SHINDENGEN

VX-2 Series Power MOSFET

N-Channel Enhancement type

2SK2564
(F8F60VX2)

600V 8A

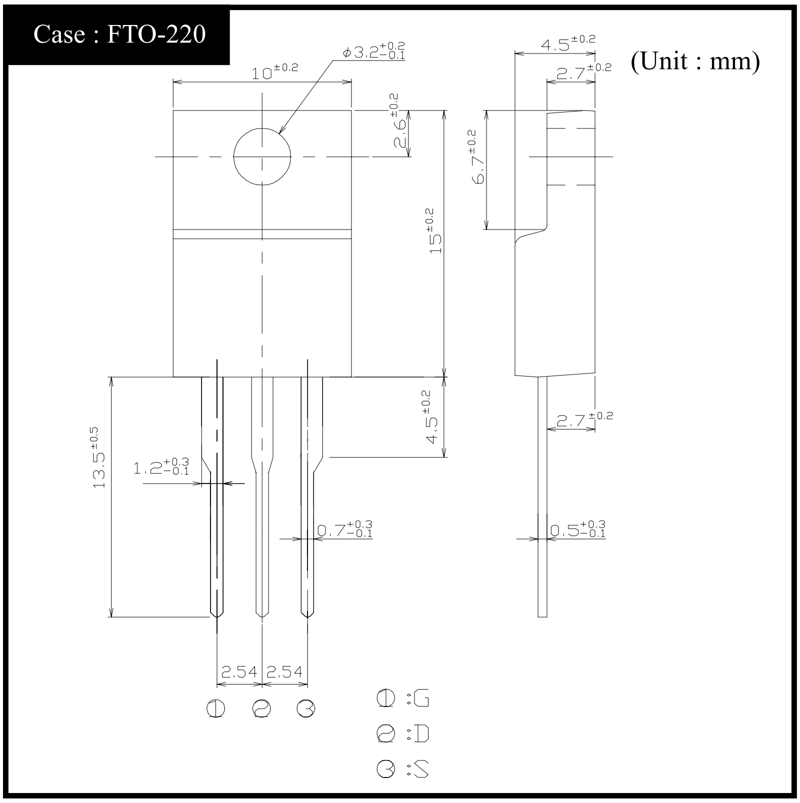
FEATURES

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

APPLICATION

- ●Switching power supply of AC 100-200V input
- ●Inverter
- ●Power Factor Control Circuit

