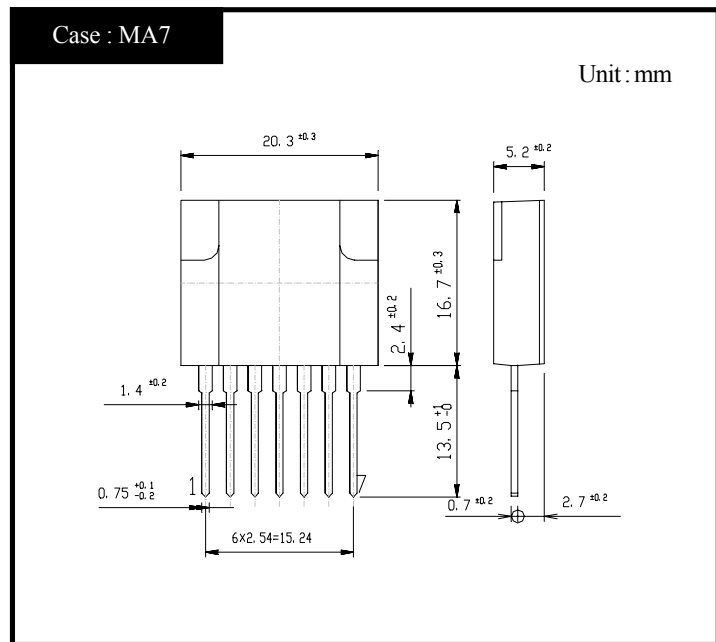


# MA4820

### 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-,⑥-	800	V
Input Current	Iin	DC ②+,③-	5	A
		Pulse ②+,③- Duty 1/2	10	A
Maximum Power Dissipation	Pd	Ta=25°C	3	W
		Heatsink Tc=100°C	21	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	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	Iz	⑤+,④-	MAX 20	mA

#### ●Electrical Characteristics (Tc=25°C)

Item	Symbol	Conditions	Ratings	Unit
Q1	Zero Gate Voltage Drcain Current	IDSS VDS=800V, VGS=0V, ②+,③-	MAX 250	μA
	Static Drain-Source On-State Resistance	RDs(on) I0=2.5A, ②+,③- VGS=10V, ⑤+,③-	TYP (2.1)	Ω
			MAX 3.0	Ω
	Thermal Resistance	θjc Junction to Case	MAX 2.3	°C/W
D1	Reverse Current	IR VR=800V, ①+,②-	MAX 10	μA
	Forward Voltage	VF IF=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		4	A

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

Item	Conditions	Ratings	Unit		
Minimum Input Full Load Output Voltage	V <sub>in</sub> =90V, I <sub>O</sub> =4.0A	12.0±0.6	V	Fig 1, ① Refer	
Maximum Input Light Load Output Voltage	V <sub>in</sub> =276V, I <sub>O</sub> =0.40A	12.0±0.6	V	Fig 1, ② Refer	
Over Current Protection	Foldback Current	V <sub>in</sub> =276V, V <sub>O</sub> =10V	MAX 6.0	A	Fig 1, ③ Refer
	Short Circuit	V <sub>in</sub> =276V, R <sub>O</sub> =0.5Ω	Nodamage To Any Device, Automatic Recovery.	-	Fig 1, ④ Refer

