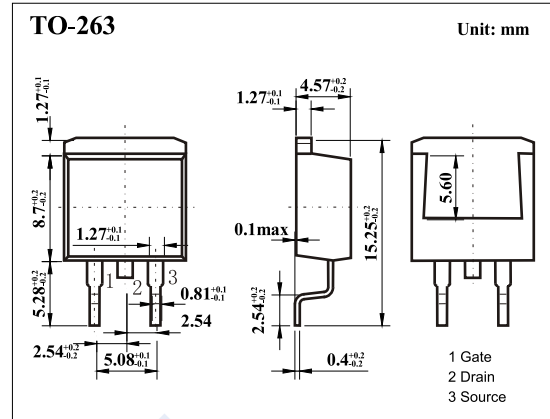
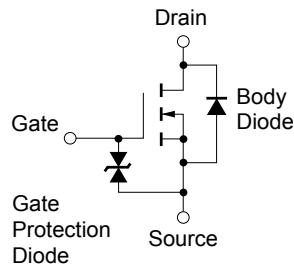


N-Channel MOSFET

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■ Features

- $V_{DS} = 30V$
- $I_D = 48 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 11.5m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 17m\Omega$ ($V_{GS} = 4.5V$)
- Low gate charge



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	V_{DS}	30	V	
Gate-Source Voltage	V_{GS}	± 20		
Continuous Drain Current $T_c = 25^\circ C$	I_D	48	A	
Pulsed Drain Current (Note.1)	I_{DM}	192		
Power Dissipation	P_D	$T_c = 25^\circ C$	50	W
		$T_a = 25^\circ C$	1.5	
Junction Temperature	T_J	150	$^\circ C$	
Storage Temperature Range	T_{stg}	-55 to 150		

Note.1: $PW \leq 10 \mu s$, Duty Cycle $\leq 1\%$

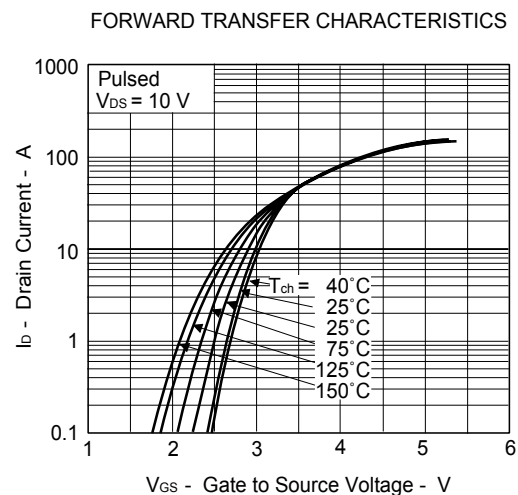
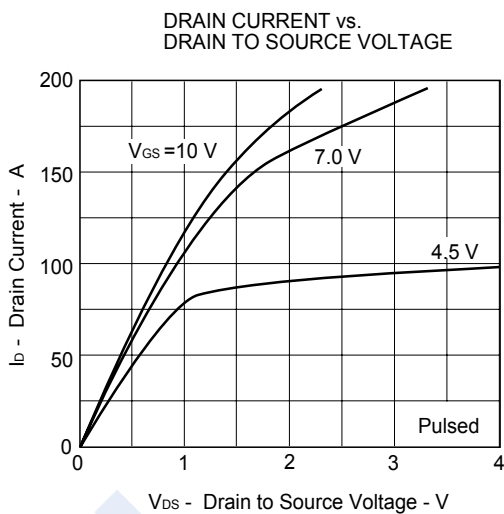
N-Channel MOSFET