OUTLINE DIMENSIONS



RATINGS

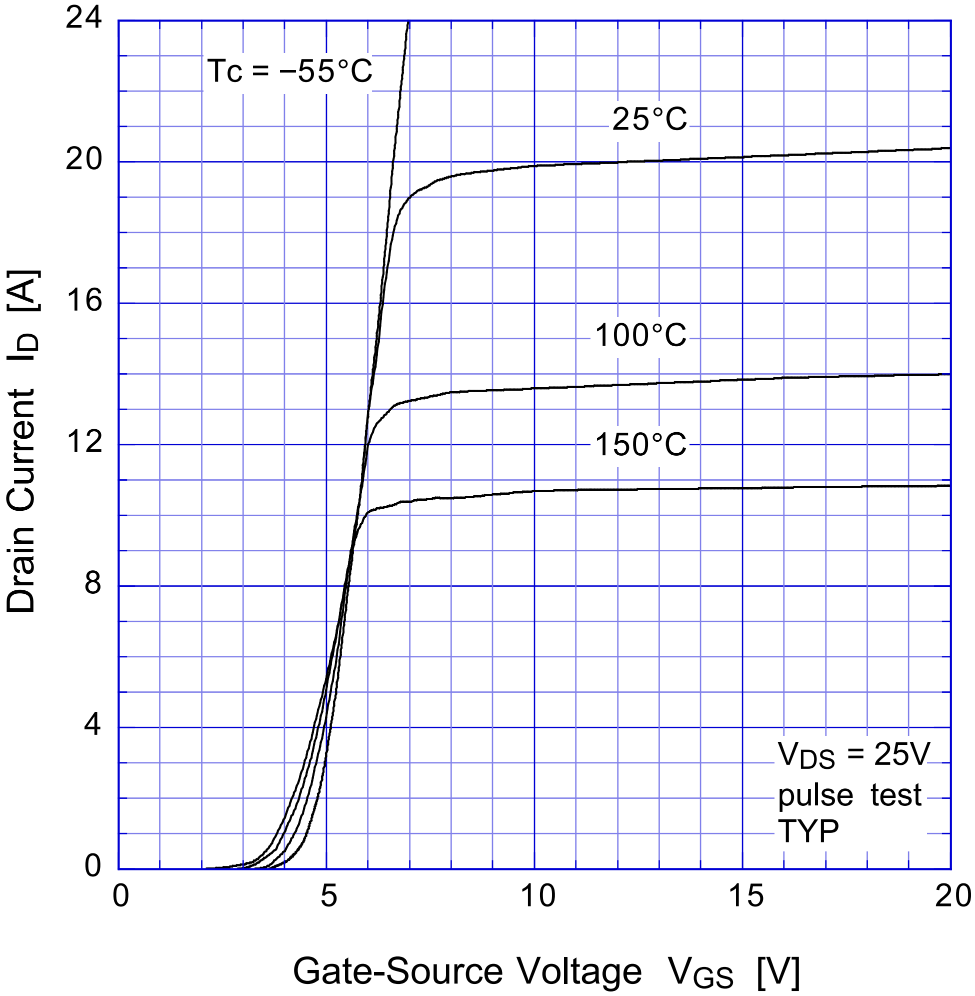
●Absolute Maximum Ratings （Tc = 25℃）

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		-55～150	℃
Channel Temperature	T_{ch}		150	
Drain-Source Voltage	V_{DSS}		600	V
Gate-Source Voltage	V_{GSS}		±30	
Continuous Drain Current(DC)	I_D		8	A
Continuous Drain Current(Peak)	I_{DP}		24	
Continuous Source Current(DC)	I_S		8	
Total Power Dissipation	P_T		50	W
Single Pulse Avalanche Current	I_{AS}	T_{ch} = 25℃	8	A
Dielectric Strength	V_{dis}	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque : 0.3N･m)	0.5	N･m

