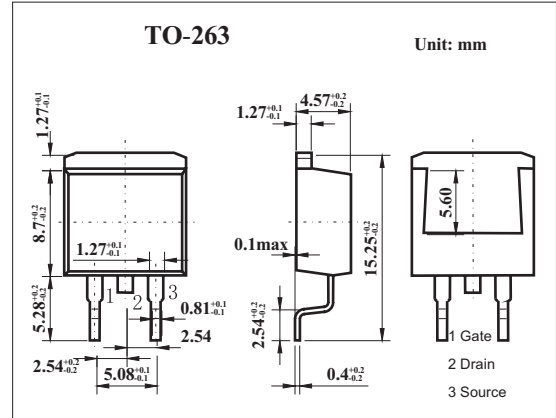
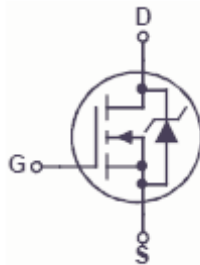


KDB3632(FDB3632)

■ Features

- $r_{DS(ON)} = 7.5m\ \Omega$ (Typ.), $V_{GS} = 10V$, $I_D = 80A$
- $Q_{g(tot)} = 84nC$ (Typ.), $V_{GS} = 10V$
- Low Miller Charge
- Low Q_{RR} Body Diode
- UIS Capability (Single Pulse and Repetitive Pulse)



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

Parameter	Symbol	Rating	Unit
Drain to source voltage	V_{DSS}	100	V
Gate to source voltage	V_{GSS}	± 20	V
Drain current-Continuous	I_D	$T_c < 111^\circ C$	80
		$T_A = 25^\circ C$	12
Power dissipation	P_D	310	W
		Derate above $25^\circ C$	2.07
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	43	$^\circ C/W$
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.48	$^\circ C/W$
Channel temperature	T_{ch}	175	$^\circ C$
Storage temperature	T_{stg}	-55 to +175	$^\circ C$

KDB3632(FDB3632)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit	
Drain to source breakdown voltage	V _{DSS}	I _D =250μA, V _{GS} =0V	100			V	
Drain cut-off current	I _{DSS}	V _{DS} =80V, V _{GS} =0			1	μA	
		V _{DS} =80V, V _{GS} =0, T _c =150°C			250	μA	
Gate leakage current	I _{GSS}	V _{GS} =±20V			±100	nA	
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	2.0		4.0	V	
Drain to source on-state resistance	R _{Ds(on)}	V _{GS} =10V, I _D =80A		0.0075	0.009	Ω	
		V _{GS} =6V, I _D =40A		0.009	0.015		
		V _{GS} =10V, I _D =80A, T _c =175°C		0.018	0.022		
Input capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0, f=1MHZ		6000		pF	
Output capacitance	C _{oss}			820		pF	
Reverse transfer capacitance	C _{rss}			200		pF	
Total Gate Charge at 10V	Q _{g(TOT)}	V _{GS} = 0V to 10V		84	110	nC	
Threshold Gate Charge	Q _{g(TH)}	V _{GS} = 0V to 2V		11	14	nC	
Gate to Source Gate Charge	Q _{gs}	V _{DS} = 50 V, I _D = 80A, I _g =1.0mA		30		nC	
Gate Charge Threshold to Plateau	Q _{gs2}			20		nC	
Gate to Drain "Miller" Charge	Q _{gd}			20		nC	
Turn-On Time	t _{ON}					102	ns
Turn-On Delay Time	t _{d(ON)}	V _{DD} = 50 V, I _D = 80A, V _{GS} = 10 V, R _{GEN} = 3.6 Ω		30		ns	
Rise Time	t _r			39		ns	
Turn-Off Delay Time	t _{d(OFF)}			96		ns	
Fall Time	t _f			46		ns	
Turn-Off Time	t _{OFF}					213	ns
Source to Drain Diode Voltage	V _{SD}		I _{SD} =80A			1.25	V
		I _{SD} =40A			1.0	V	
Reverse Recovery Time	t _{rr}	I _{SD} = 75A, di _{SD} /dt =100A/μs			64	ns	
Reverse Recovered Charge	Q _{Rr}	I _{SD} = 75A, di _{SD} /dt =100A/μs			120	nC	