

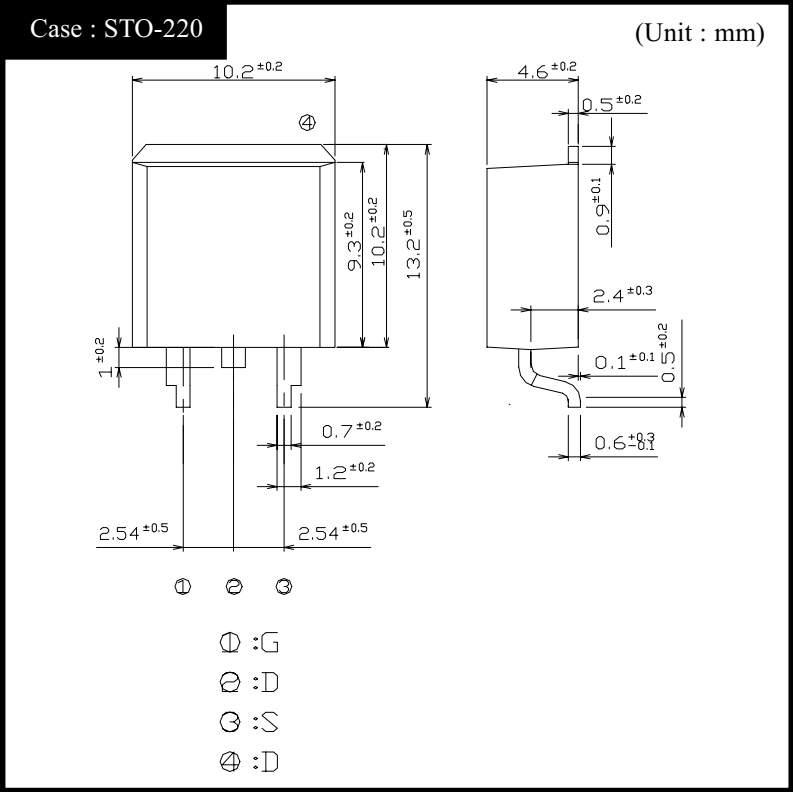
2SK2489

(F10S18VZ)

180V 10A

- 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.
- APPLICATION
- DC/DC converters
 - Power supplies of DC 12-24V input
 - Product related to
Integrated Service Digital Network

OUTLINE DIMENSIONS



RATINGS

●Absolute Maximum Ratings (Tc = 25°C)

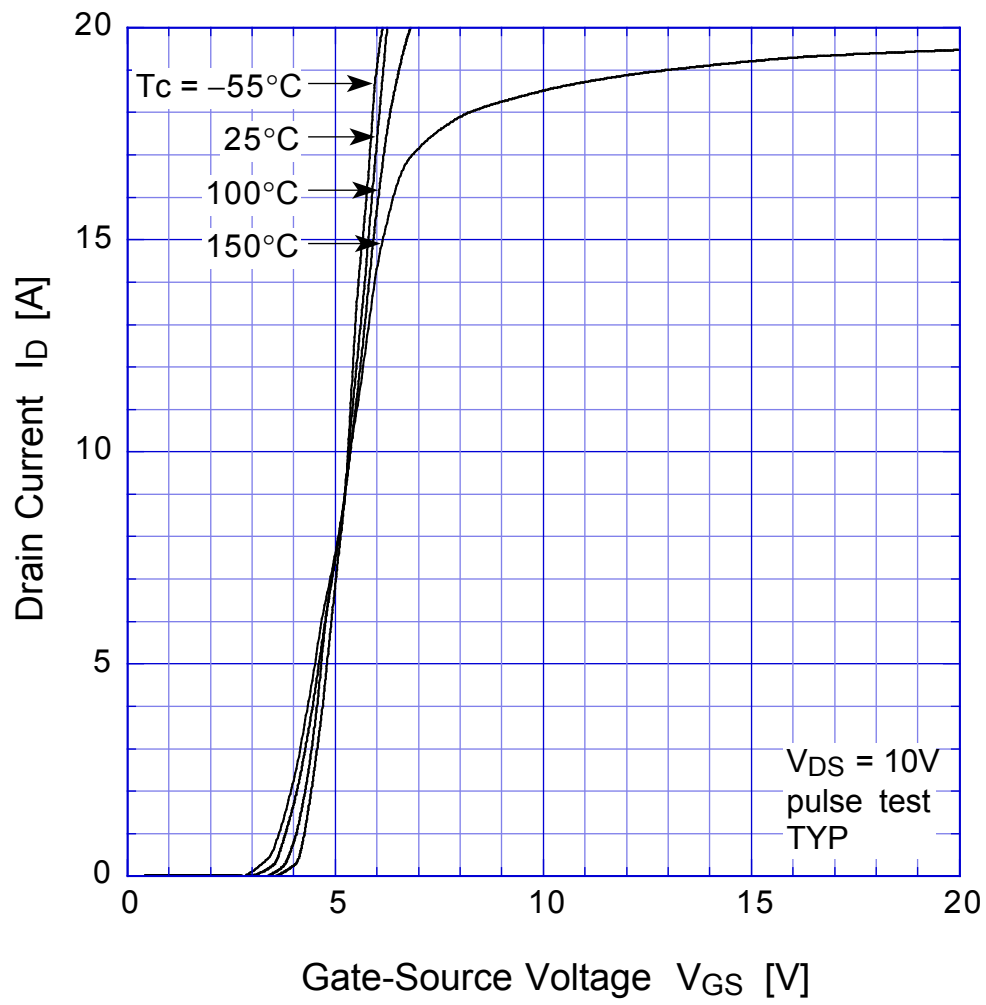
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T _{stg}		-55~150	°C
Channel Temperature	T _{ch}		150	
Drain-Source Voltage	V _{DSS}		180	V
Gate-Source Voltage	V _{GS}		±30	
Continuous Drain Current (DC)	I _D		10	A
Continuous Drain Current (Peak)	I _{DP}		20	
Continuous Source Current (DC)	I _S		10	
Total Power Dissipation	P _T		45	W
Single Pulse Avalanche Current	I _{AS}	T _{ch} = 25°C	10	A