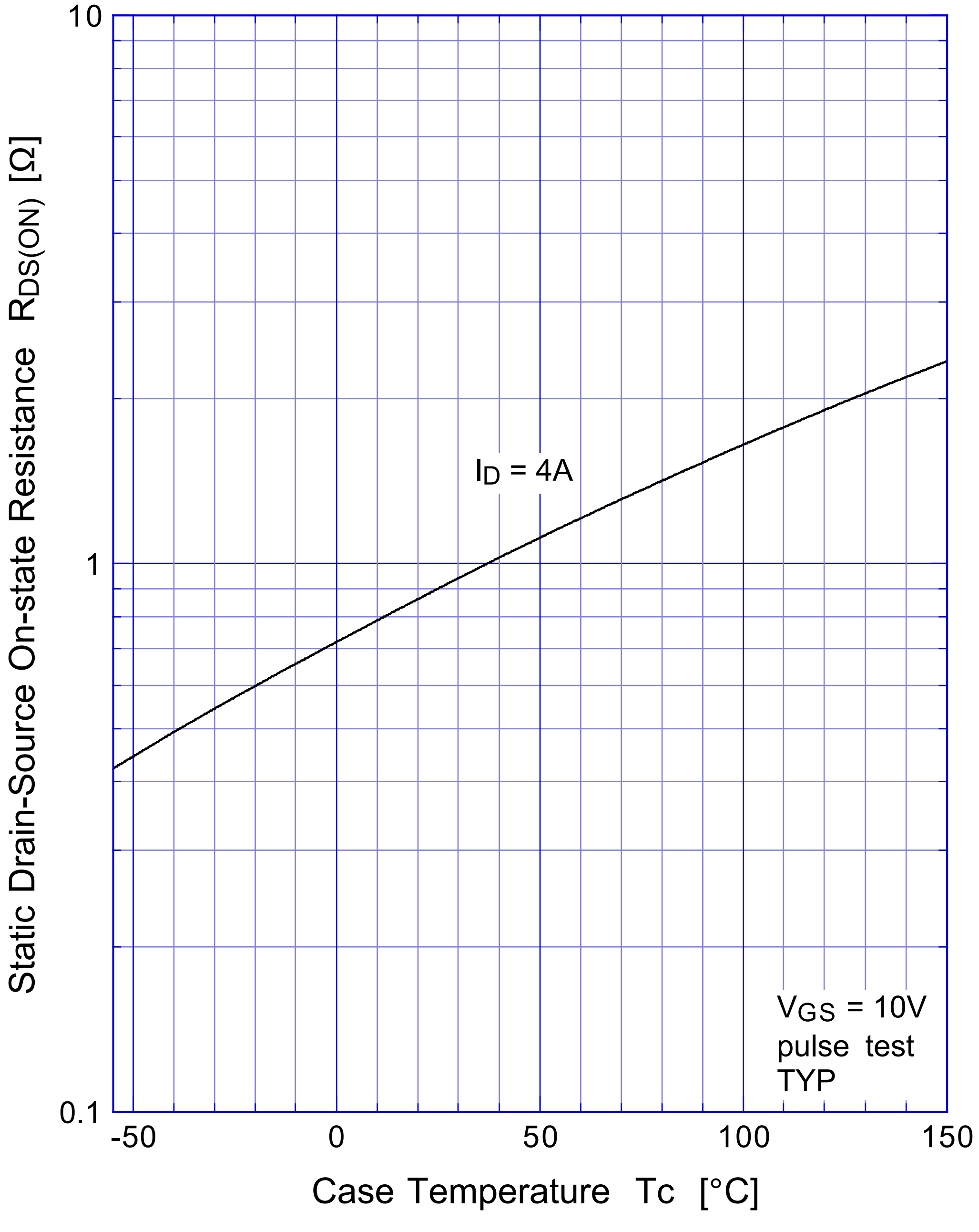
●Electrical Characteristics　Tc = 25℃

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	I_D = 1mA, V_{GS} = 0V	600			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 600V, 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 = 4A, V_{DS} = 10V	2.4	5.5		S
Static Drain-Source On-state Resistance	$R_{DS(ON)}$	I_D = 4A, V_{GS} = 10V		0.9	1.2	Ω
Gate Threshold Voltage	V_{TH}	I_D = 1mA, V_{DS} = 10V	2.5	3.0	3.5	V
Source-Drain Diode Forwade Voltage	V_{SD}	I_S = 4A, V_{GS} = 0V			1.5	
Thermal Resistance	θ jc	junction to case			2.5	℃/W
Total Gate Charge	Q_g	V_{DD} = 400V, V_{GS} = 10V, I_D = 8A		42		nC
Input Capacitance	C_{iss}	V_{DS} = 10V, V_{GS} = 0V, f = 1MHz		1130		pF
Reverse Transfer Capacitance	C_{rss}			85		
Output Capacitance	C_{oss}			245		
Turn-On Time	t_{on}	I_D = 4A, R_L = 37.5Ω, V_{GS} = 10V		55	80	ns
Turn-Off Time	t_{off}			195	290	

