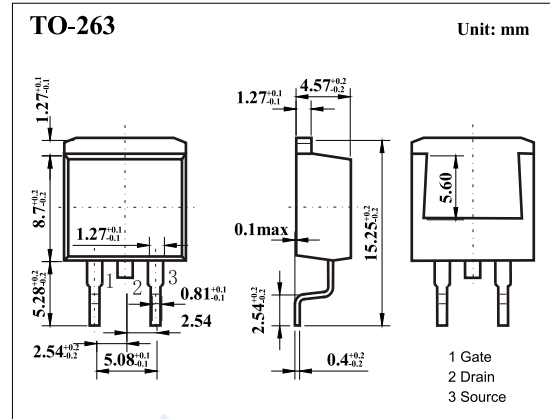
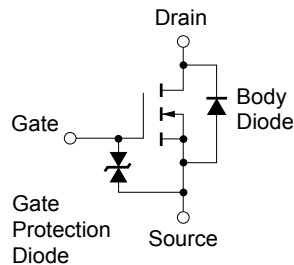


## N-Channel MOSFET

### 2SK3424-ZJ

#### ■ 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	$V_{GS}$	$\pm 20$		
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  $\leq 1\%$

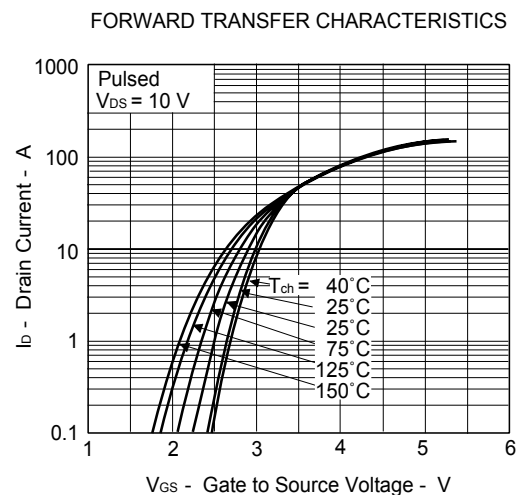
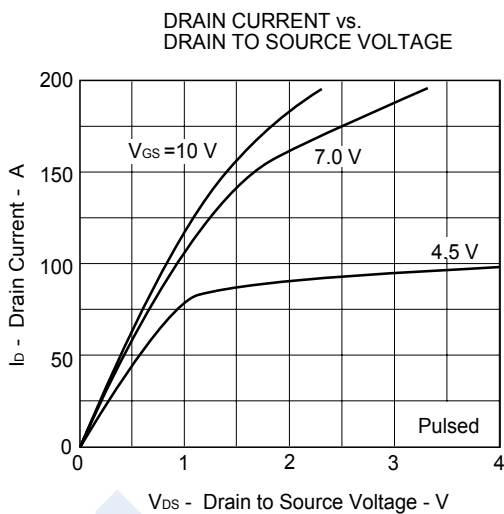
## N-Channel MOSFET

