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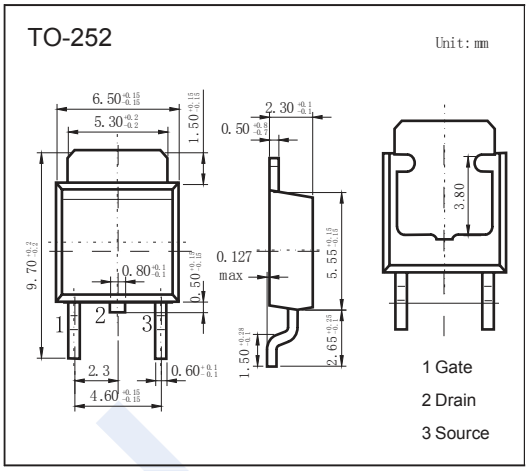
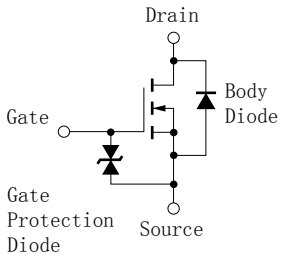


■ Features

- V_{DSS} = 60V
- I_D = 36 A (V_{GS} = 10V)
- $R_{DS(ON)}$ < 15mΩ (V_{GS} = 10V)
- $R_{DS(ON)}$ < 22mΩ (V_{GS} = 4V)
- Low Ciss : Ciss = 3200 pF TYP.



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current	I_D	36	A
Pulsed Drain Current (Note.1)	I_{DM}	144	
Single Avalanche Current (Note.2)	I_{AS}	35	
Power Dissipation Tc = 25℃	P_D	40	W
Power Dissipation Ta = 25℃		1	
Single Avalanche Energy (Note.2)	E_{AS}	123	mJ
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: PW ≤ 10 us, Duty Cycle ≤ 1 %

Note.2: Starting T_J = 25 °C, V_{DD} = 150 V, R_G = 25 Ω, V_{GS} = 20 V → 0 V

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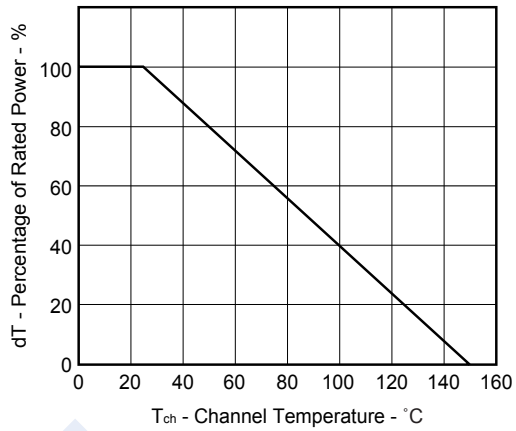
■ Electrical Characteristics Ta = 25℃

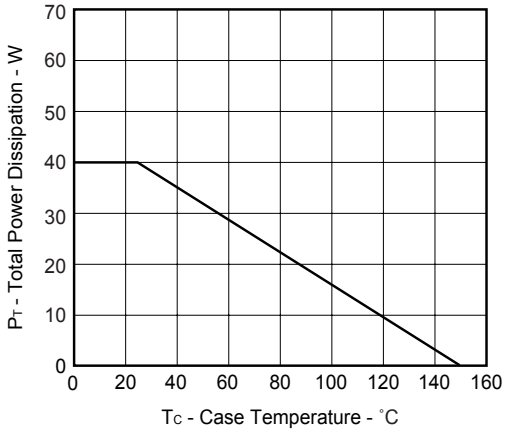
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=250μA, V_{GS}=0V	60			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			10	uA
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±10	uA
Gate to Source Cut-off Voltage	$V_{GS(off)}$	V_{DS}=10V , I_D=1mA	1.5		2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=18A			15	mΩ
		V_{GS}=4V, I_D=18A			22	
Forward Transconductance	g_{FS}	V_{DS}=10V, I_D=18A	13	27		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=10V, f=1MHz		3200		pF
Output Capacitance	C_{oss}			520		
Reverse Transfer Capacitance	C_{rss}			270		
Total Gate Charge	Q_g	V_{GS}=10V, V_{DS}=48V, I_D=36A		61		nC
Gate Source Charge	Q_{gs}			8.2		
Gate Drain Charge	Q_{gd}			17		
Turn-On DelayTime	$t_{d(on)}$	V_{DD} = 30 V, I_D = 18 A, V_{GS}= 10 V, R_G = 10 Ω		36		ns
Turn-On Rise Time	t_r			310		
Turn-Off DelayTime	$t_{d(off)}$			170		
Turn-Off Fall Time	t_f			180		
Body Diode Reverse Recovery Time	t_{rr}	I_F= 36A, V_{GS}=0, dI/dt= 100A/μs		48		
Body Diode Reverse Recovery Charge	Q_{rr}			89		nC
Diode Forward Voltage	V_{SD}	I_F=36A,V_{GS}=0V		1		V