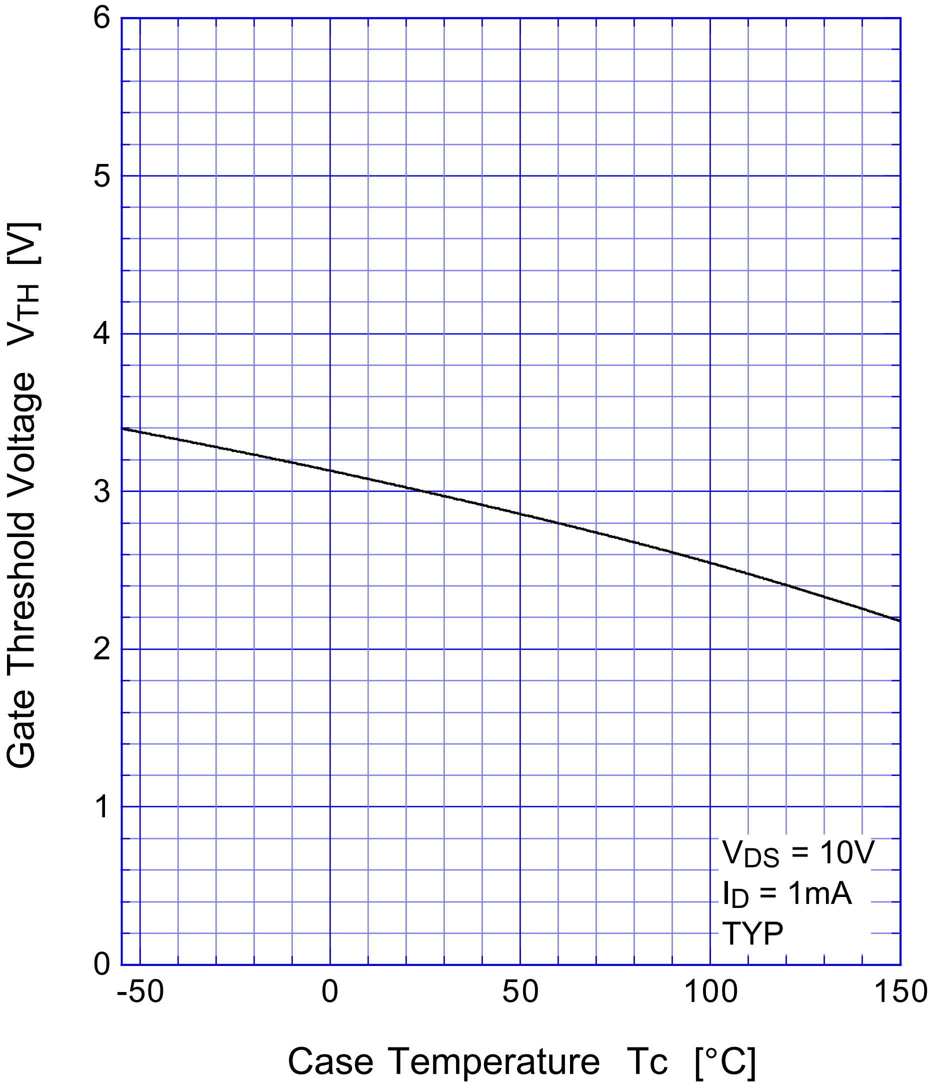
2SK2564 Transfer Characteristics



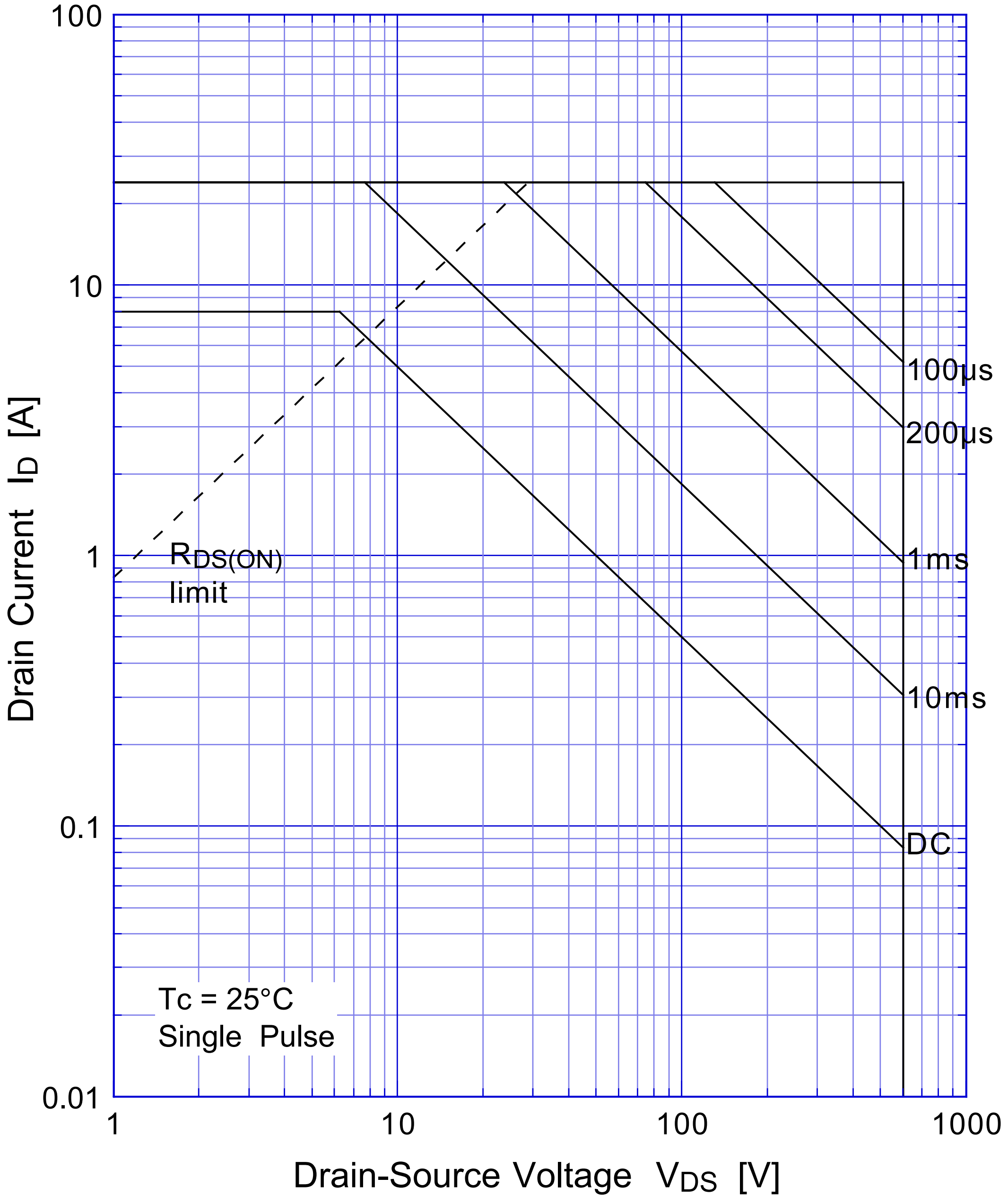
2SK2564 Static Drain-Source On-state Resistance