### 2SK3424-ZJ

#### ■ Typical Characteristics

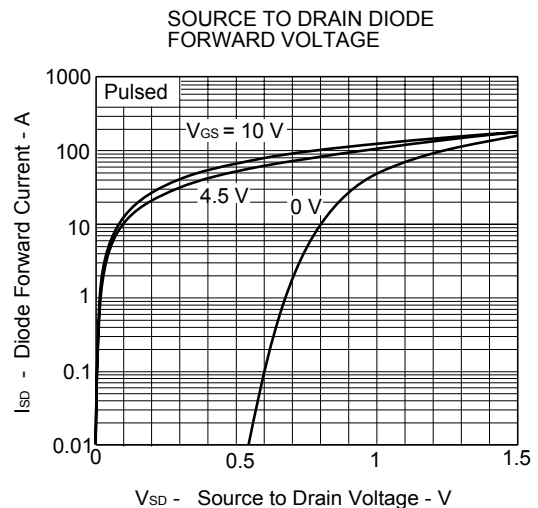
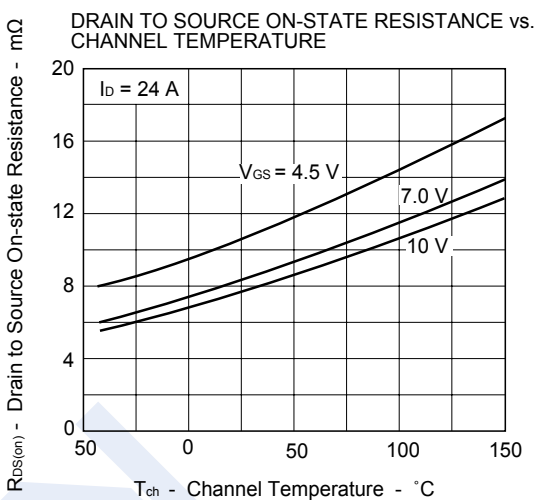
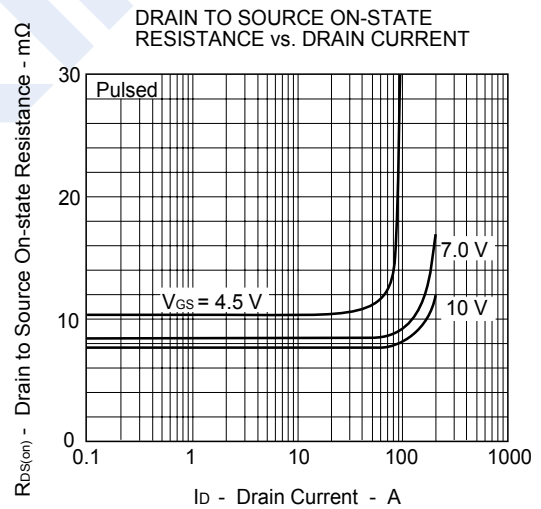
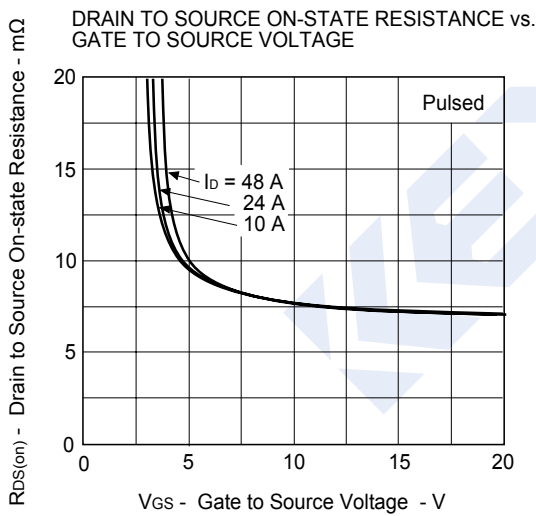
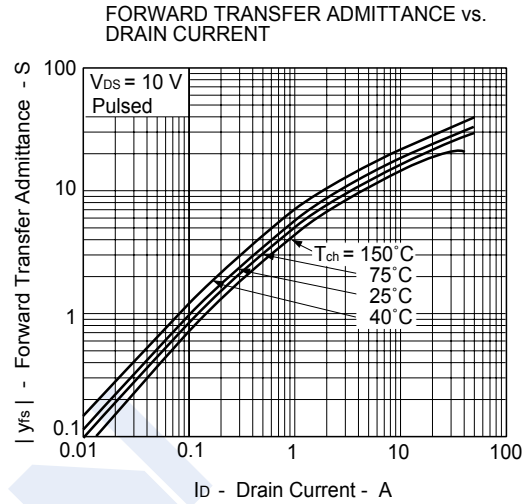
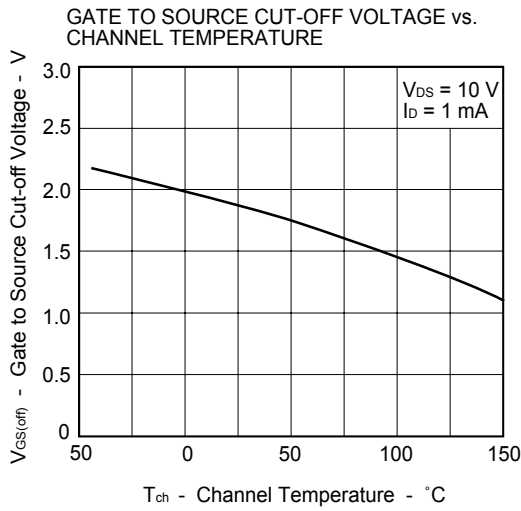
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DS}$	$I_D=250\ \mu\text{A}$ , $V_{GS}=0\text{V}$	30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30\text{V}$ , $V_{GS}=0\text{V}$			10	$\mu\text{A}$
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0\text{V}$ , $V_{GS}=\pm 20\text{V}$			$\pm 10$	$\mu\text{A}$
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 $\Omega$
		$V_{GS}=4.5\text{V}$ , $I_D=24\text{A}$			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



