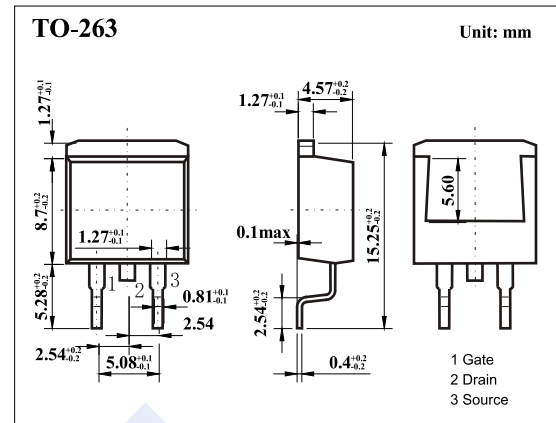
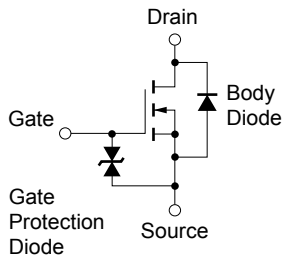


N-Channel MOSFET

2SK3434-ZJ

Features

- $V_{DS} = 60V$
- $I_D = 48A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 20m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 31m\Omega$ ($V_{GS} = 4V$)
- Low Ciss: Ciss = 2100 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}	± 20		
Continuous Drain Current	I_D	48	A	
Pulsed Drain Current (Note.1)	I_{DM}	192		
Single Avalanche Current (Note.2)	I_{AS}	28		
Power Dissipation	P_D	$T_c = 25^\circ C$	56	W
		$T_a = 25^\circ C$	1.5	
Single Avalanche Energy (Note.2)	E_{AS}	78	mJ	
Thermal Resistance.Junction- to-Ambient	R_{thJA}	83.3	$^\circ C/W$	
Thermal Resistance.Junction- to-Case	R_{thJC}	2.23		
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 $T_J = 25^\circ C$, $V_{DD} = 150V$, $R_G = 25\Omega$, $V_{GS} = 20V \rightarrow 0V$

N-Channel MOSFET

2SK3434-ZJ

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μA, V _{GS} =0V	60			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			10	μA
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±10	μA
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 =24A			20	mΩ
		V _{GS} =4V, I _D =24A			31	
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =24A	13	27		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =10V, f=1MHz		2100		pF
Output Capacitance	C _{oss}			340		
Reverse Transfer Capacitance	C _{rss}			170		
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =48V, I _D =48A		40		nC
Gate Source Charge	Q _{gs}			7		
Gate Drain Charge	Q _{gd}			11		
Turn-On DelayTime	t _{d(on)}			40		
Turn-On Rise Time	t _r	V _{DD} = 30V, I _D = 24A, V _{GS(on)} =10V, R _G = 10 Ω		400		ns
Turn-Off DelayTime	t _{d(off)}			120		
Turn-Off Fall Time	t _f			160		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 48A, V _{GS} =0, di/dt= 100A/μs		43		nC
Body Diode Reverse Recovery Charge	Q _{rr}			61		
Diode Forward Voltage	V _{SD}	I _F =48A, V _{GS} =0V		1		V