■ Typical Characterisitics

DERATING FACTOR OF FORWARD BIAS SAFE OPERATING AREA



TOTAL POWER DISSIPATION vs. CASE TEMPERATURE



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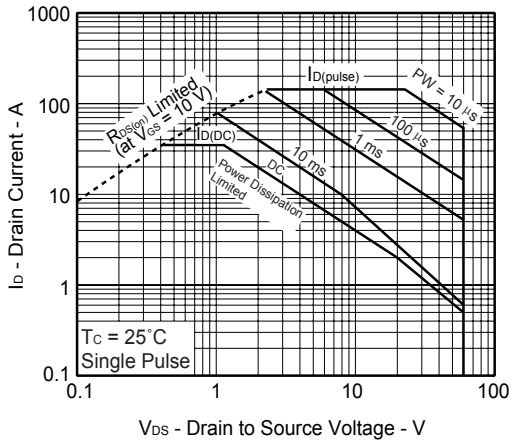
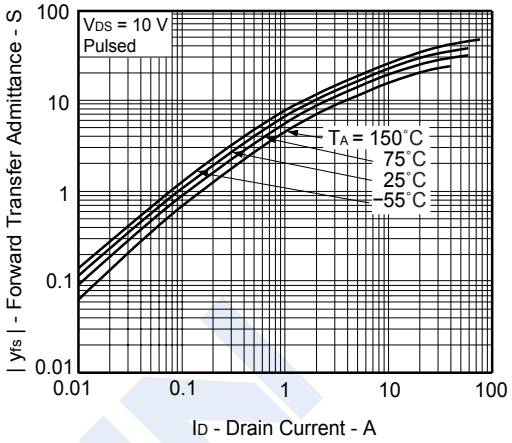
■ Typical Characterisitics

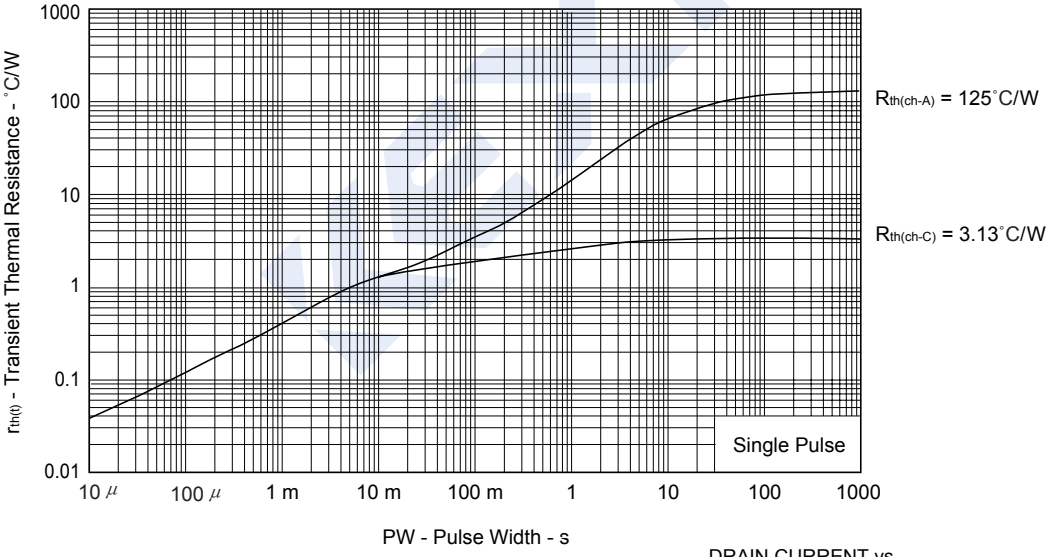
FORWARD BIAS SAFE OPERATING AREA



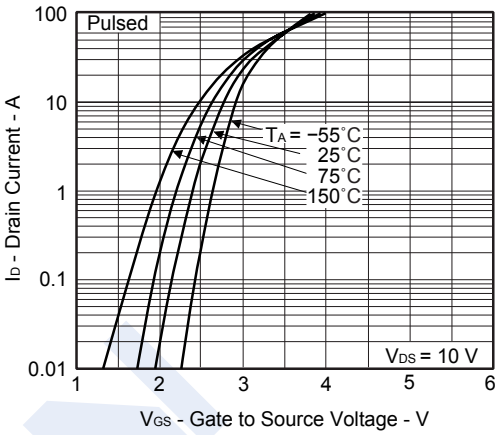
FORWARD TRANSFER ADMITTANCE vs. DRAIN CURRENT