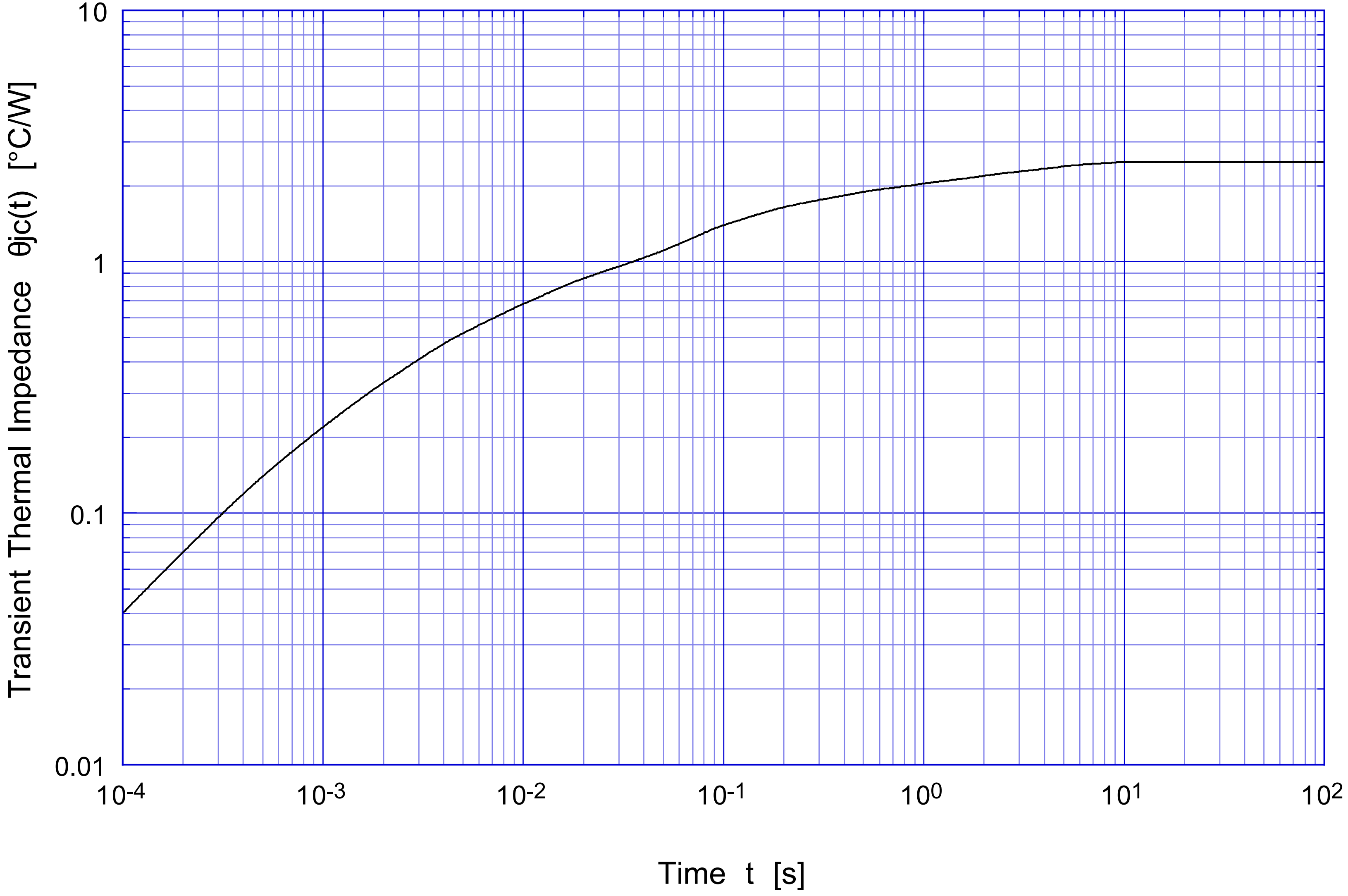
2SK2564 Gate Threshold Voltage



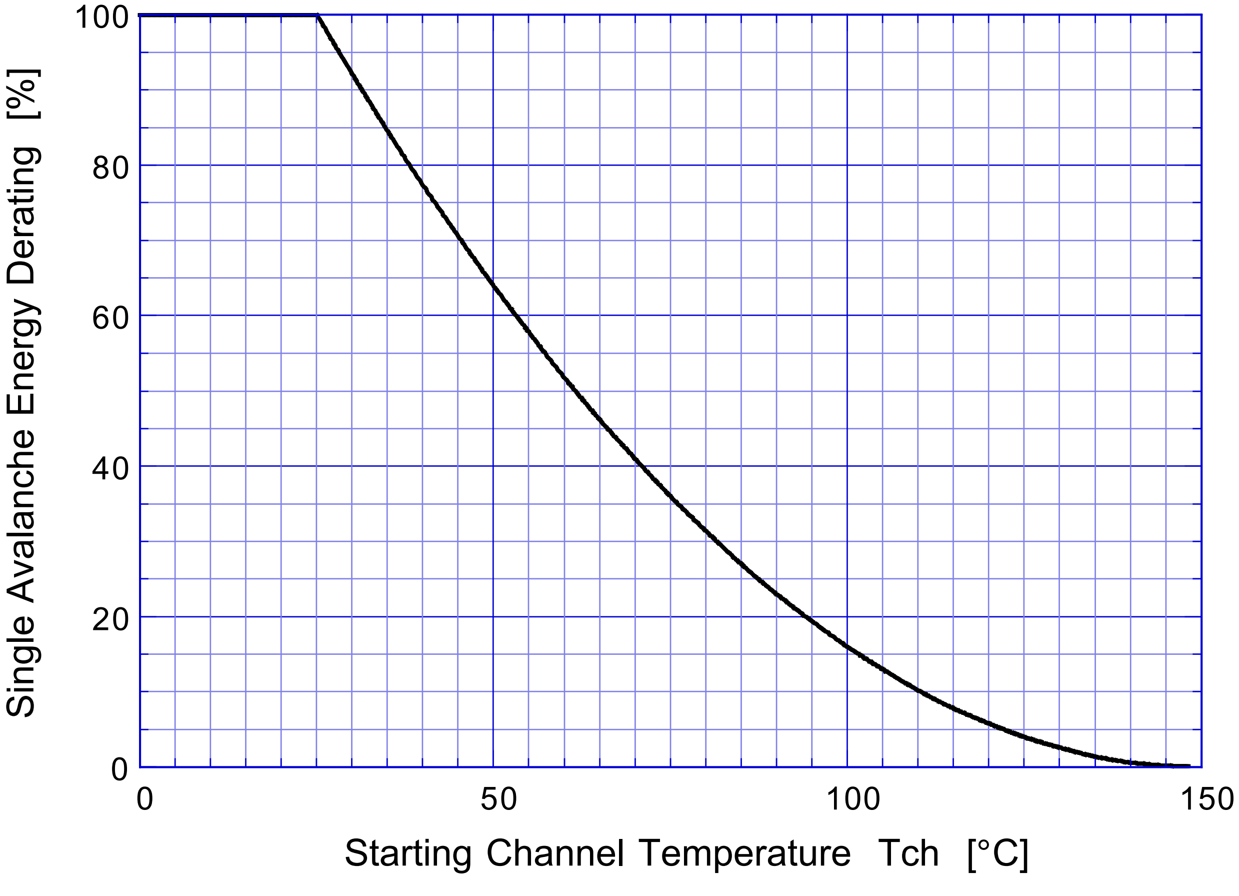