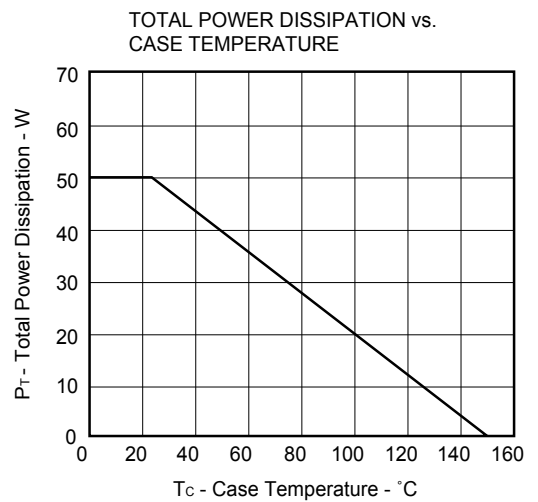
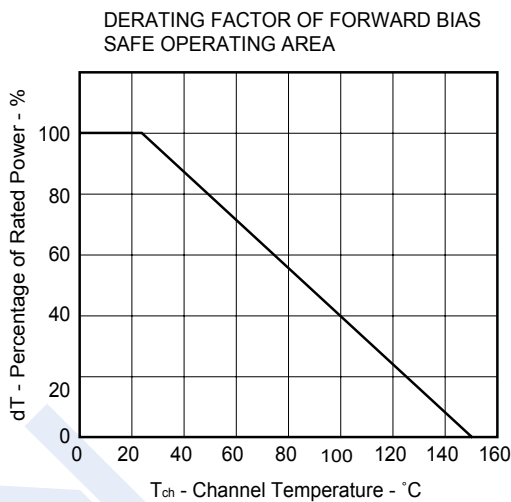
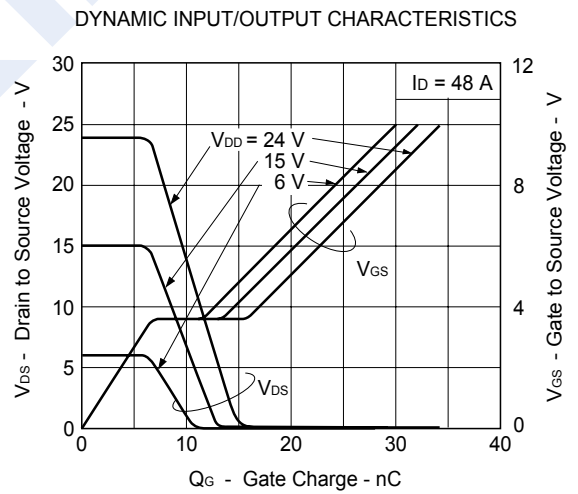
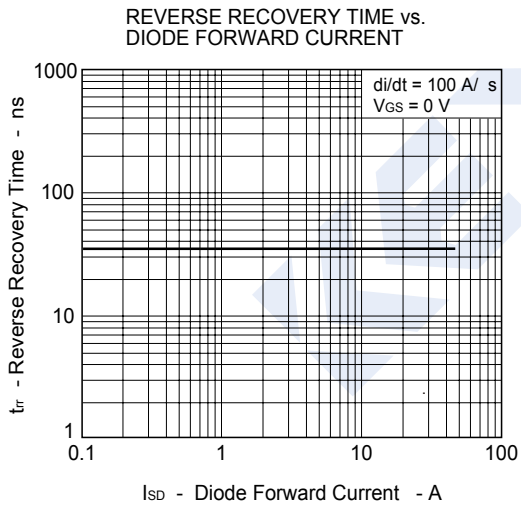
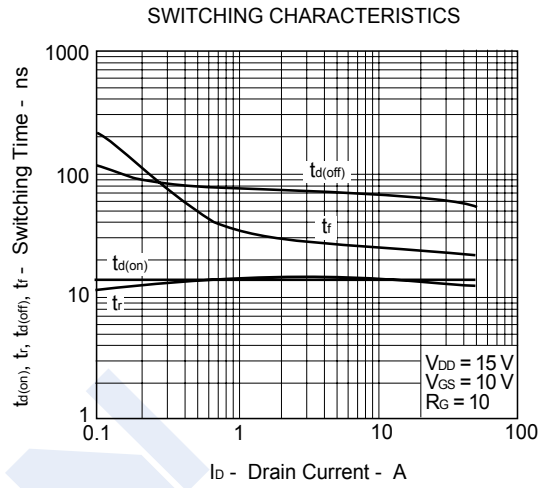
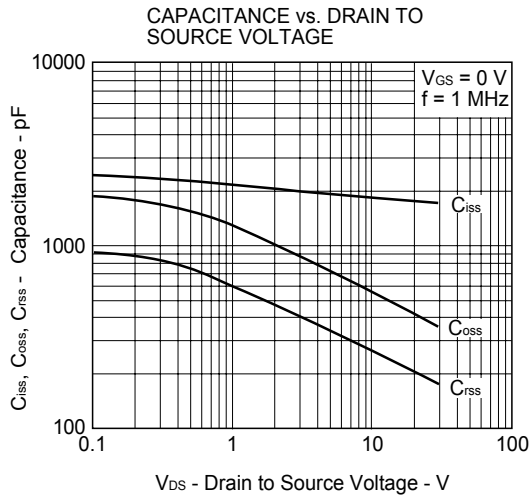
## N-Channel MOSFET 2SK3424-ZJ

### Typical Characteristics



## N-Channel MOSFET 2SK3424-ZJ

### Typical Characteristics



## N-Channel MOSFET 2SK3424-ZJ

■ Typical Characteristics