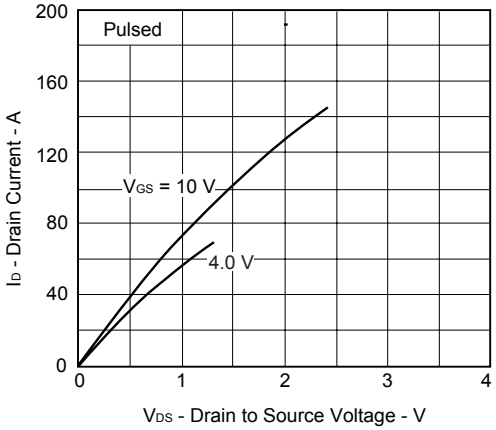
TRANSIENT THERMAL RESISTANCE vs. PULSE WIDTH



FORWARD TRANSFER CHARACTERISTICS



DRAIN CURRENT vs. DRAIN TO SOURCE VOLTAGE



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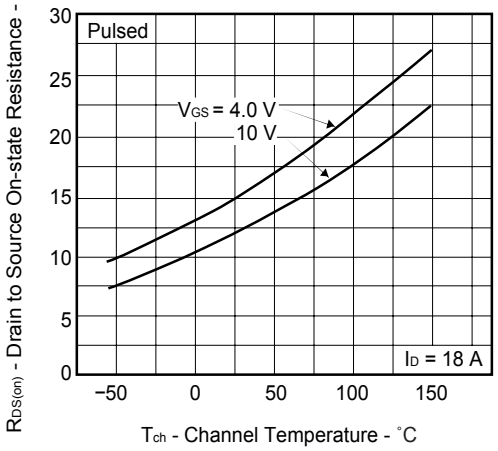
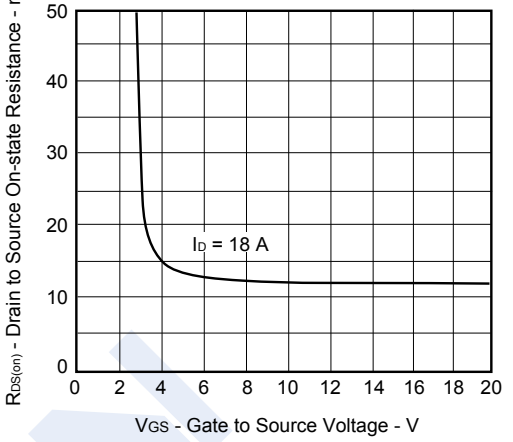
■ Typical Characterisitics

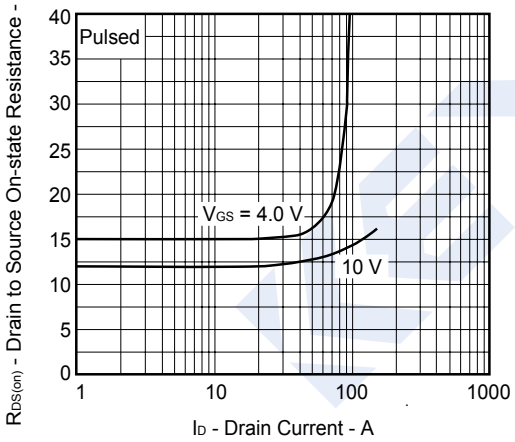
DRAIN TO SOURCE ON-STATE RESISTANCE vs. CHANNEL TEMPERATURE



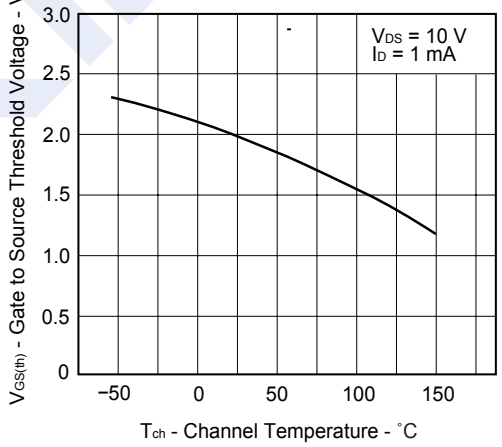
DRAIN TO SOURCE ON-STATE RESISTANCE vs. GATE TO SOURCE VOLTAGE



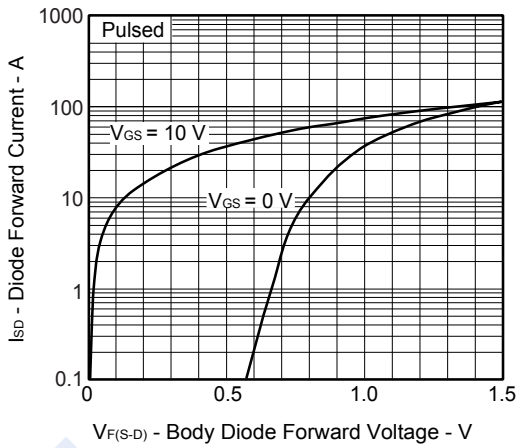
DRAIN TO SOURCE ON-STATE RESISTANCE vs. DRAIN CURRENT