Figure in ○=Terminal Sign

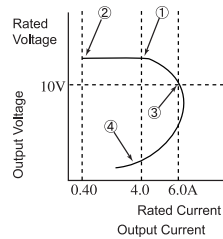
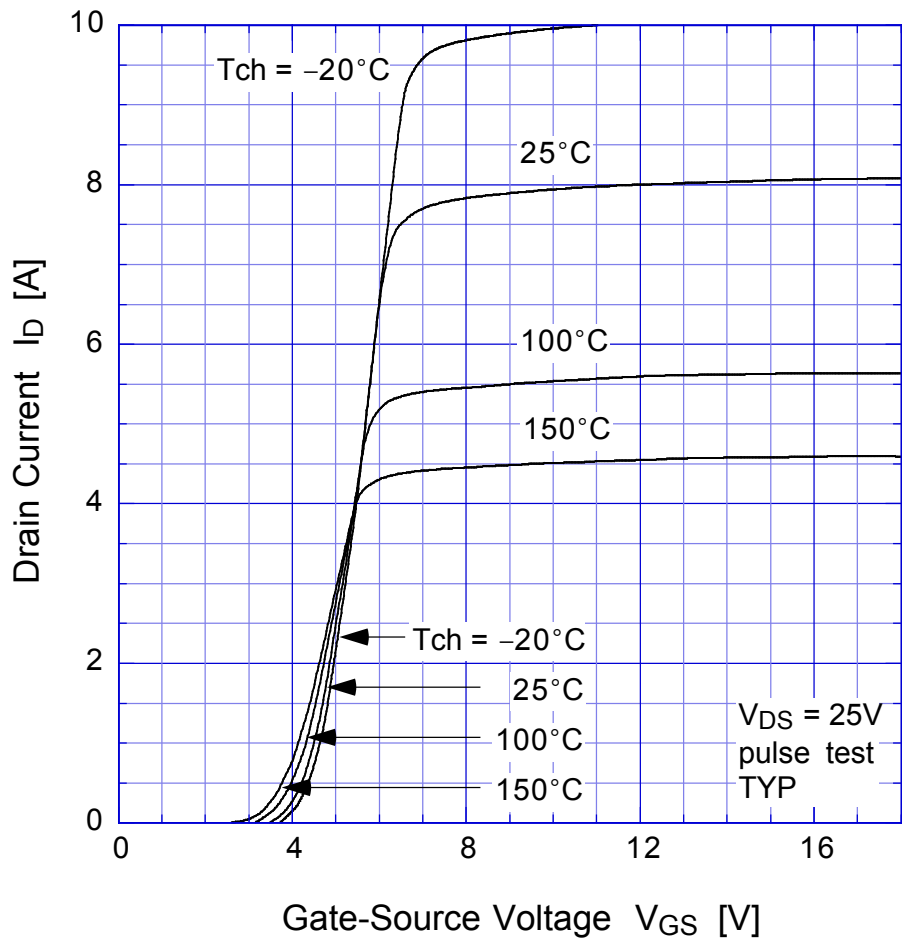
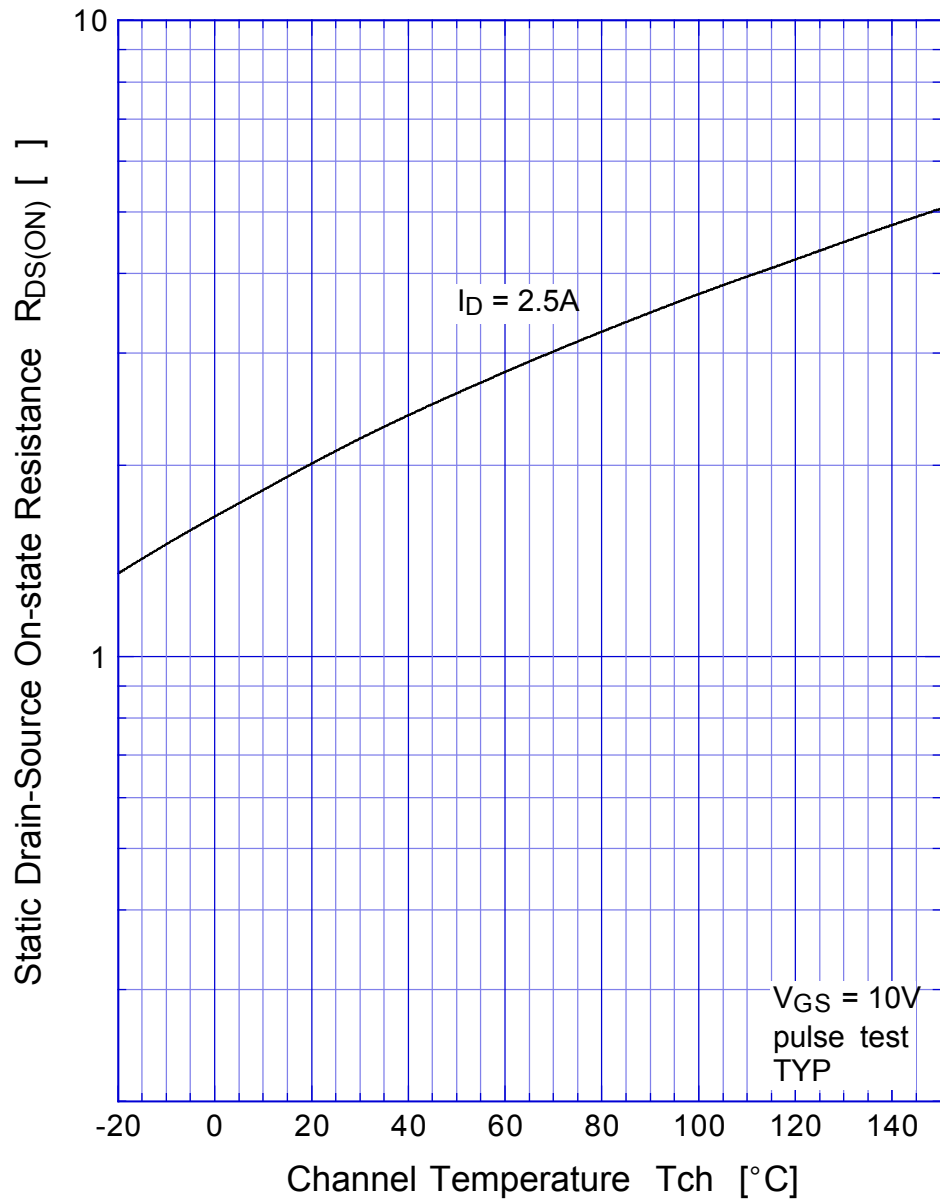