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Typical Characteristics

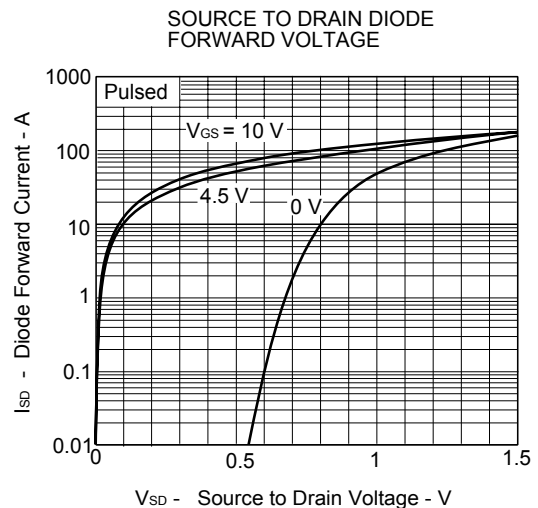
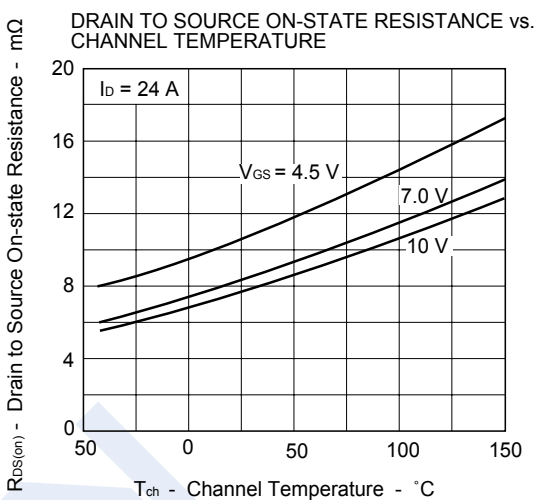
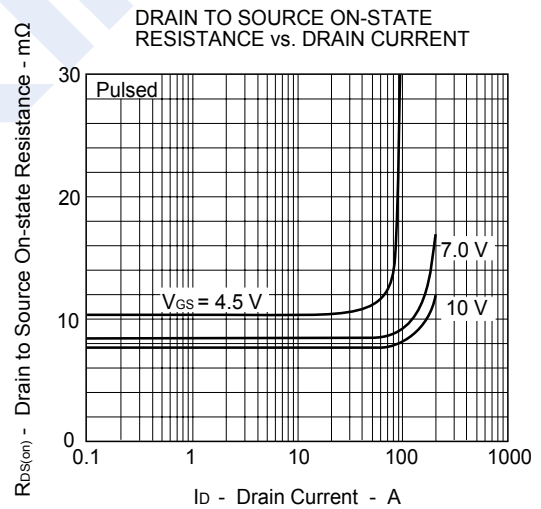
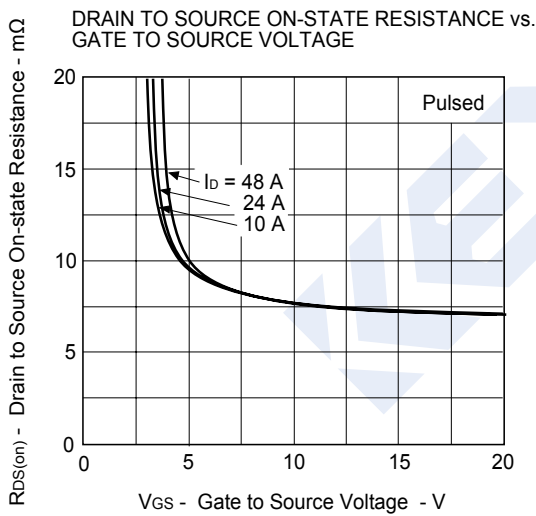
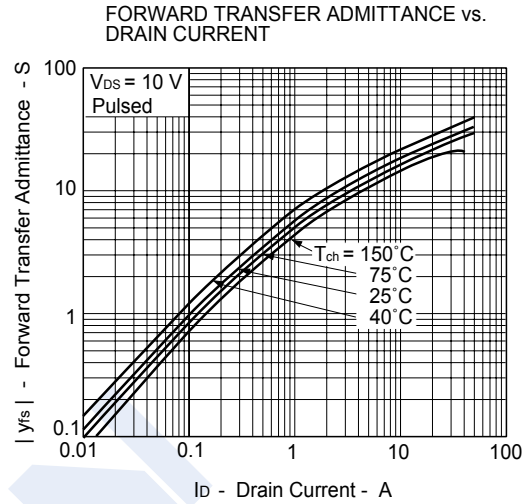
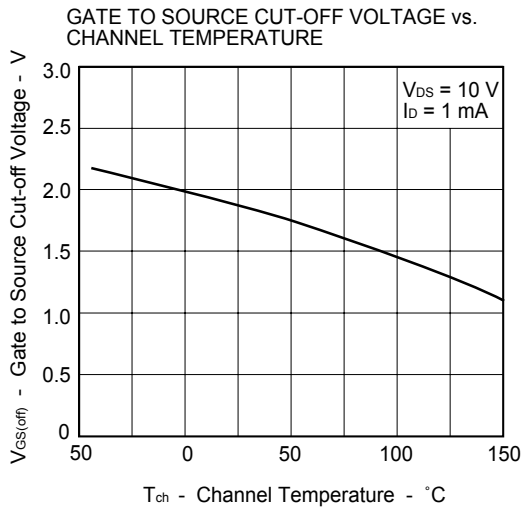
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DS}	$I_D=250\ \mu\text{A}$, $V_{GS}=0\text{V}$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30\text{V}$, $V_{GS}=0\text{V}$			10	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0\text{V}$, $V_{GS}=\pm 20\text{V}$			± 10	μA
Gate to Source Cut-off Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$, $I_D=1\text{mA}$	1.5		2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$, $I_D=24\text{A}$			11.5	m Ω
		$V_{GS}=4.5\text{V}$, $I_D=24\text{A}$			17	
