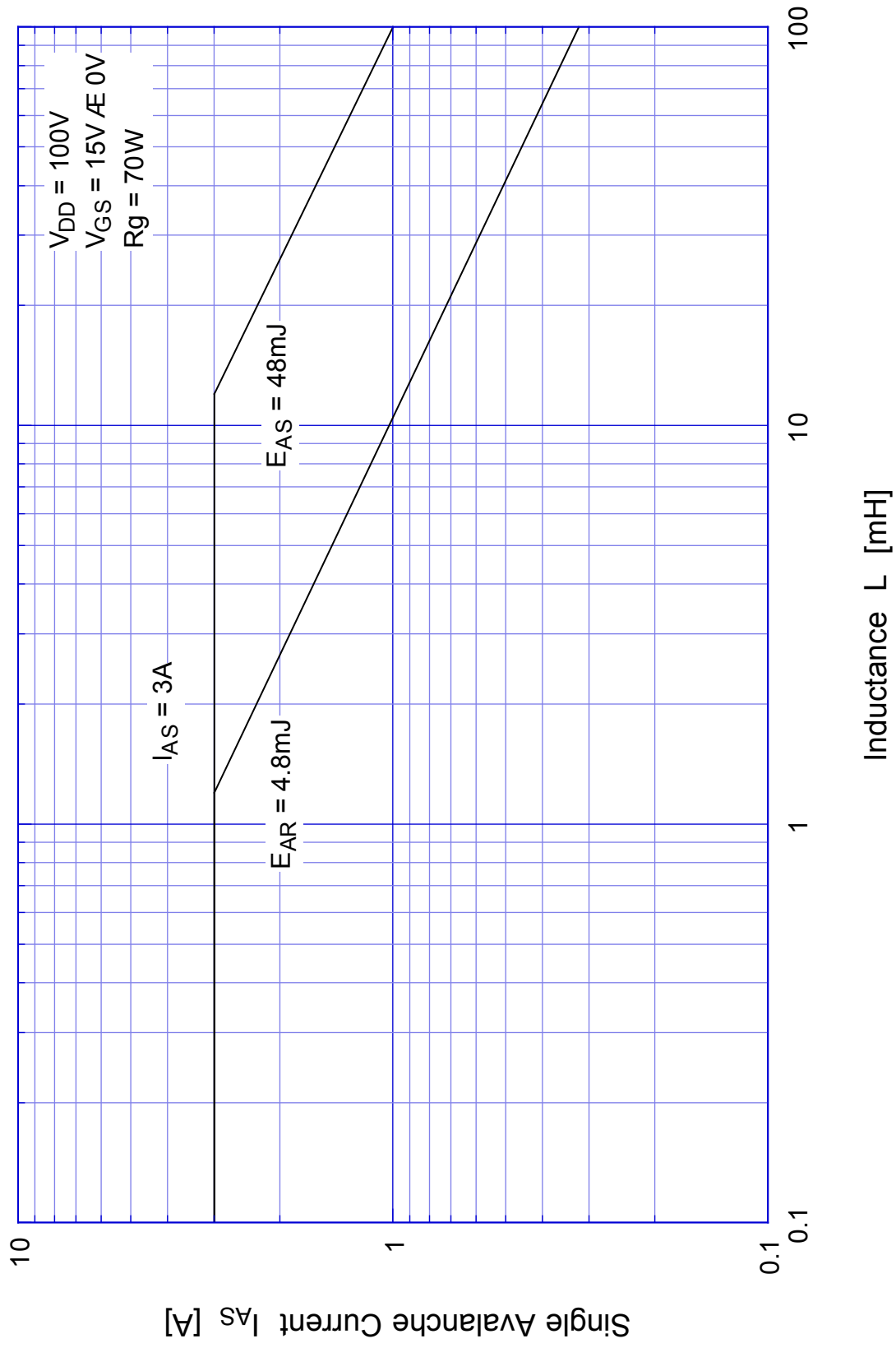
2SK2668 Single Avalanche Energy Derating



