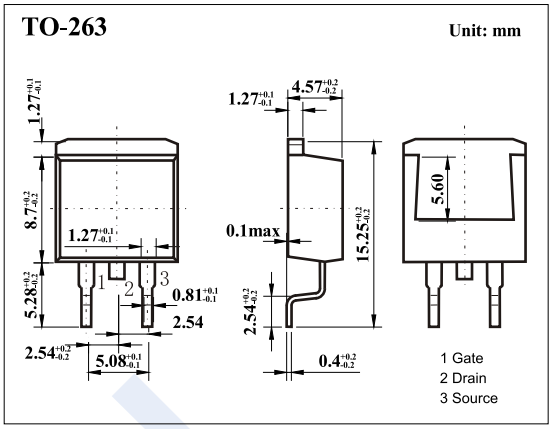
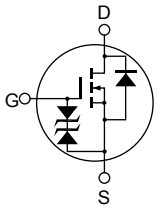
N-Channel MOSFET
2SK2926-ZJ



■ Features

- $V_{DS\ (V)}$ = 60V
- I_D = 15 A (V_{GS} = 10V)
- $R_{DS(ON)}$ < 55mΩ (V_{GS} = 10V)
- $R_{DS(ON)}$ < 110mΩ (V_{GS} = 4V)
- High speed switching



■ 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	15	A
Pulsed Drain Current (Note.1)	I_{DM}	60	
Body to Drain Diode Reverse Drain Current	I_{DR}	15	
Avalanche Current (Note.2)	I_{AR}	15	
Power Dissipation (Note.3)	P_D	25	W
Avalanche Energy (Note.2)	E_{AR}	19	mJ
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

Note.1: PW ⩽ 10us, duty cycle ⩽ 1 %

Note.2: Value at Tch = 25°C, Rg ⩾ 50 Ω

Note.3: Value at Tc = 25°C

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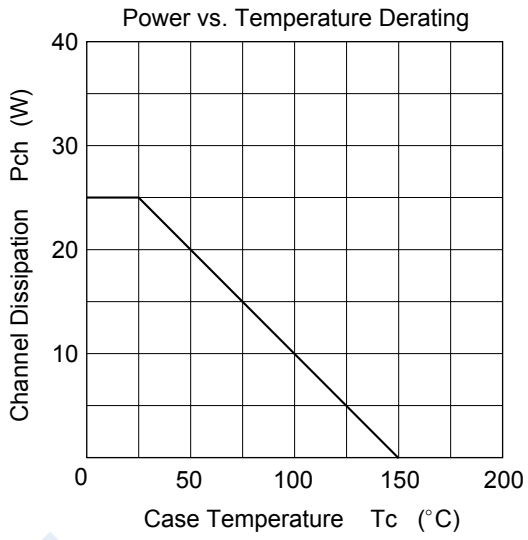
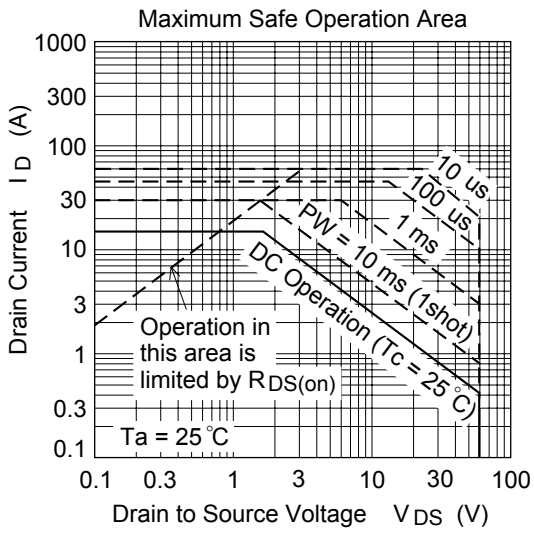
■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=10mA, V_{GS}=0V	60			V
Gate-Source Breakdown Voltage	V_{GSS}	I_D=±100uA, V_{DS}=0V	±20			
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}=±16V			±10	uA
Gate to Source Cutoff 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=8A			55	mΩ
		V_{GS}=4V, I_D=8A			110	
Forward Transconductance	g_{FS}	V_{DS}=10V, I_D=8A	7	11		S
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=10V, f=1MHz		500		pF
Output Capacitance	C_{oss}			260		
Reverse Transfer Capacitance	C_{rss}			110		
Turn-On DelayTime	$t_{d(on)}$	V_{GS}=10V, I_D=8A, R_L=3.75Ω		10		ns
Turn-On Rise Time	t_r			80		
Turn-Off DelayTime	$t_{d(off)}$			100		
Turn-Off Fall Time	t_f			110		
Body Diode Reverse Recovery Time	t_{rr}	I_F= 15A, V_{GS}=0, dI/dt= 50A/us		55		
Diode Forward Voltage	V_{SD}	I_F=15A,V_{GS}=0V		1		V