Forward Transconductance	g_{FS}	$V_{DS}=10\text{V}$, $I_D=24\text{A}$	13			S
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$, $V_{DS}=10\text{V}$, $f=1\text{MHz}$		1900		pF
Output Capacitance	C_{oss}			580		
Reverse Transfer Capacitance	C_{rss}			270		
Total Gate Charge	Q_g	$V_{GS}=10\text{V}$, $V_{DS}=24\text{V}$, $I_D=48\text{A}$		34		nC
Gate Source Charge	Q_{gs}			6.4		
Gate Drain Charge	Q_{gd}			9.1		
Turn-On DelayTime	$t_{d(on)}$	$V_{DD} = 15\text{V}$, $I_D = 24\text{A}$, $V_{GS(on)}=10\text{V}$, $R_G = 10\ \Omega$		14		ns
Turn-On Rise Time	t_r			13		
Turn-Off DelayTime	$t_{d(off)}$			61		
Turn-Off Fall Time	t_f			22		
Body Diode Reverse Recovery Time	t_{rr}	$I_F = 48\text{A}$, $V_{GS}=0$, $di/dt = 100\text{A}/\mu\text{s}$		34		ns
Body Diode Reverse Recovery Charge	Q_{rr}			26		
Diode Forward Voltage	V_{SD}	$I_F=48\text{A}$, $V_{GS}=0\text{V}$		1		V