2SK2564 Safe Operating Area



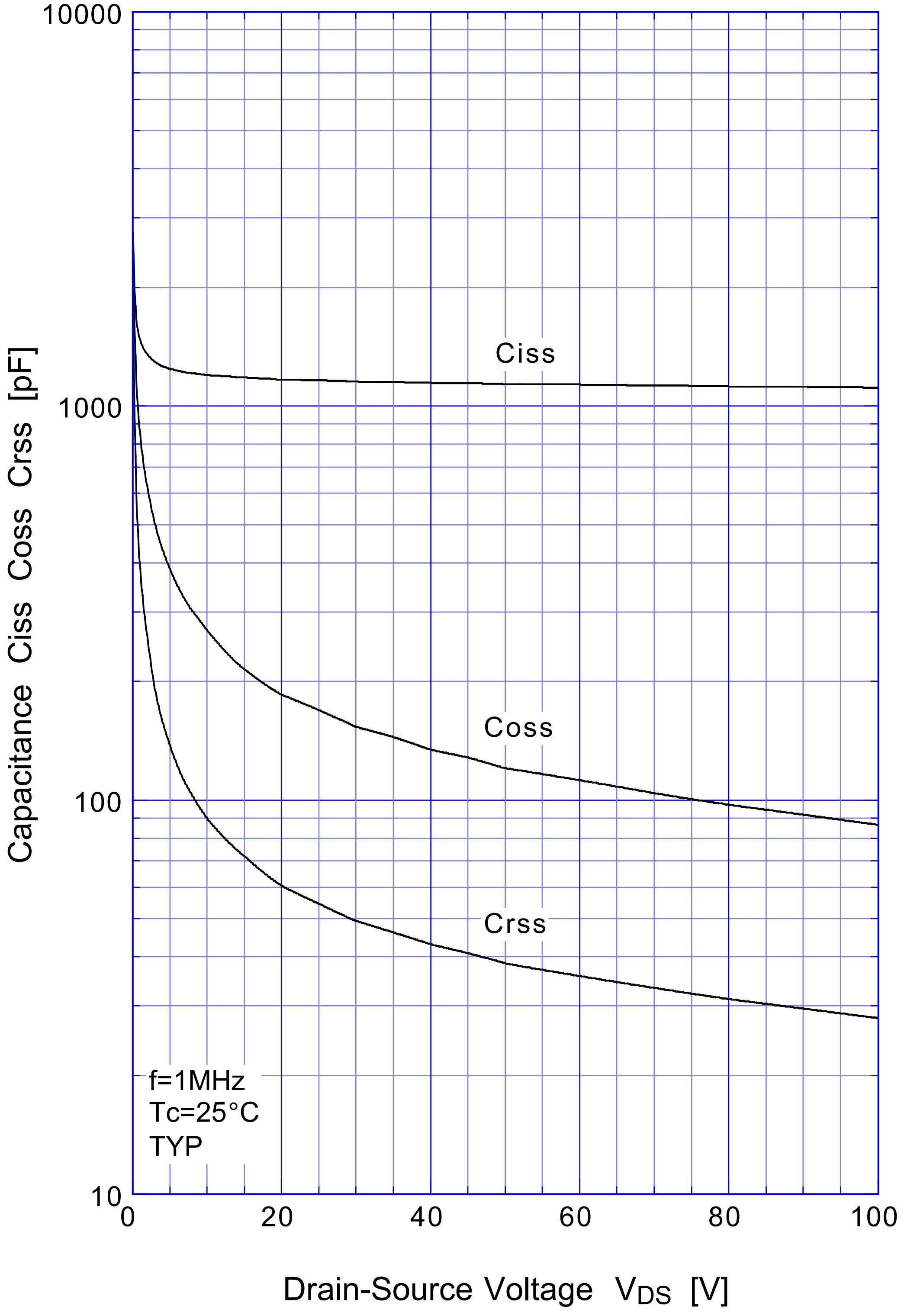
2SK2564 Transient