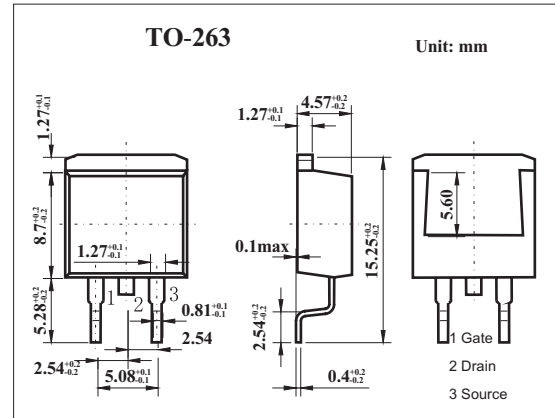
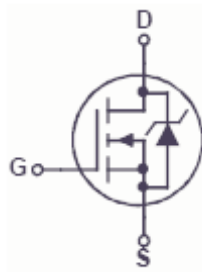


N-Channel PowerTrench MOSFET

KDB2532(FDB2532)

■ Features

- $r_{DS(ON)} = 14m\Omega$ (Typ.), $V_{GS} = 10V$, $I_D = 33A$
- $Q_{g(tot)} = 82nC$ (Typ.), $V_{GS} = 10V$
- Low Miller Charge
- Low QRR 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_{DS}	150	V
Gate to source voltage	V_{GS}	± 20	V
Drain current-Continuous	I_D	$T_C=25^\circ C$	79
		$T_A=25^\circ C$	8
Power dissipation Derate above $25^\circ C$	P_D	310	W
		2.07	W/ $^\circ C$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	43	$^\circ C/W$
Channel temperature	T_{ch}	175	$^\circ C$
Storage temperature	T_{stg}	-55 to +175	$^\circ C$

KDB2532(FDB2532)

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain to source breakdown voltage	V _{DSS}	I _D =250μA, V _{GS} =0V	150			V
Drain cut-off current	I _{DSS}	V _{Ds} =120V, V _{GS} =0			1	μ A
		V _{Ds} =120V, V _{GS} =0, T _c =150°C			250	
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 =33A		0.014	0.016	Ω
		V _{GS} =6V, I _D =16A		0.016	0.024	
		V _{GS} =10V, I _D =33A, T _c =175°C		0.040	0.048	
Input capacitance	C _{iss}			5870		pF
Output capacitance	C _{oss}	V _{Ds} =25V, V _{GS} =0, f=1MHZ		615		pF
Reverse transfer capacitance	C _{rss}			135		pF
Total Gate Charge at 10V	Q _{g(TOT)}	V _{GS} = 0V to 10V		82	107	nC
Threshold Gate Charge	Q _{g(TH)}	V _{GS} = 0V to 2V		11	14	nC
Gate to Source Gate Charge	Q _{gs}	V _{Ds} = 75V,		23		nC
Gate Charge Threshold to Plateau	Q _{gs2}	I _g =1.0mA		13		nC
Gate to Drain "Miller" Charge	Q _{gd}	I _D = 33A		19		nC
Turn-On Time	t _{ON}				69	ns
Turn-On Delay Time	t _{d(ON)}			16		ns
Rise Time	t _r	V _{DD} = 75V, I _D = 33A		30		ns
Turn-Off Delay Time	t _{d(OFF)}	V _{GS} = 10V, R _{GS} = 3.6 Ω		39		ns
Fall Time	t _f			17		ns
Turn-Off Time	t _{OFF}				84	ns
Reverse Recovery Time	t _{rr}	I _{SD} = 33A, di _{SD} /dt = 100A/μs			105	ns
Reverse Recovered Charge	Q _{RR}	I _{SD} = 33A, di _{SD} /dt = 100A/μs			327	nC
Source to Drain Diode Voltage	V _{SD}	I _{SD} = 33A			1.25	V
		I _{SD} = 16A			1.0	V