Fig1. Output Voltage/Current

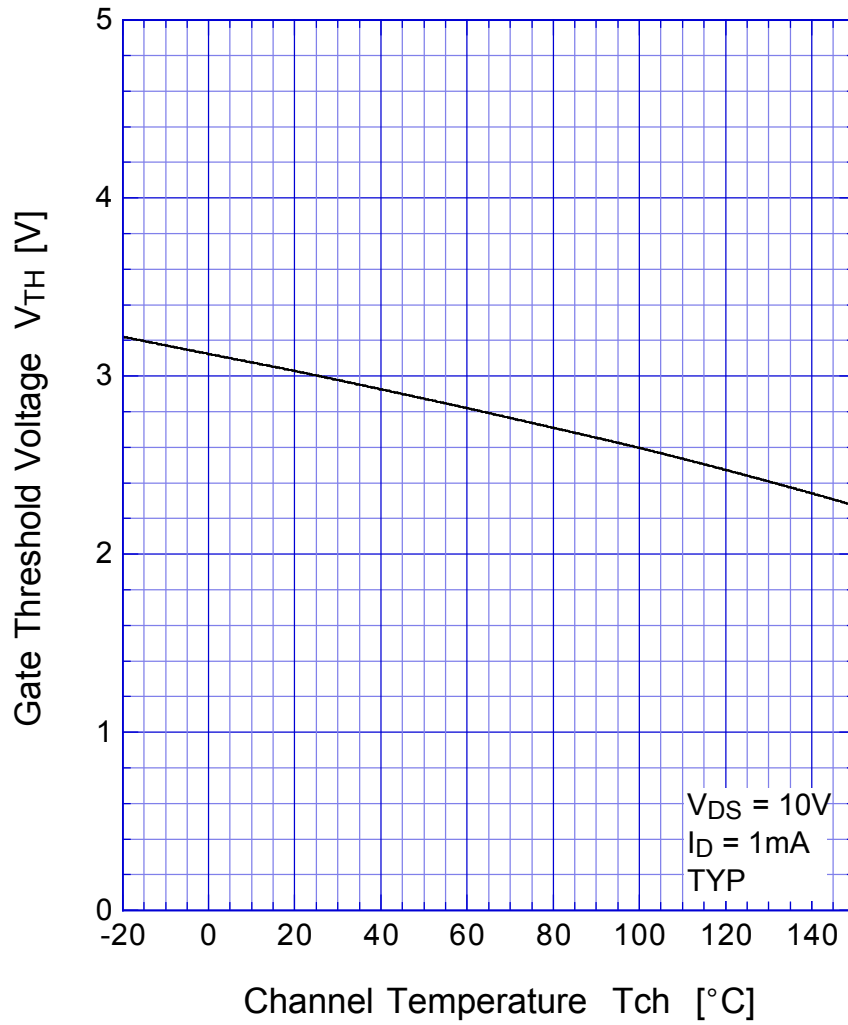
# MA4820 Transfer Characteristics



## MA4820 Static Drain-Source On-state