●Electrical Characteristics $T_c = 25^\circ\text{C}$

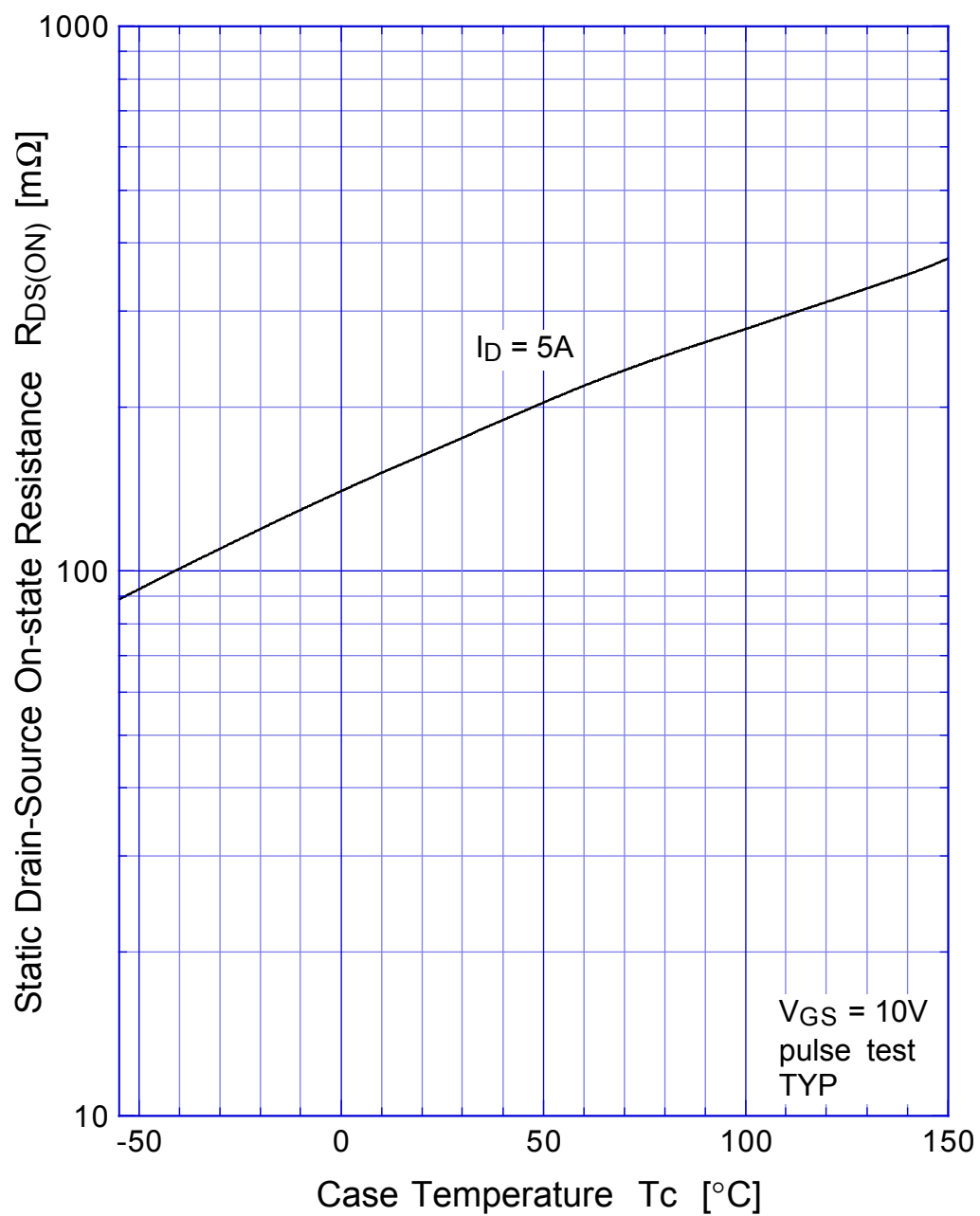
Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0\text{V}$	180			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 180\text{V}$, $V_{GS} = 0\text{V}$			250	μA
Gate-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 30\text{V}$, $V_{DS} = 0\text{V}$			± 0.1	
Forward Transconductance	g_{fs}	$I_D = 5\text{A}$, $V_{DS} = 10\text{V}$	3.0	7.0		S
Static Drain-Source On-state Resistance	$R_{DS(ON)}$	$I_D = 5\text{A}$, $V_{GS} = 10\text{V}$		0.17	0.25	Ω
Gate Threshold Voltage	V_{TH}	$I_D = 1\text{mA}$, $V_{DS} = 10\text{V}$	2.0	3.0	4.0	V
Source-Drain Diode Forward Voltage	V_{SD}	$I_S = 5\text{A}$, $V_{GS} = 0\text{V}$			1.5	
Thermal Resistance	θ_{jc}	junction to case			2.77	$^\circ\text{C}/\text{W}$
Total Gate Charge	Q_g	$V_{DD} = 150\text{V}$, $V_{GS} = 10\text{V}$, $I_D = 10\text{A}$		25		nC
Input Capacitance	C_{iss}	$V_{DS} = 10\text{V}$, $V_{GS} = 0\text{V}$, $f = 1\text{MHz}$		720		pF
Reverse Transfer Capacitance	C_{rss}			80		
Output Capacitance	C_{oss}			280		
Turn-On Time	t_{on}	$I_D = 5\text{A}$, $V_{GS} = 10\text{V}$, $R_L = 20\Omega$		50	100	ns
Turn-Off Time	t_{off}			140	280	

