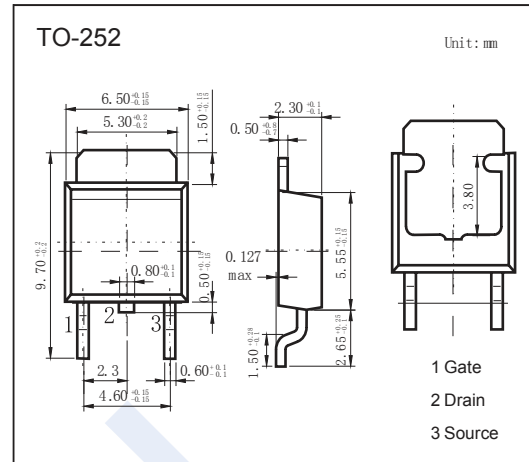
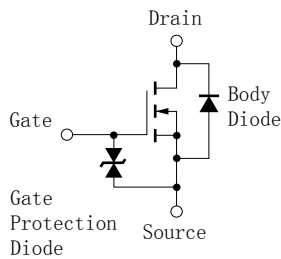


## N-Channel MOSFET

### 2SK3402-Z

#### ■ Features

- $V_{BS} = 60V$
- $I_D = 36 A$  ( $V_{GS} = 10V$ )
- $R_{DS(ON)} < 15m\Omega$  ( $V_{GS} = 10V$ )
- $R_{DS(ON)} < 22m\Omega$  ( $V_{GS} = 4V$ )
- Low  $C_{iss}$  :  $C_{iss} = 3200 pF$  TYP.



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

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

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

Note.2: Starting  $T_J = 25^\circ C$ ,  $V_{DD} = 150 V$ ,  $R_G = 25 \Omega$ ,  $V_{GS} = 20 V \rightarrow 0 V$

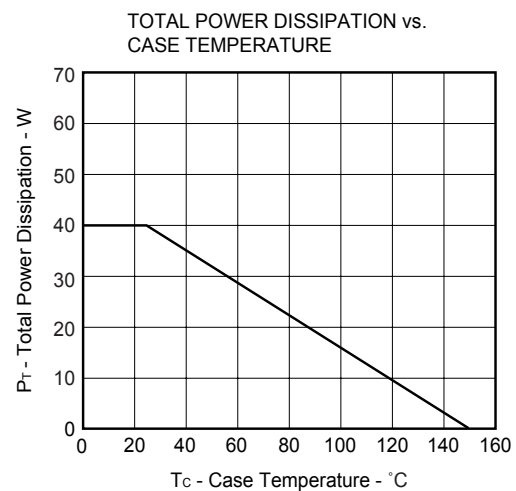
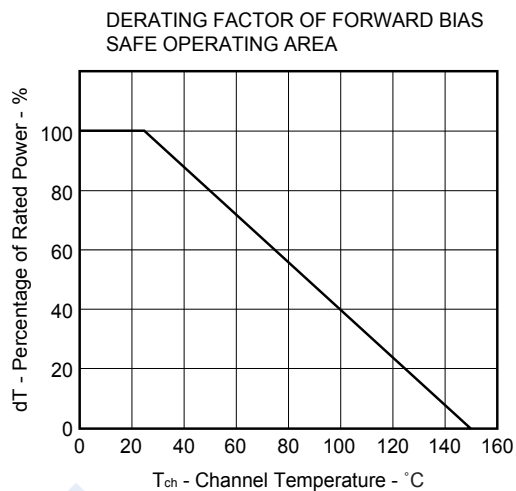
## N-Channel MOSFET

