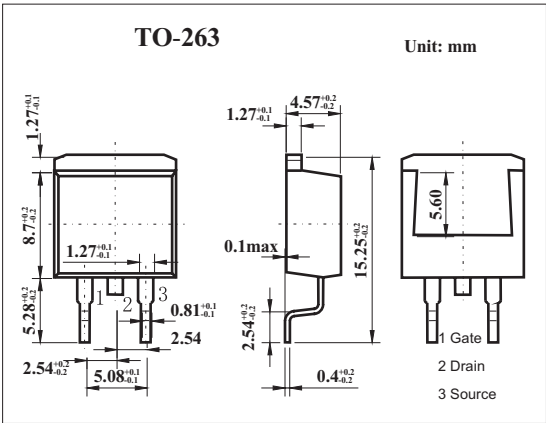
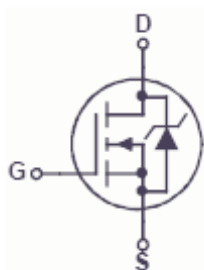


N-Channel PowerTrench MOSFET KDB2572(FDB2572)

■ Features

- $r_{DS(ON)} = 45m\Omega$ (Typ.), $V_{GS} = 10V$, $I_D = 9A$
- $Q_{g(tot)} = 26nC$ (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_{DS}	150	V
Gate to source voltage	V_{GS}	± 20	V
Drain current-Continuous	I_D	29	A
		4	A
Power dissipation	P_D	135	W
		0.9	W/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	43	°C/W
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	1.11	°C/W
Channel temperature	T_{ch}	175	°C
Storage temperature	T_{stg}	-55 to +175	°C

KDB2572(FDB2572)

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditions	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	μA
		V _{DS} =120V, V _{GS} =0, T _C =150℃			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 =9A		0.045	0.054	Ω
		V _{GS} =6V, I _D =4A		0.050	0.075	
		V _{GS} =10V, I _D =9A, T _C =175℃		0.126	0.146	
Input capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0, f=1MHZ		1770		pF
Output capacitance	C _{oss}			183		pF
Reverse transfer capacitance	C _{rss}			40		pF
Total Gate Charge at 10V	Q _{g(TOT)}	V _{GS} = 0V to 10V		26	34	nC
Threshold Gate Charge	Q _{g(TH)}	V _{GS} = 0V to 2V		3.3	4.3	nC
Gate to Source Gate Charge	Q _{gs}	V _{DS} = 75 V, I _D = 9A, I _g =1.0mA		8		nC
Gate Charge Threshold to Plateau	Q _{gs2}			5		nC
Gate to Drain "Miller" Charge	Q _{gd}			6		nC
Turn-On Time	t _{ON}	V _{DD} = 75 V, I _D = 9 A, V _{GS} = 10 V, R _{GEN} = 11 Ω			36	ns
Turn-On Delay Time	t _{d(ON)}			11		ns
Rise Time	t _r			14		ns
Turn-Off Delay Time	t _{d(OFF)}			31		ns
Fall Time	t _f			14		ns
Turn-Off Time	t _{OFF}				66	ns
Source to Drain Diode Voltage	V _{SD}	I _{SD} =9A			1.25	V
		I _{SD} =4A			1.0	V
Reverse Recovery Time	t _{rr}	I _{SD} = 9A, diSD/dt = 100A/μs			74	ns
Reverse Recovered Charge	Q _{Rr}	I _{SD} = 9A, diSD/dt = 100A/μs			169	nC