2SK2489

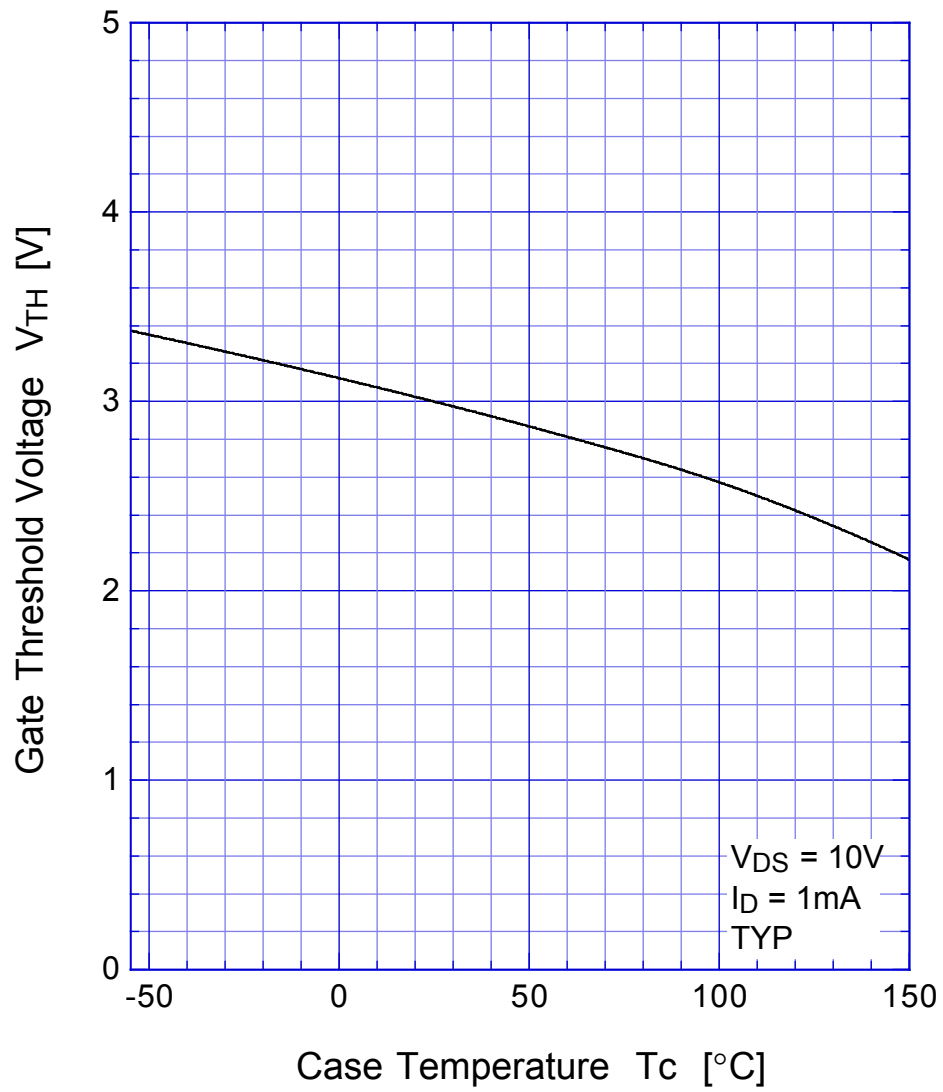
Transfer Characteristics



2SK2489 Static Drain-Source On-state Resistance