### 2SK3402-Z

#### ■ Electrical Characteristics Ta = 25°C

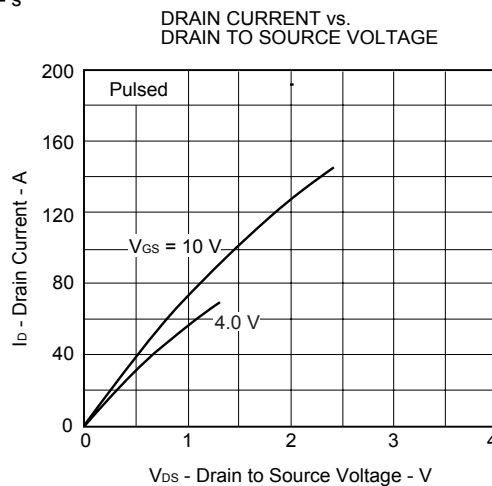
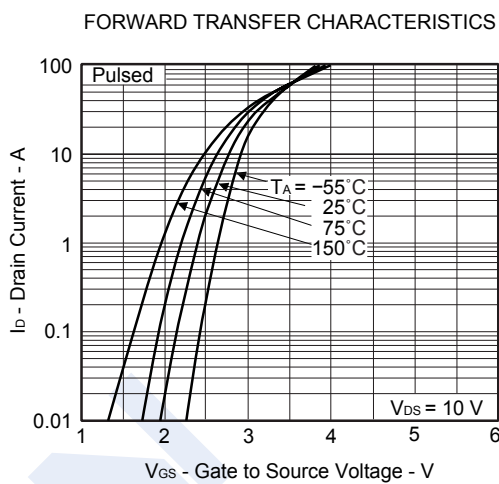
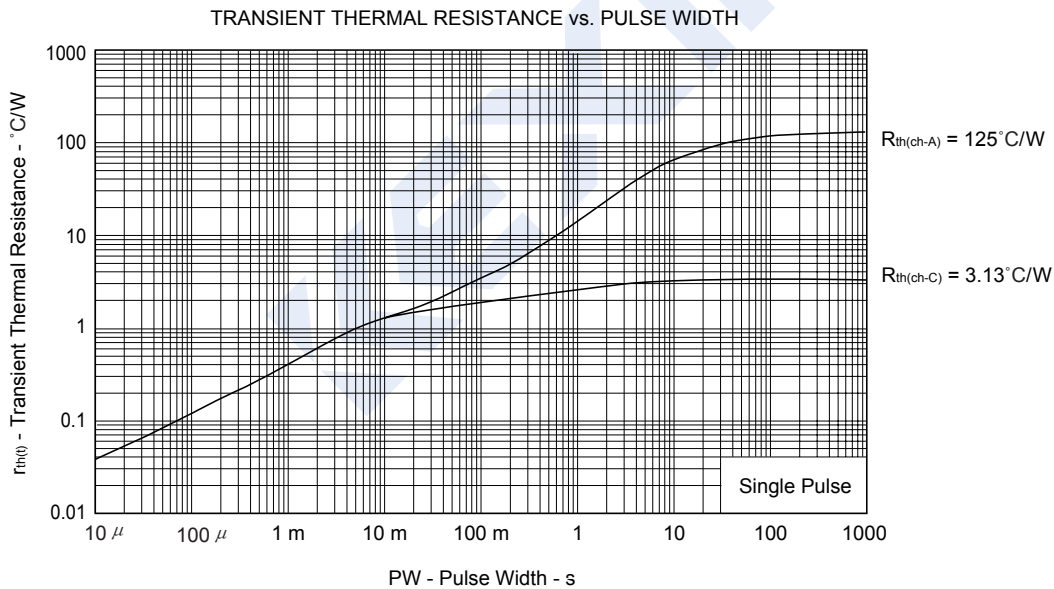
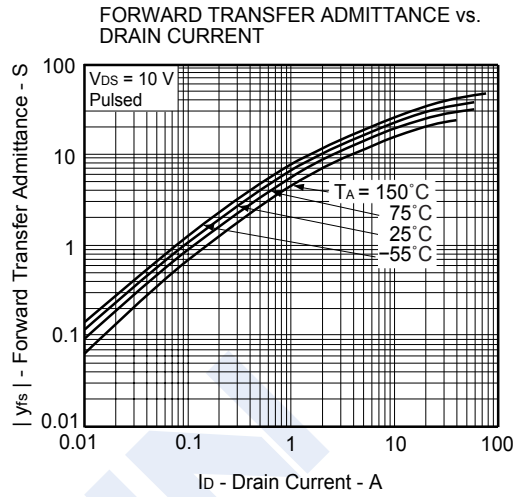
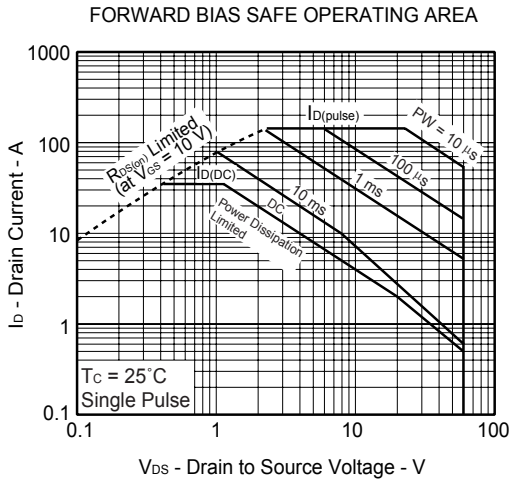
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V <sub>DSS</sub>	I <sub>D</sub> =250 μA, V <sub>GS</sub> =0V	60			V
Zero Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> =60V, V <sub>GS</sub> =0V			10	μA
Gate-Body Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±20V			±10	μA
Gate to Source Cut-off Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =1mA	1.5		2.5	V
Static Drain-Source On-Resistance	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =18A			15	mΩ
		V <sub>GS</sub> =4V, I <sub>D</sub> =18A			22	
Forward Transconductance	g <sub>FS</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =18A	13	27		S