Thermal Impedance



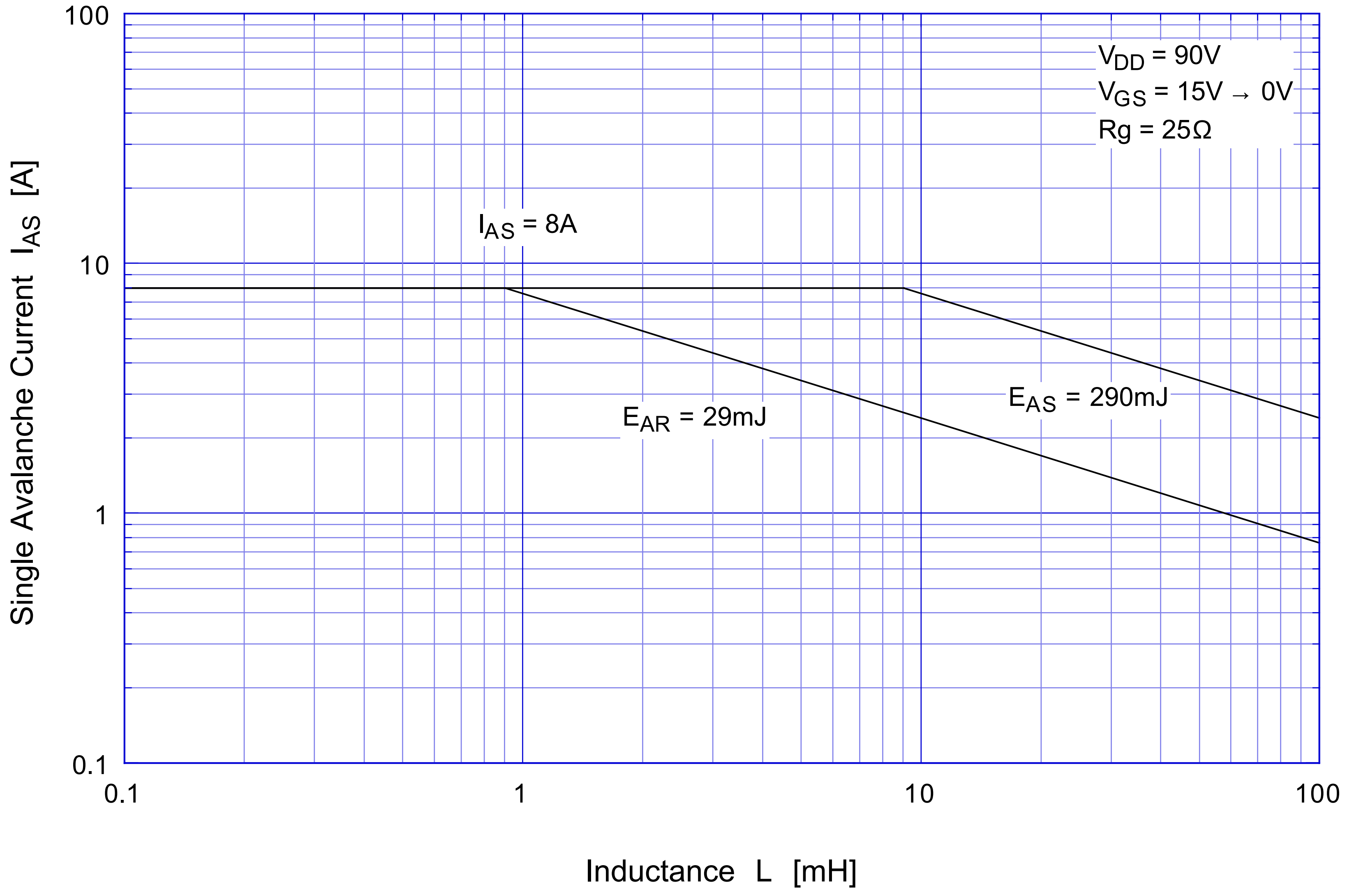
2SK2564 Single Avalanche Energy Derating