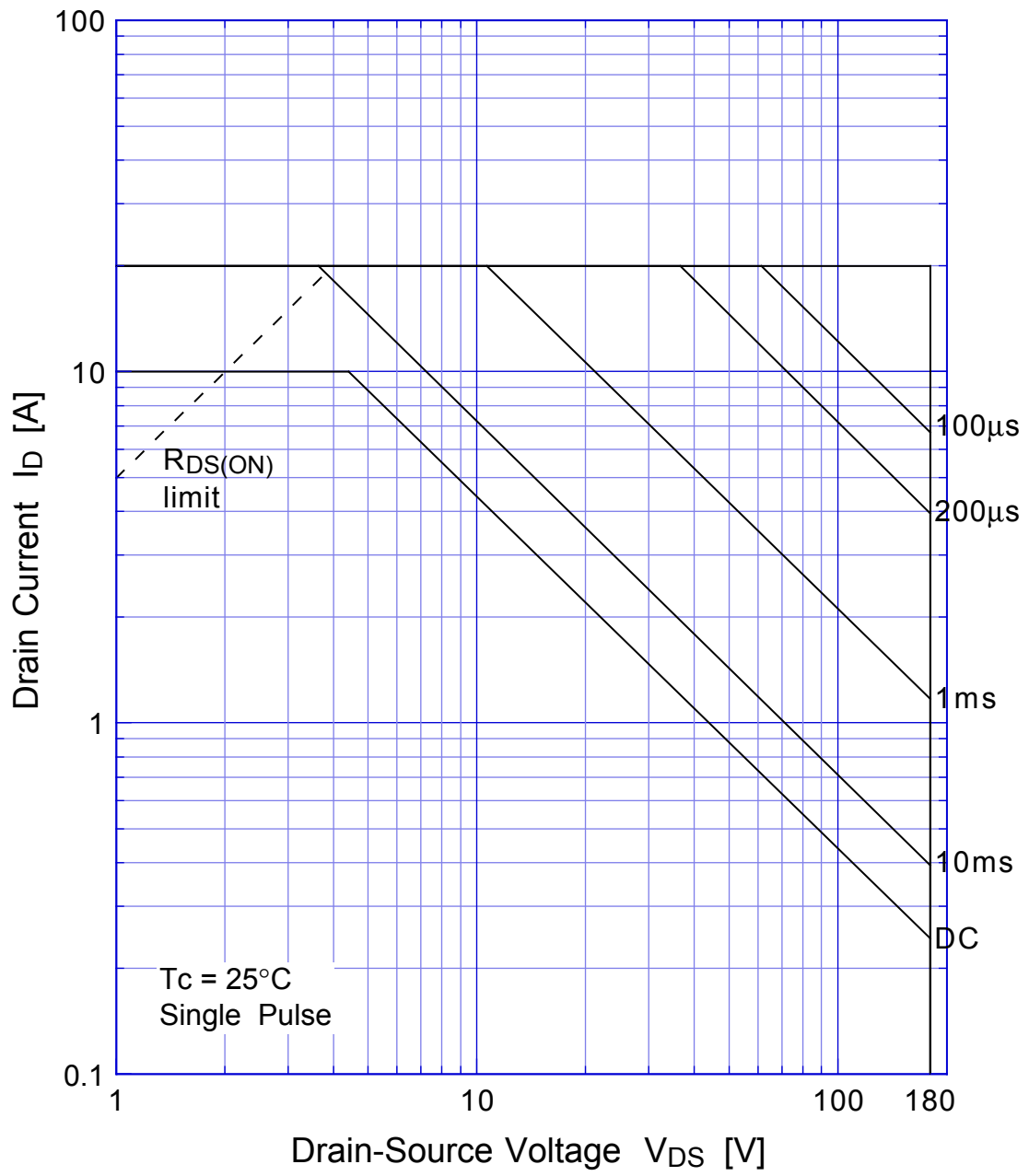


2SK2489 Gate Threshold Voltage

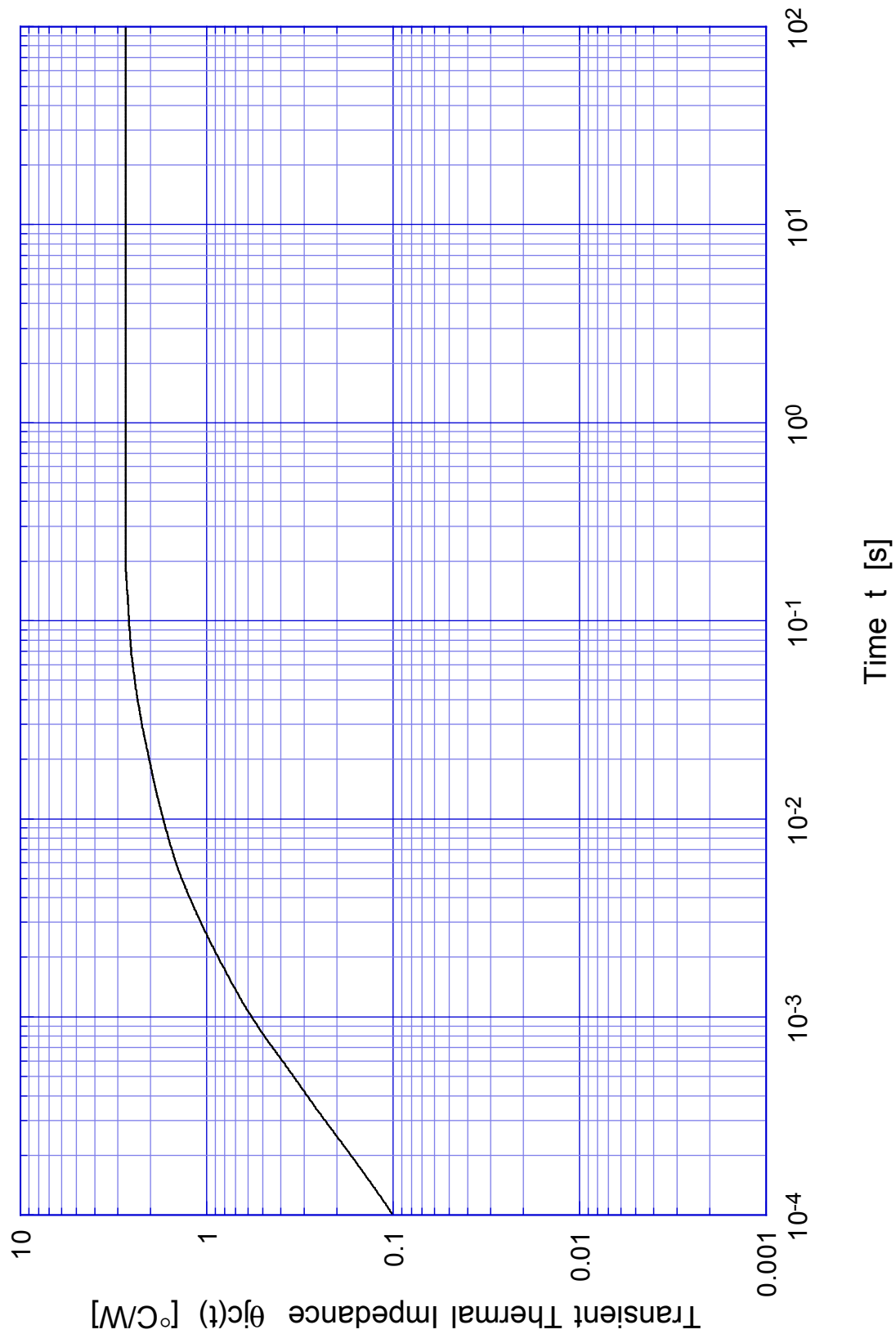