■ Typical Characterisitics





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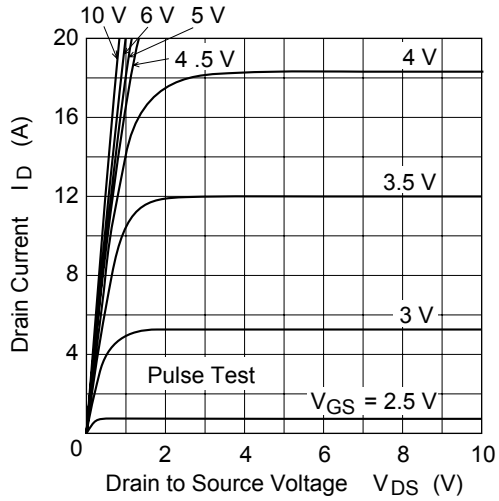
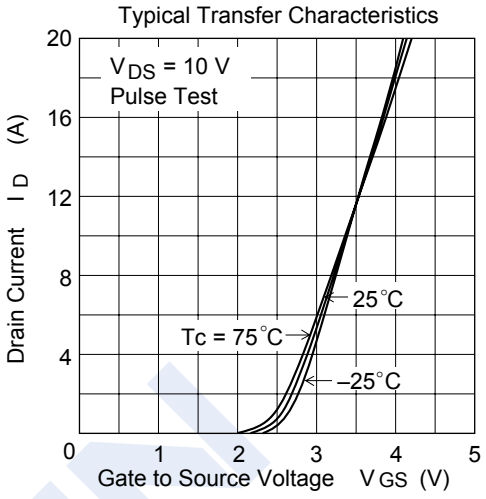
■ Typical Characterisitics