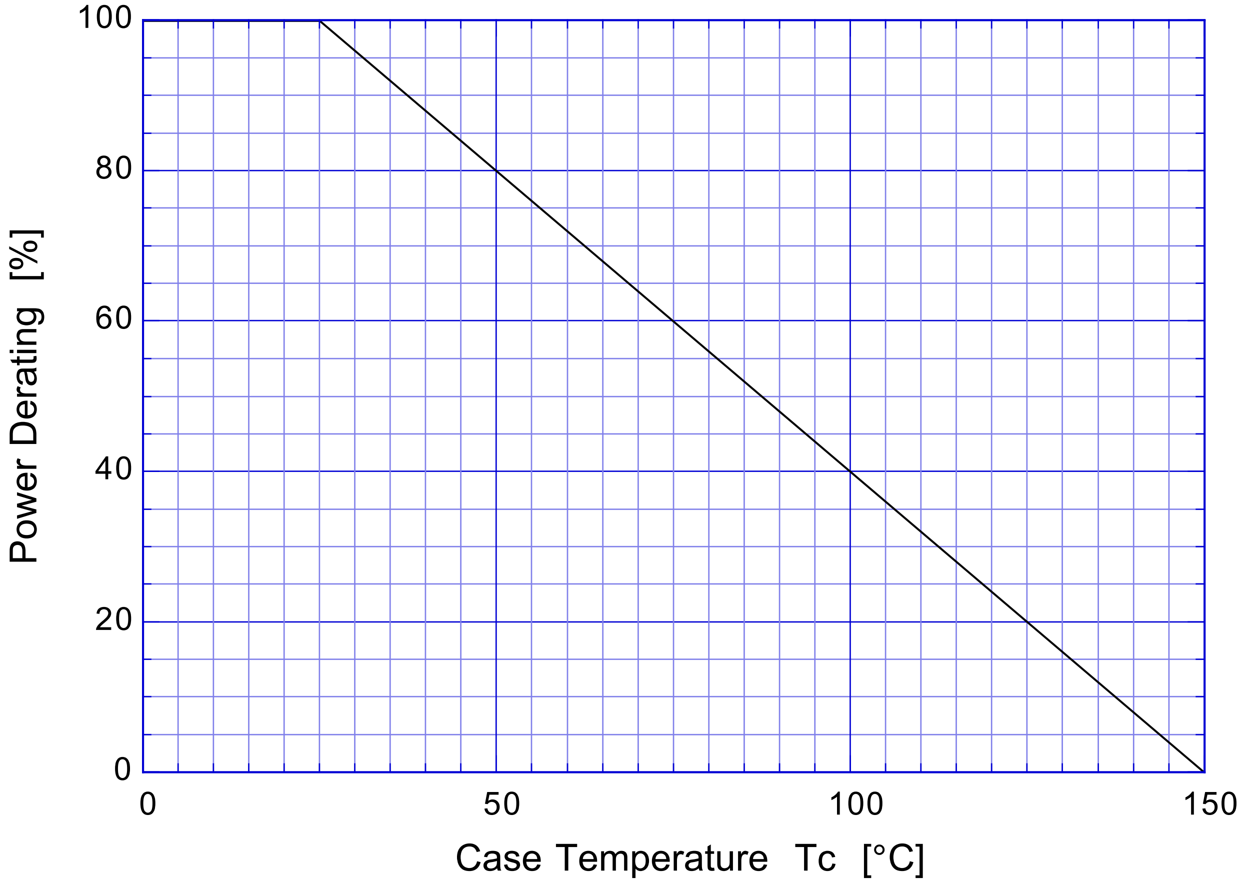
2SK2564 Capacitance



2SK2564 Single Avalanche Current - Inductive Load



2SK2564 Power Derating



2SK2564 Gate Charge Characteristics