Input Capacitance	C <sub>iss</sub>	V <sub>GS</sub> =0V, V <sub>DS</sub> =10V, f=1MHz		3200		pF
Output Capacitance	C <sub>oss</sub>			520		
Reverse Transfer Capacitance	C <sub>rss</sub>			270		
Total Gate Charge	Q <sub>g</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =48V, I <sub>D</sub> =36A		61		nC
Gate Source Charge	Q <sub>gs</sub>			8.2		
Gate Drain Charge	Q <sub>gd</sub>			17		
Turn-On DelayTime	t <sub>d(on)</sub>	V <sub>DD</sub> = 30 V, I <sub>D</sub> = 18 A, V <sub>GS</sub> = 10 V, R <sub>G</sub> = 10 Ω		36		ns
Turn-On Rise Time	t <sub>r</sub>			310		
Turn-Off DelayTime	t <sub>d(off)</sub>			170		
Turn-Off Fall Time	t <sub>f</sub>			180		
Body Diode Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 36A, V <sub>GS</sub> =0, di/dt= 100A/μs		48		nC
Body Diode Reverse Recovery Charge	Q <sub>rr</sub>			89		
Diode Forward Voltage	V <sub>SD</sub>	I <sub>F</sub> =36A, V <sub>GS</sub> =0V		1		V

