

KQB27P06

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BVDSS	V _{GS} = 0 V, I _D = -250 μA	-60			V
Breakdown Voltage Temperature Coefficient	$\frac{\Delta B_{V_{DS}}}{\Delta T_J}$	I _D = -250 μA, Referenced to 25°C		-0.06		V/°C
Zero Gate Voltage Drain Current	IDSS	V _{DS} = -60 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -48V, T _C =150°C			-10	μA
Gate-Body Leakage, Forward	IGSSF	V _{GS} = -25 V, V _{DS} = 0 V			-100	nA
Gate-Body Leakage, Reverse	IGSSR	V _{GS} = 25V, V _{DS} = 0 V			100	nA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-2.0		-4.0	V
Static Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = -10 V, I _D = -13.5A		0.055	0.07	Ω
Forward Transconductance	g _{FS}	V _{DS} = -30 V, I _D = -13.5 A		12.4		S
Input Capacitance	C _{iss}	V _{DS} = -25 V, V _{GS} = 0 V, f = 1.0 MHz		1100	1400	pF
Output Capacitance	C _{oss}			510	660	pF
Reverse Transfer Capacitance	C _{rss}			120	155	pF
Turn-On Delay Time	t _{d(on)}	V _{DD} = -30V, I _D = -13.5 A, R _G = 25 Ω (Note4,5)		18	45	ns
Turn-On Rise Time	t _r			185	380	ns
Turn-Off Delay Time	t _{d(off)}			30	70	ns
Turn-Off Fall Time	t _f			90	190	ns
Total Gate Charge	Q _g	V _{DS} = -48 V, I _D = -27 A, V _{GS} = -10 V (Note4,5)		33	43	nC
Gate-Source Charge	Q _{gs}			6.8		nC
Gate-Drain Charge	Q _{gd}			18		nC
Maximum Continuous Drain-Source Diode Forward Current	I _S				-27	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}				-108	A
Drain-Source Diode Forward Voltage	V _{SD}	V _{GS} = 0 V, I _S = -27 A			-4.0	V
Reverse Recovery Time	t _{rr}	V _{GS} = 0 V, I _S = -27 A,		105		ns
Reverse Recovery Charge	Q _{rr}	dI _F / dt = 100 A/μs (Note 4)		0.41		μC

Note:

1. Repetitive Rating : Pulse width limited by maximum junction temperature
2. L = 0.9mH, I_{AS} = -27A, V_{DD} = -25V, R_G = 25 Ω, Starting T_J = 25°C
3. I_{SD} ≤ -27A, dI/dt ≤ 300A/μs, V_{DD} ≤ BVDSS, Starting T_J = 25°C
4. Pulse Test : Pulse width ≤ 300 μs, Duty cycle ≤ 2%
5. Essentially independent of operating temperature