2SK2668 Capacitance

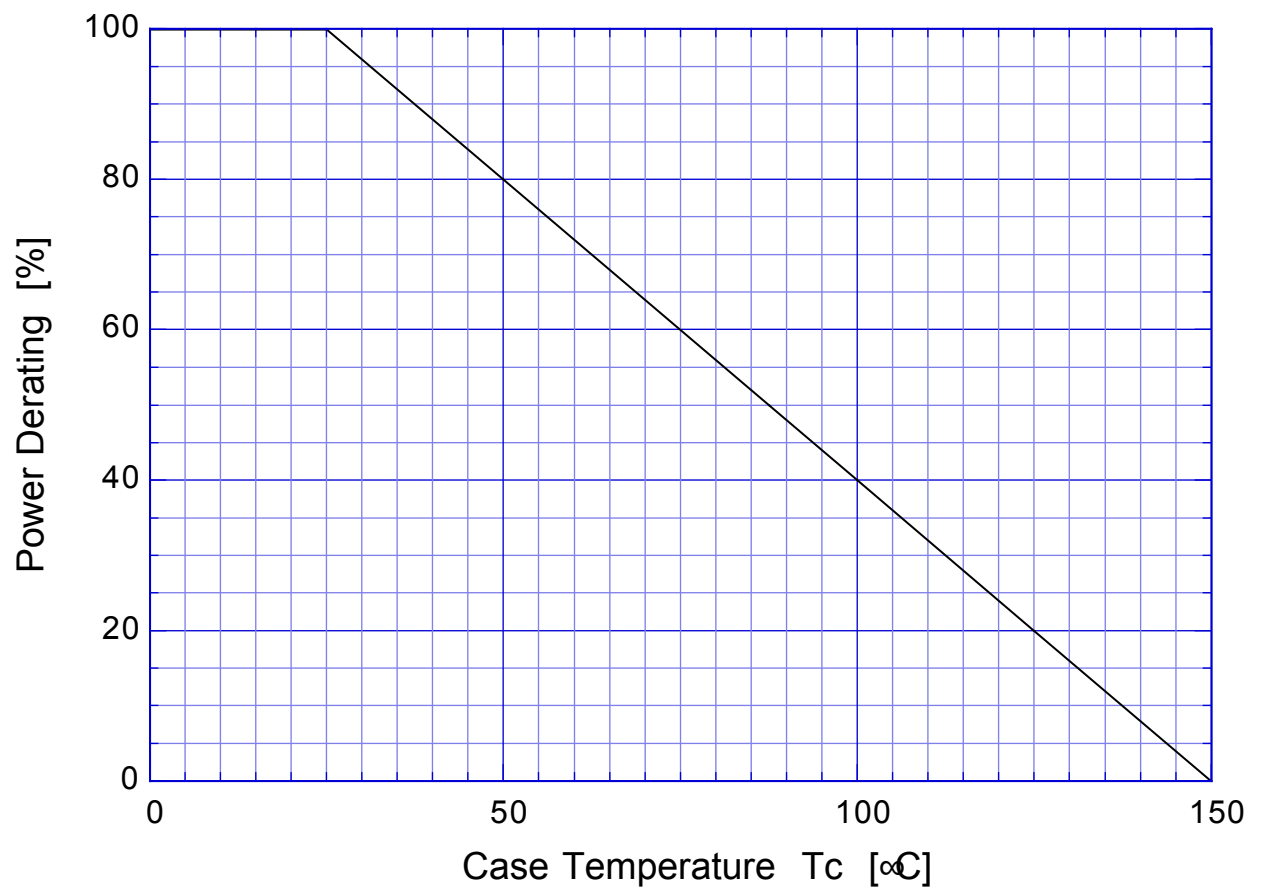


2SK2668 Single Avalanche Current - Inductive Load



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Power Derating



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Gate Charge Characteristics