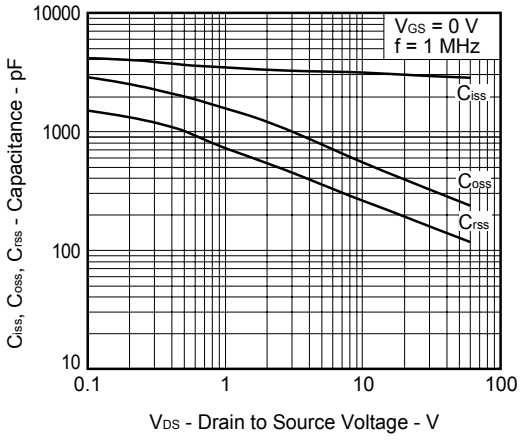
GATE TO SOURCE THRESHOLD VOLTAGE vs. CHANNEL TEMPERATURE



SOURCE TO DRAIN DIODE FORWARD VOLTAGE



CAPACITANCE vs. DRAIN TO SOURCE VOLTAGE



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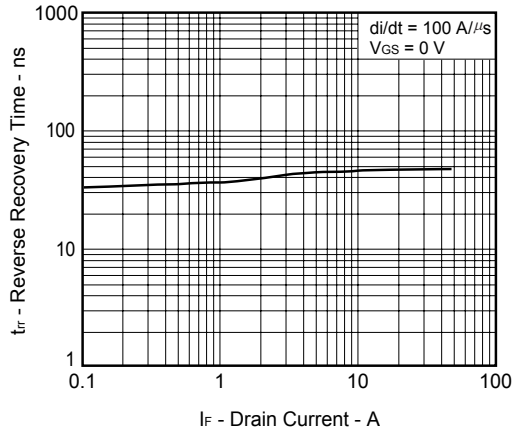
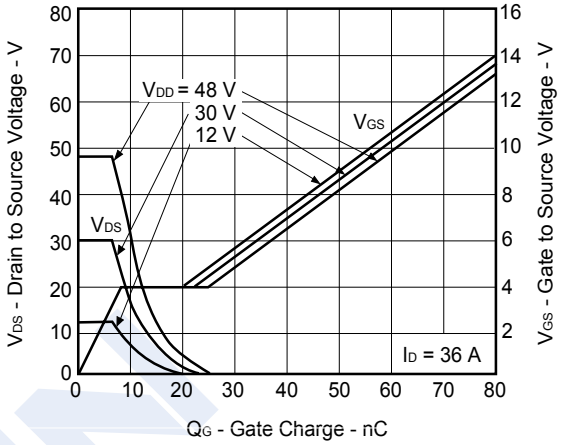
■ Typical Characterisitics

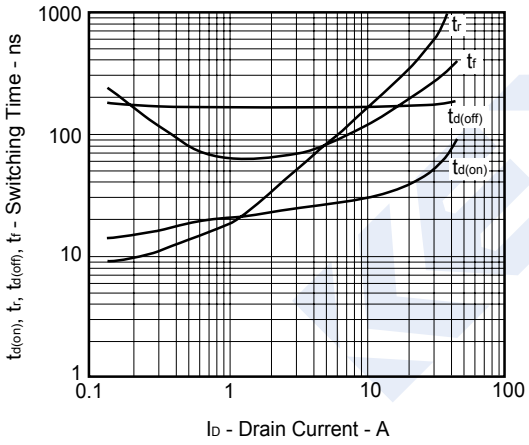
REVERSE RECOVERY TIME vs. DRAIN CURRENT



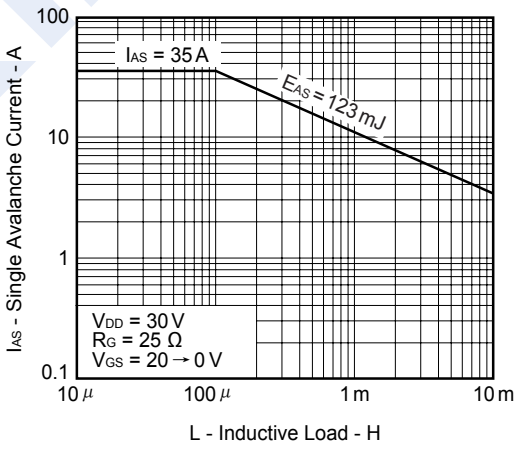
DYNAMIC INPUT/OUTPUT CHARACTERISTICS



SWITCHING CHARACTERISTICS



SINGLE AVALANCHE CURRENT vs. INDUCTIVE LOAD



SINGLE AVALANCHE ENERGY DERATING FACTOR