Resistance

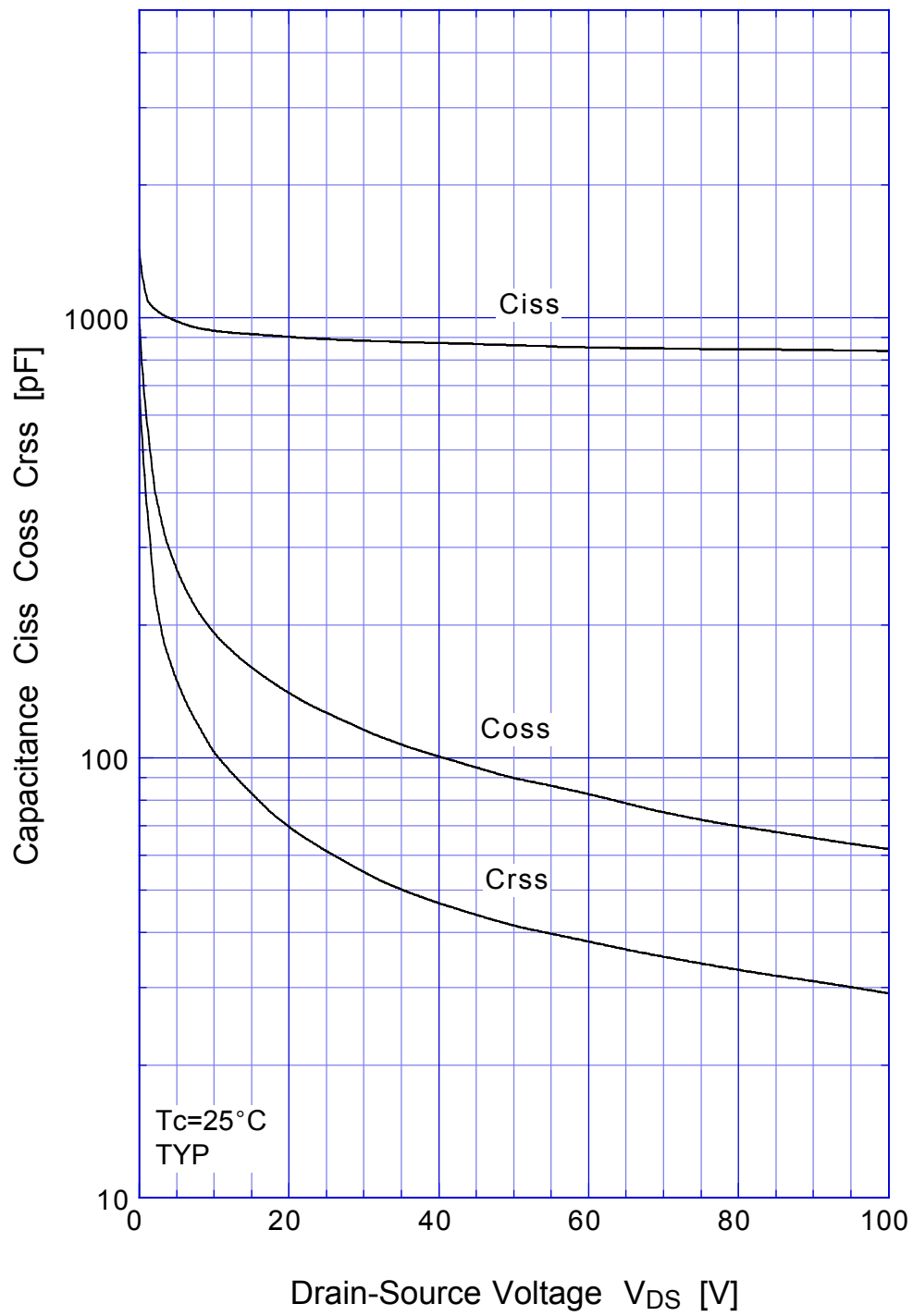


# MA4820 Gate Threshold Voltage

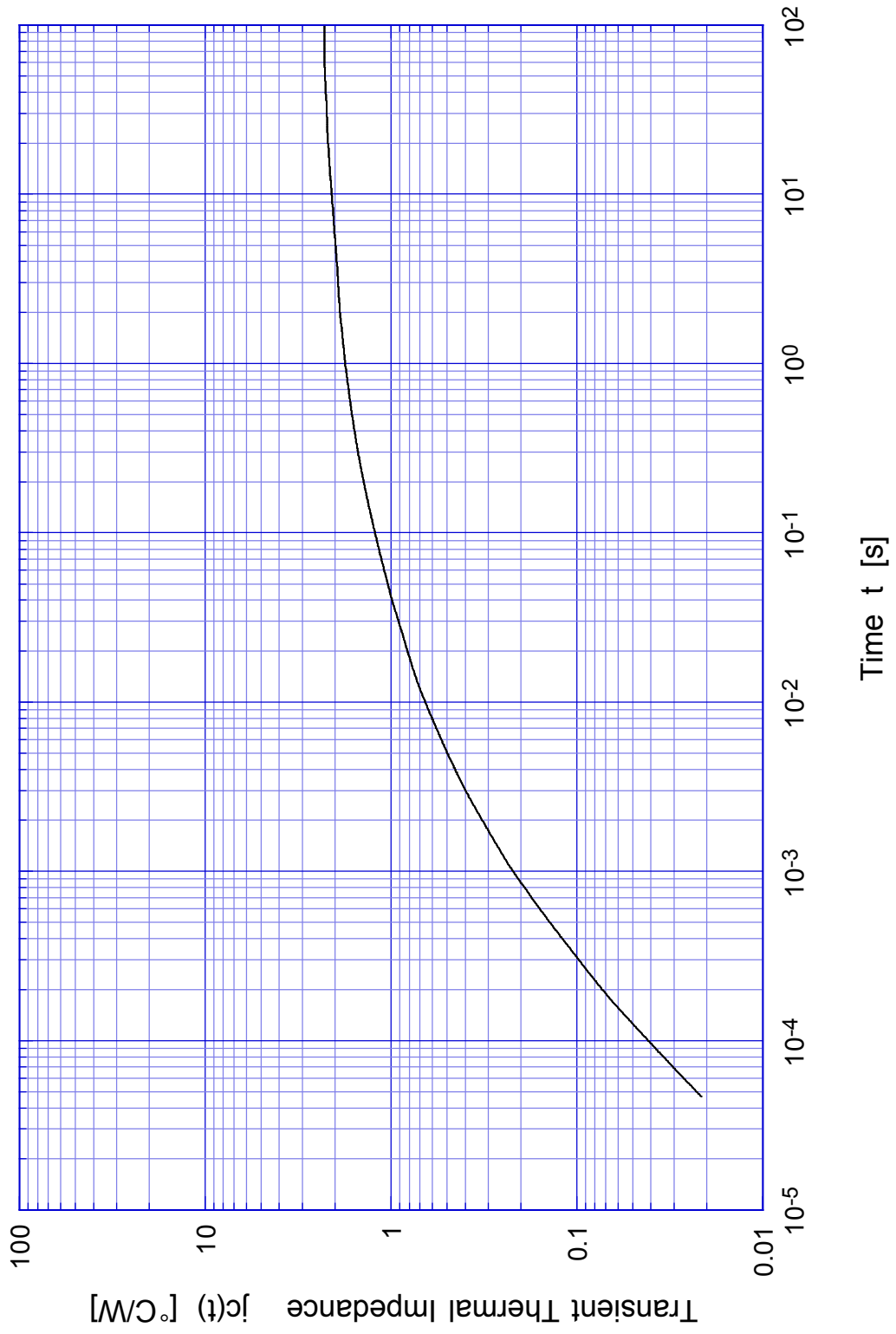