2SK2489

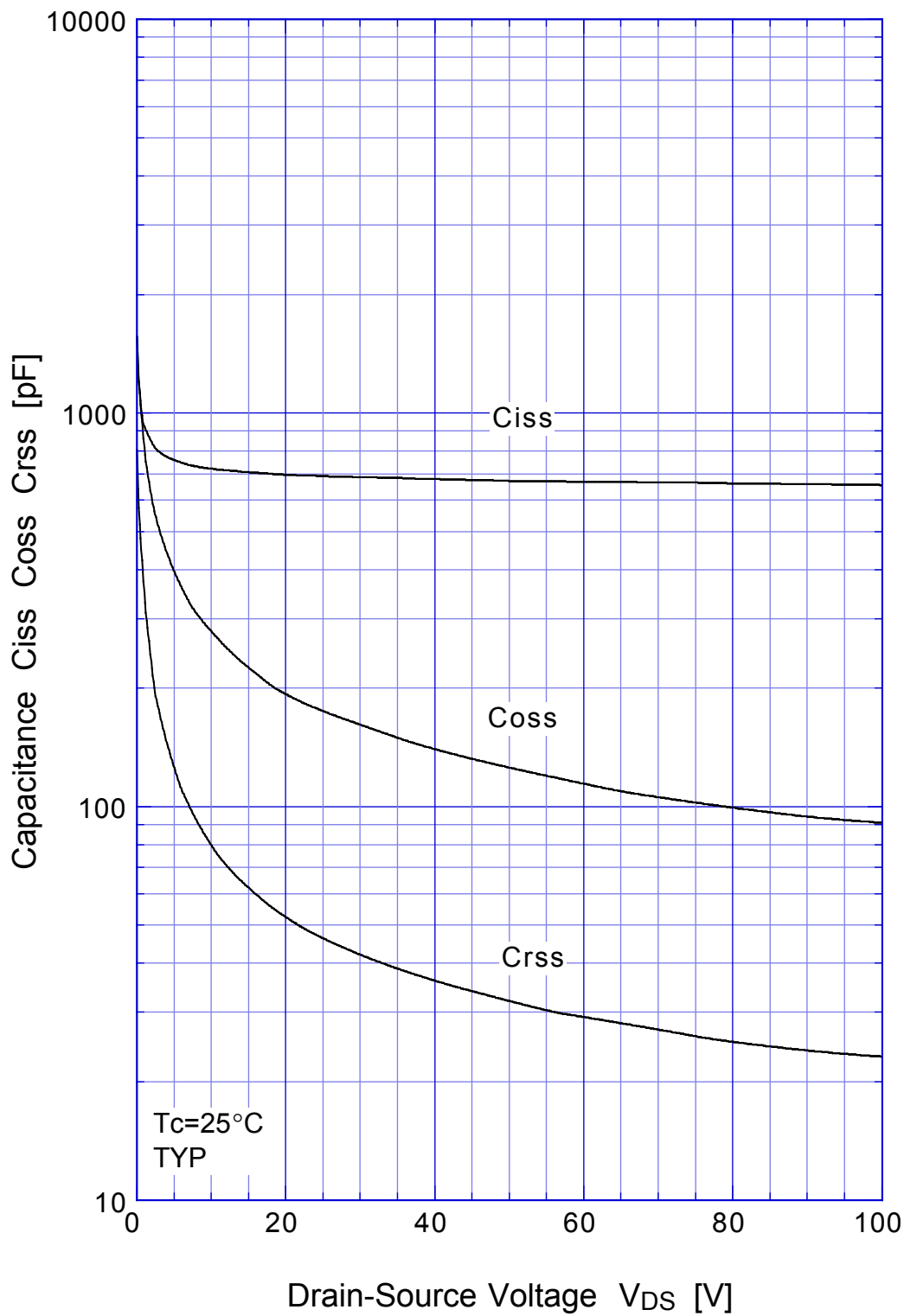
Safe Operating Area



2SK2489 Transient Thermal Impedance

