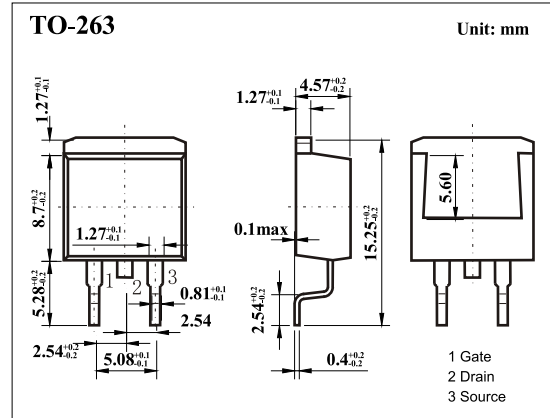
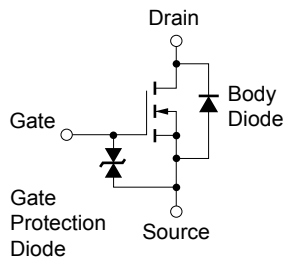


N-Channel MOSFET

2SK3430-ZJ

■ Features

- $V_{DS} = 40V$
- $I_D = 80 A$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 7.3m\Omega$ ($V_{GS} = 10V$)
- $R_{DS(ON)} < 15m\Omega$ ($V_{GS} = 4V$)
- Low Ciss: Ciss = 2800 pF TYP.



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	80	A
Pulsed Drain Current (Note.1)	I_{DM}	200	
Single Avalanche Current (Note.2)	I_{AS}	37	
Power Dissipation	P_D	$T_c = 25^\circ C$	W
		$T_a = 25^\circ C$	
Single Avalanche Energy (Note.2)	E_{AS}	137	mJ
Thermal Resistance.Junction- to-Ambient	R_{thJA}	83.3	$^\circ C/W$
Thermal Resistance.Junction- to-Case	R_{thJC}	1.49	
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 $T_J = 25^\circ C$, $V_{DD} = 150 V$, $R_G = 25 \Omega$, $V_{GS} = 20 V \rightarrow 0 V$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{DSS}	I _D =250 μ A, V _{GS} =0V	40			V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =40V, 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 =40A			7.3	mΩ
		V _{GS} =4V, I _D =40A			15	
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =40A	20	40		S
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =10V, f=1MHz		2800		pF
Output Capacitance	C _{oss}			730		
Reverse Transfer Capacitance	C _{rss}			320		
Total Gate Charge	Q _g	V _{GS} =10V, V _{DS} =32V, I _D =80A		50		nC
Gate Source Charge	Q _{gs}			10		
Gate Drain Charge	Q _{gd}			14		
Turn-On DelayTime	t _{d(on)}	V _{DD} = 20V, I _D = 40A, V _{GS(on)} =10V, R _G = 10 Ω		110		ns
Turn-On Rise Time	t _r			1800		
Turn-Off DelayTime	t _{d(off)}			170		
Turn-Off Fall Time	t _f			350		
Body Diode Reverse Recovery Time	t _{rr}	I _F = 80A, V _{GS} =0, di/dt= 100A/ μ s		50		nC
Body Diode Reverse Recovery Charge	Q _{rr}			77		
Diode Forward Voltage	V _{SD}	I _F =80A, V _{GS} =0V		1		V