Typical Characteristics



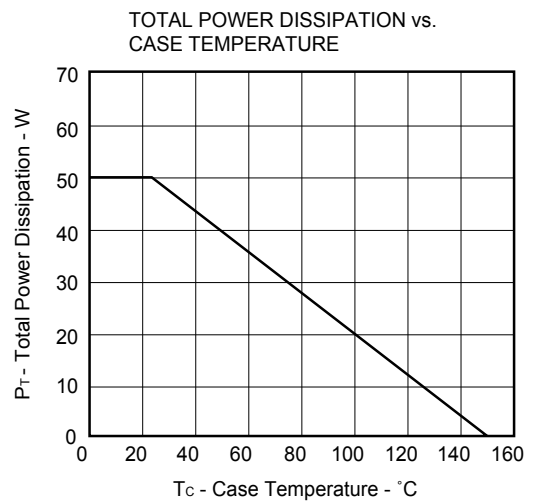
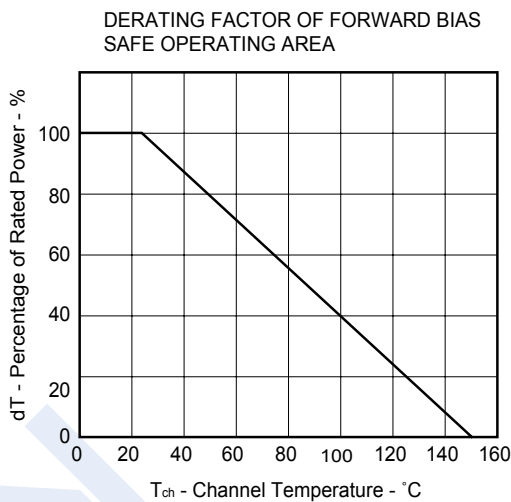
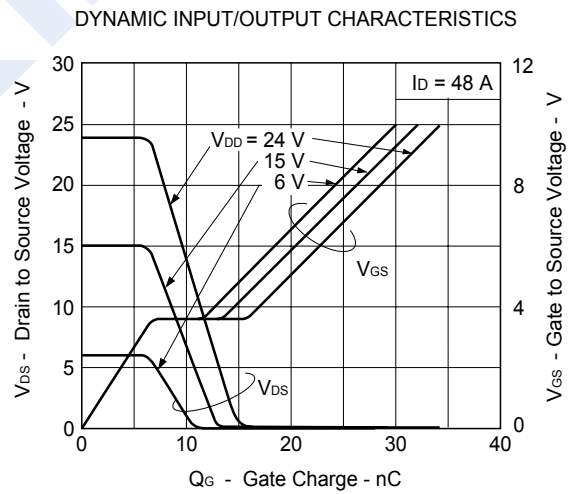
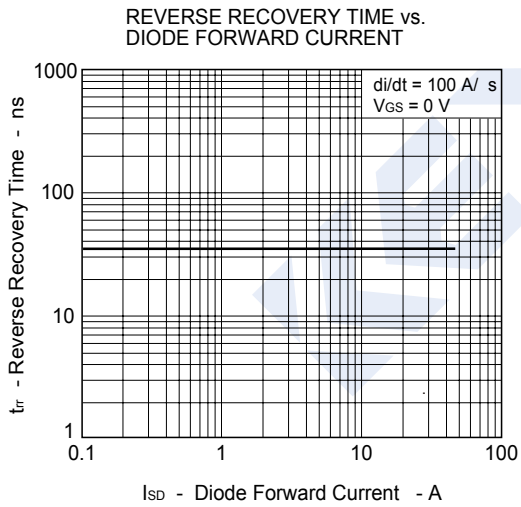
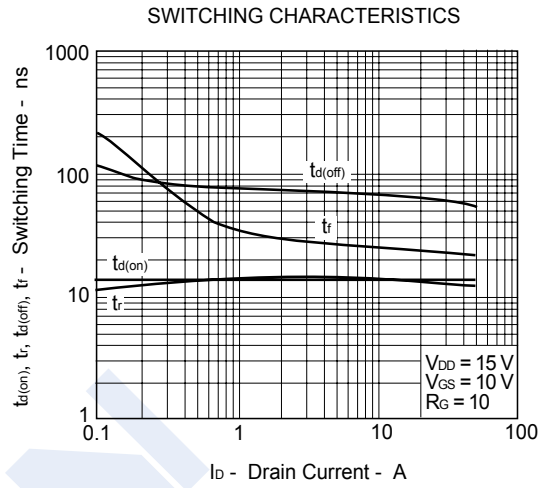
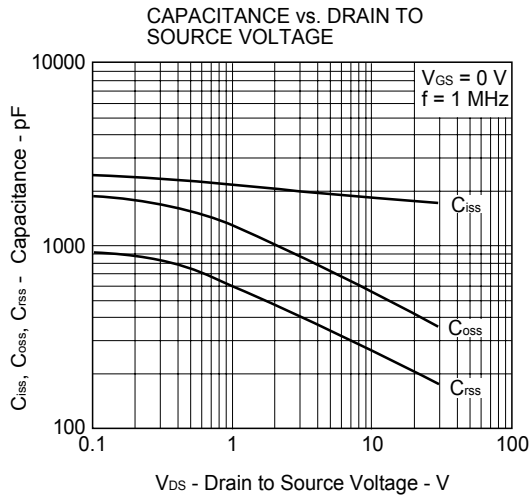
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Typical Characteristics



N-Channel MOSFET 2SK3424-ZJ

■ Typical Characteristics



N-Channel MOSFET 2SK3424-ZJ

■ Typical Characteristics