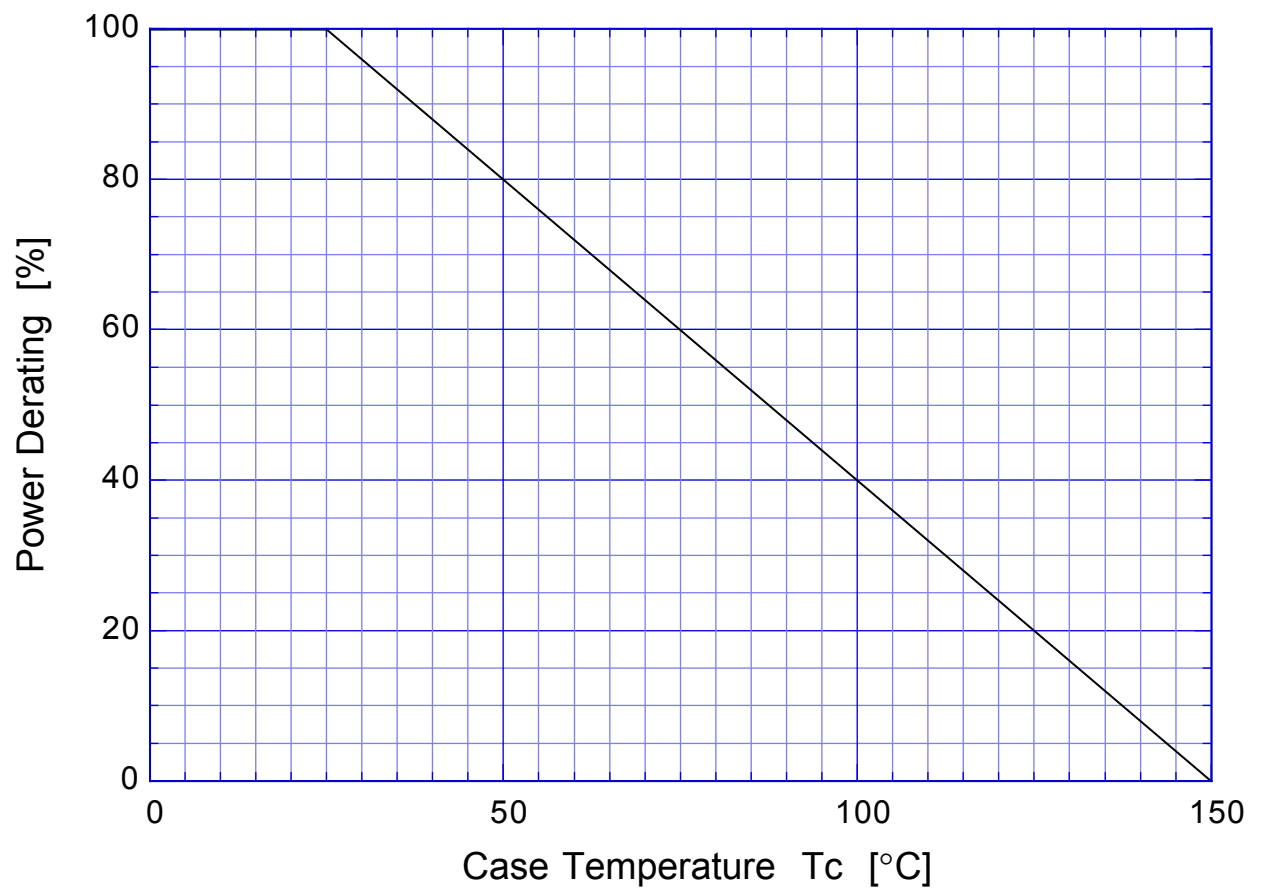


2SK2489 Capacitance



2SK2489

Power Derating



2SK2489

Gate Charge Characteristics