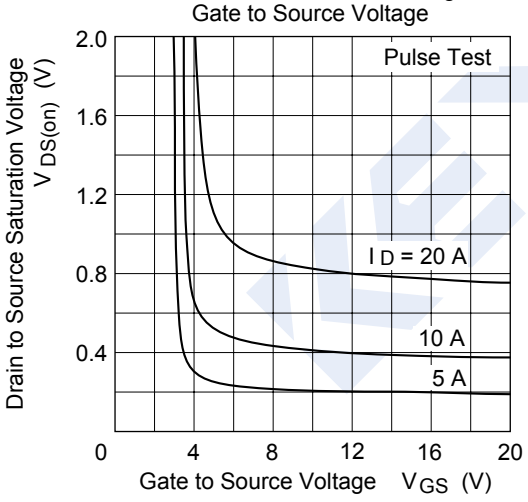
Typical Output Characteristics



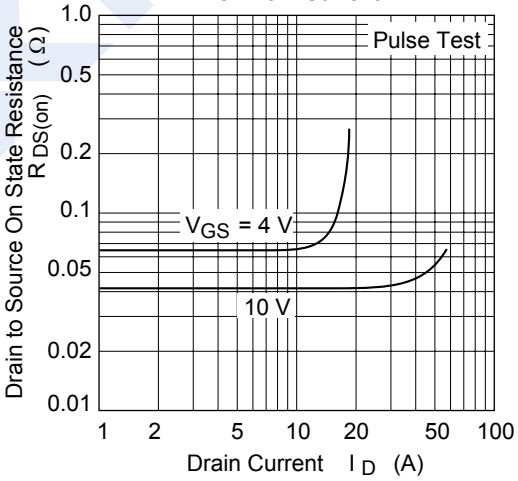
Typical Transfer Characteristics



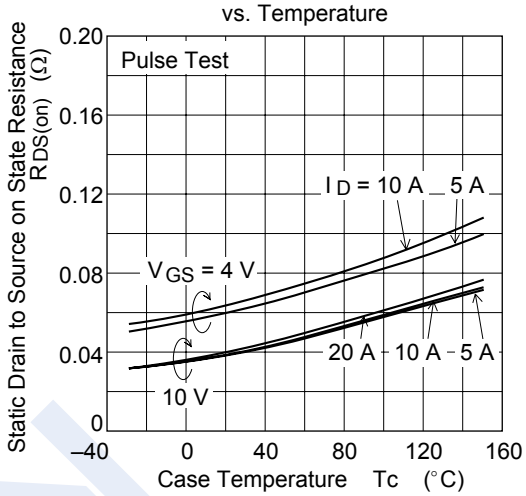
Drain to Source Saturation Voltage vs. Gate to Source Voltage



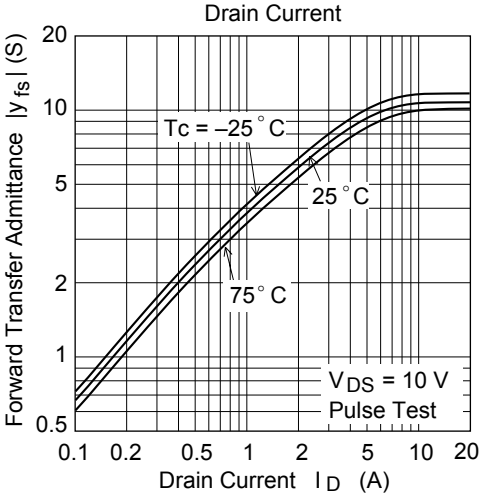
Static Drain to Source on State Resistance vs. Drain Current



Static Drain to Source on State Resistance vs. Temperature



Forward Transfer Admittance vs. Drain Current



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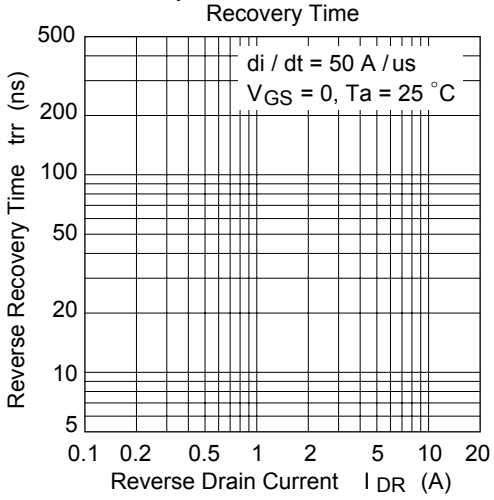
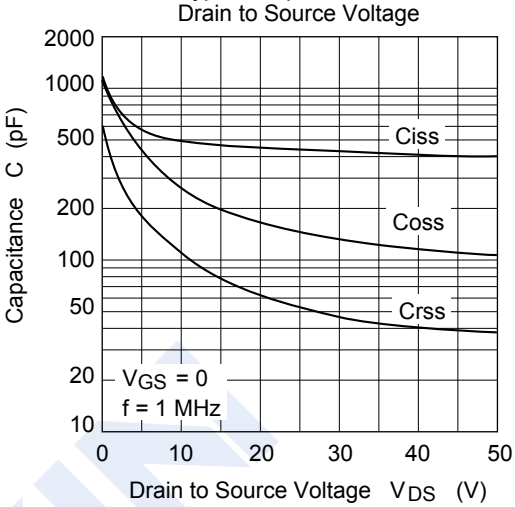
■ Typical Characterisitics