# MA4820

## Capacitance

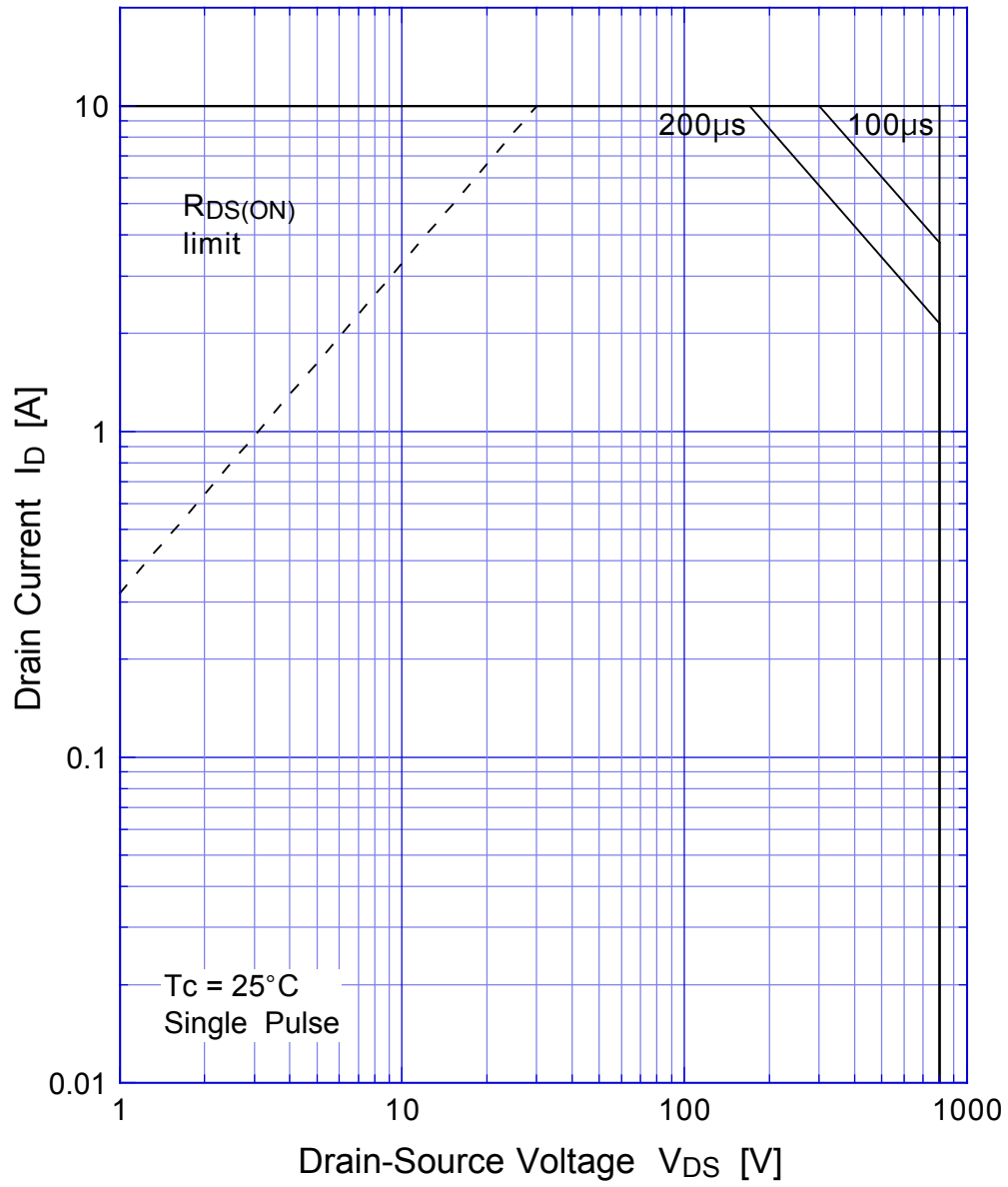


# MA4820 Transient Thermal Impedance



# MA4820

## Safe Operating Area





MA4820

Power Derating