#### ■ Typical Characteristics



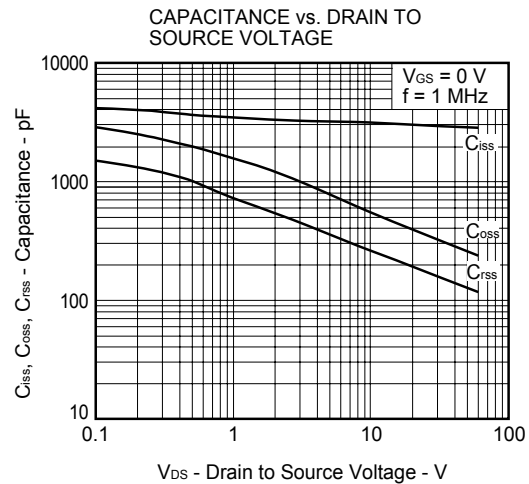
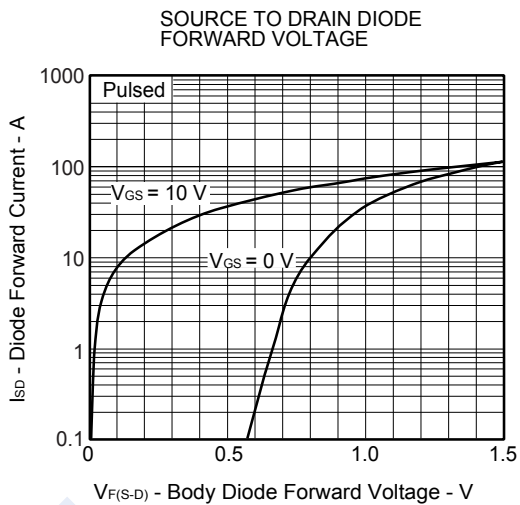
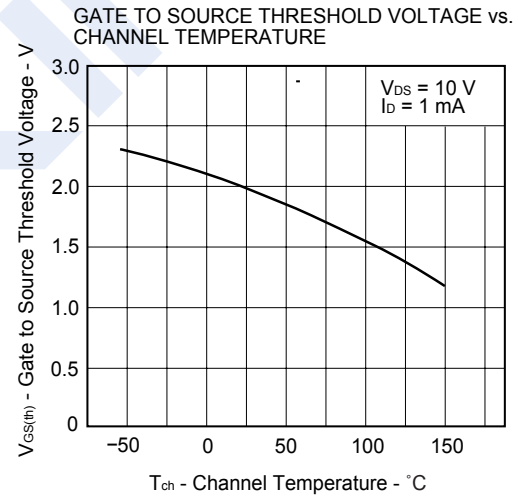
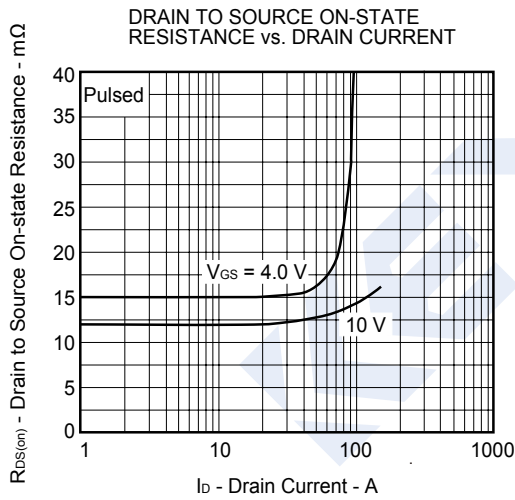
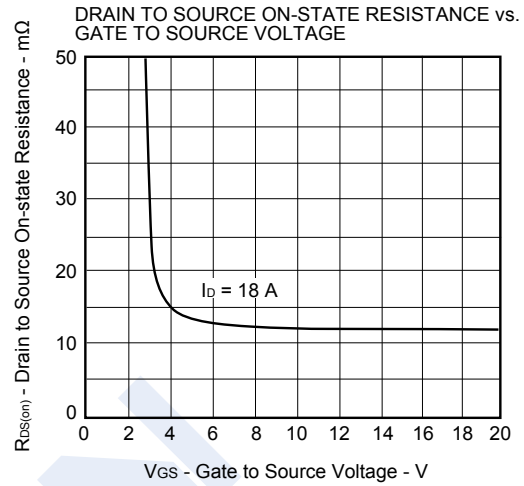
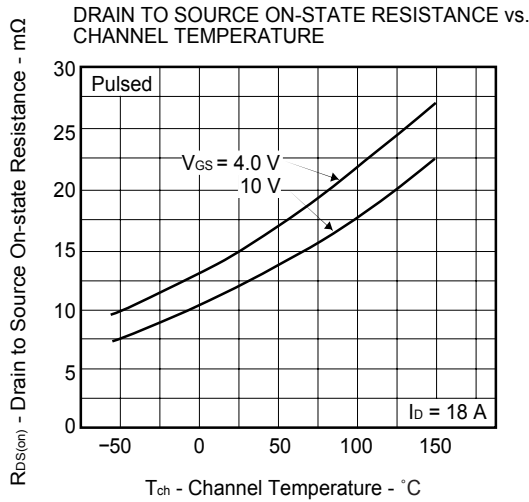
## N-Channel MOSFET 2SK3402-Z

■ Typical Characteristics



## N-Channel MOSFET 2SK3402-Z

### Typical Characteristics



## N-Channel MOSFET 2SK3402-Z

### Typical Characteristics