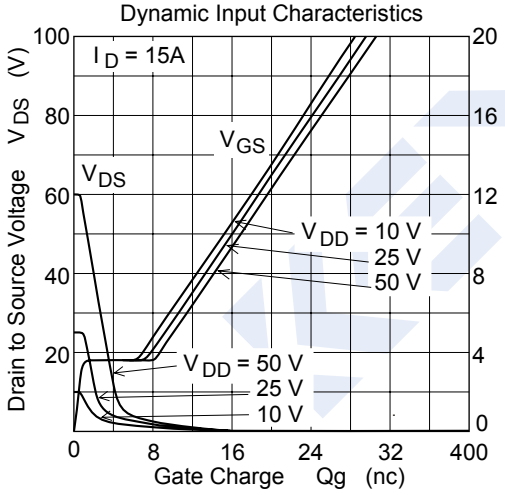
Body to Drain Diode Reverse Recovery Time



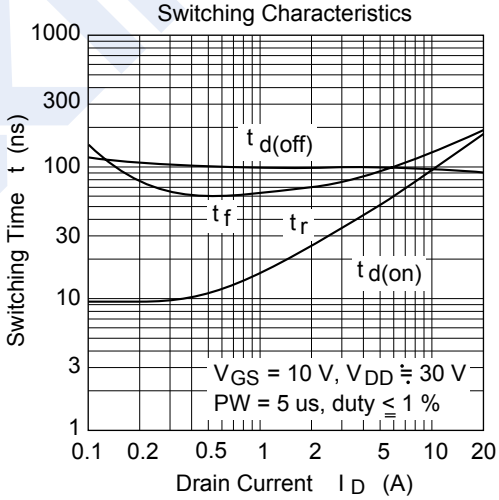
Typical Capacitance vs. Drain to Source Voltage



