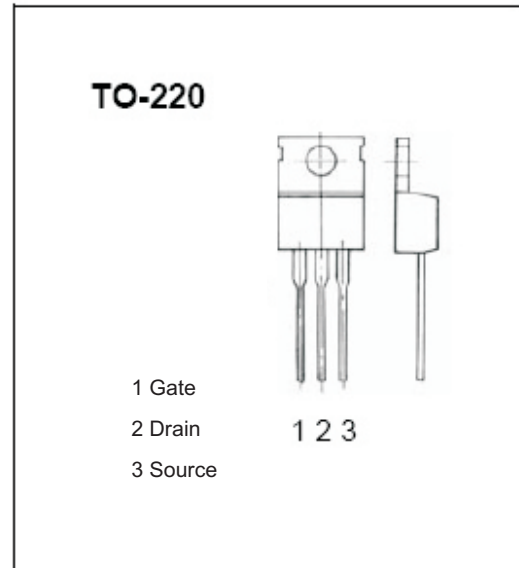
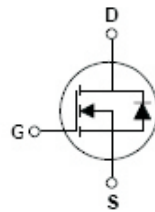


N-Channel MOSFET KXP20N15

■ Features

- $V_{DS} (V) = 150V$
- $R_{DS(ON)} \leq 0.13\Omega (V_{GS} = 10V)$



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	150	V
Gate source voltage	V_{GS}	± 20	V
Drain Current — Continuous	I_D	20	A
Drain Current - Pulsed (Note 2)	I_{DM}	60	A
Power dissipation @ $T_c=25^\circ\text{C}$ (Note 1) - Derate above 25°C	P_D	112	W
		0.9	W/ $^\circ\text{C}$
Thermal resistance, junction - ambient	R_{thJA}	62.5	$^\circ\text{C}/\text{W}$
Operating and storage temperature	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

Note:1.Power rating when mounted on FR-4 glass epoxy printed circuit board using recommended footprint.

2.Pulse Test : Pulse width $\leq 300\mu\text{s}$, Duty cycle $\leq 2\%$

N-Channel MOSFET KXP20N15

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} = 0 V, I _D = 250 μA	150			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250 μA	2.0		4.0	V
Gate-Body leakage current	I _{GSS}	V _{GS} = ±20 V, V _{DS} = 0 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 150 V, V _{GS} = 0 V			10	μA
Drain-Source On-State Resistance	R _{DS(on)}	V _{GS} = 10 V, I _D = 10A			0.13	Ω
Forward Transconductance	g _{FS}	V _{DS} = 13 V, I _D = 10 A	8	11		S
Total Gate Charge	Q _g	V _{DS} = 120V, V _{GS} = 10 V, I _D = 20A		39.1	55.9	nC
Gate-Source Charge	Q _{gs}			7.5		
Gate-Drain Charge	Q _{gd}			22		
Input Capacitance	C _{iss}	V _{DS} = 25V, V _{GS} = 0, f = 1.0MHz		1133	1627	pF
Output Capacitance	C _{oss}			332	474	
Reverse Transfer Capacitance	C _{rss}			105	174	
Turn-On DelayTime	t _{d(on)}	V _{DD} = 75V, V _{GS} = 10V, R _G = 9.1 Ω, I _D = 20A		11	25	ns
Turn-On Rise Time	t _r			77	153	
Turn-Off Delay Time	t _{d(off)}			33	67	
Turn-Off Fall Time	t _f			49	97	
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} = 0 V, I _S = 20A			1.5	V
Reverse Recovery Time	t _{rr}	V _{GS} = 0 V, I _S = 20A, dI _S / dt = 100 A/μs		160		ns
Maximum Body-Diode Continuous Current	I _S				20	A

■ Marking

Marking	20N15
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