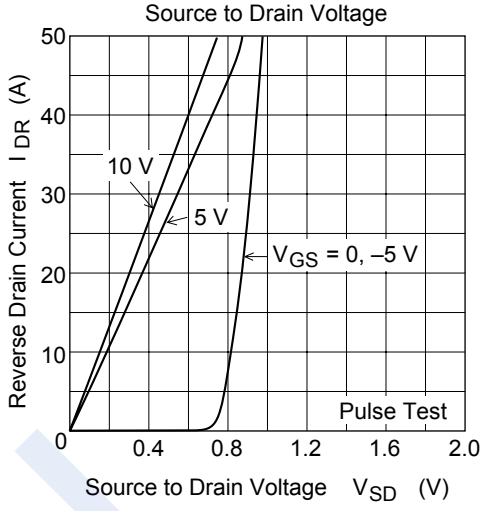
Dynamic Input Characteristics



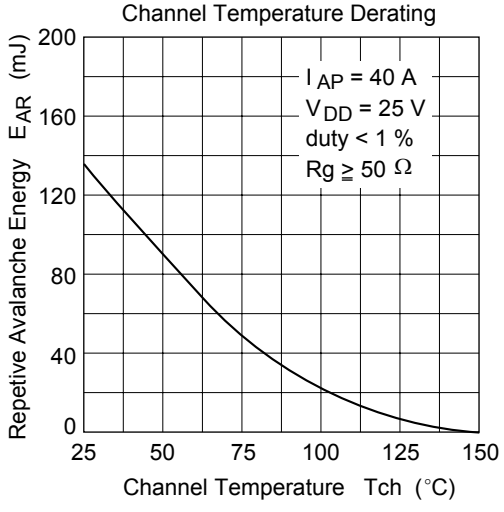
Switching Characteristics



Reverse Drain Current vs. Source to Drain Voltage



Maximum Avalanche Energy vs. Channel Temperature Derating



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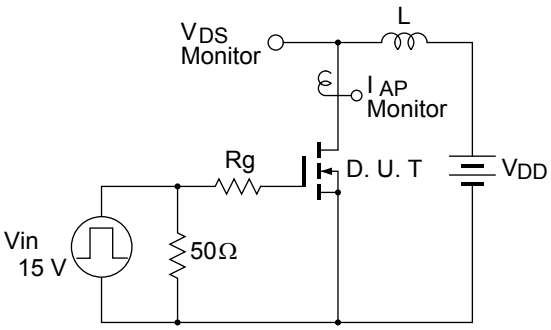
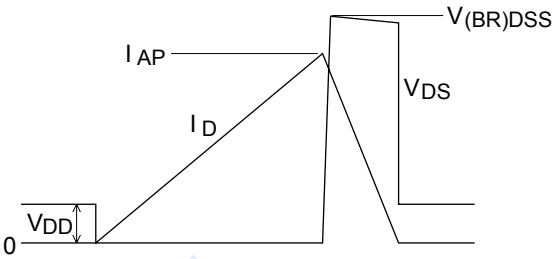
■ Typical Characterisitics

Avalanche Test Circuit

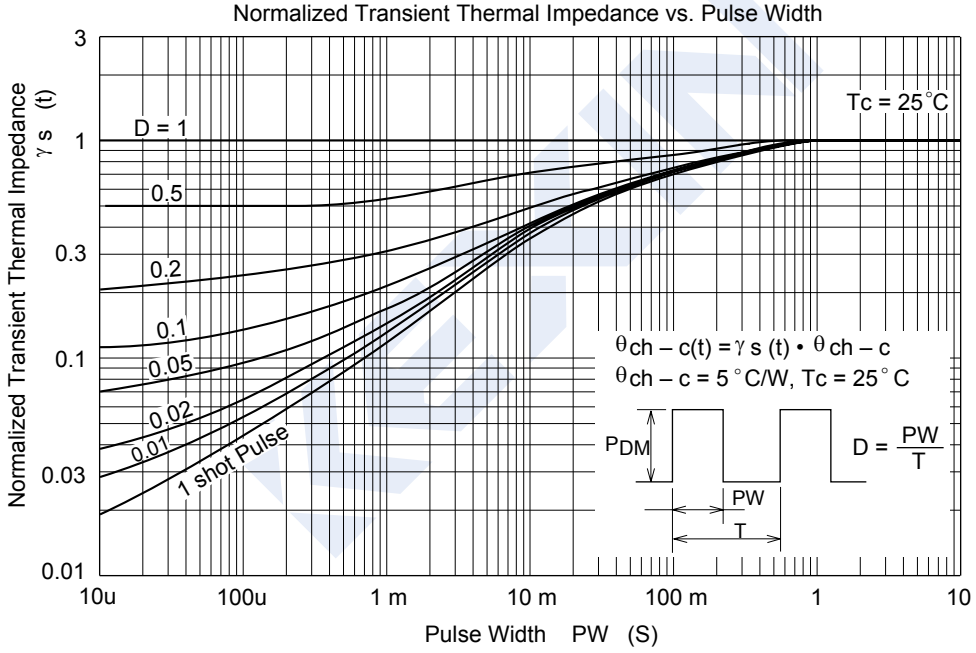


Avalanche Waveform

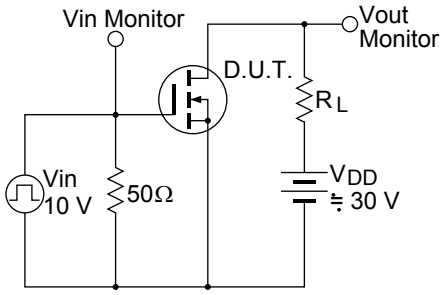
$$E_{AR} = \frac{1}{2} \cdot L \cdot I_{AP}^{2} \cdot \frac{V_{DSS}}{V_{DSS} - V_{DD}}$$



Normalized Transient Thermal Impedance vs. Pulse Width



Switching Time Test Circuit



Switching Time Waveform