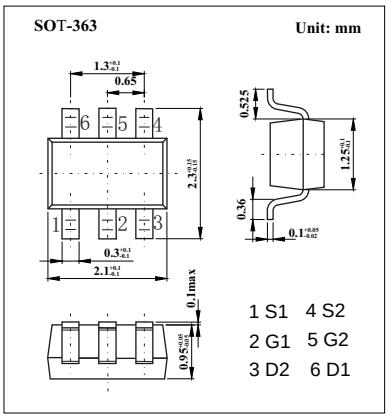
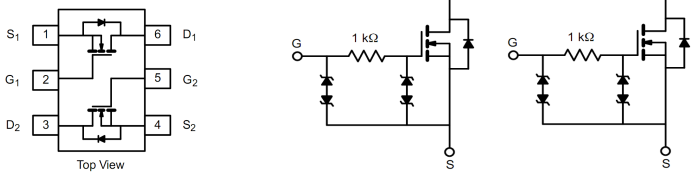
Dual N-Channel MOSFET
KI1912



■ Features

- V_{DS}=20V,I_D = 1.13A
- $R_{DS(on)}$= 280mΩ@V_{GS}=4.5V
- ESD Protected: 2000 V
- Pb-Free Packages are Available
- Lead temperature for soldering:T_L=260±5℃



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Ratings	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current T_J = 150℃ (Note 1) T_A=25°C T_A=85°C	I_D	1.13 0.81	A
Pulsed Drain Current	I_{DM}	4	A
Continuous Diode Current (Diode Conduction) (Note 1)	I_S	0.48	A
Maximum Power Dissipation (Note 1) T_A=25°C T_A=85°C	P_D	0.57 0.3	W
Maximum Junction-to-Foot(Drain)	$R_{\theta JF}$	100	℃/W
Maximum Junction-to-Ambient (Note 1)	$R_{\theta JA}$	220	℃/W
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 to 150	℃

Note: 1. Surface Mounted on 1" x 1" FR4 Board.

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■ Electrical Characteristics T_j = 25℃ unless otherwise noted

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} = 0 V, I_D = 100 μA	20			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 16V , V_{GS} = 0V			1.0	μA
		V_{DS} = 16V , V_{GS} = 0V , T_J =85℃			5.0	
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS} = V_{GS} , I_D = 100uA	0.45			V
Gate-Body Leakage	I_{GSS}	V_{DS} = 0V , V_{GS} = ±12V			±10	μA
Drain-Source On-State Resistance (Note 2)	$R_{DS(on)}$	V_{GS} = 4.5V , I_D = 1.13A			280	mΩ
		V_{GS} = 2.5V , I_D = 0.99A			360	
		V_{GS} = 1.8V , I_D = 0.2A			450	
On-State Drain Current (Note 2)	$I_{D(on)}$	V_{DS} =5V , V_{GS} = 4.5V	2			A
Forward Transconductance (Note 2)	g_{fs}	V_{DS} = 10V , I_D = 1.13A		2.6		S
Total Gate Charge (Note 3)	Q_g	V_{DS} = 10 V, V_{GS} = 4.5 V, I_D = 1.13 A		0.65	1.0	nC
Gate-Source Charge (Note 3)	Q_{gs}			0.2		
Gate-Drain Charge (Note 3)	Q_{gd}			0.23		
Turn-On Delay Time (Note 3)	$t_{d(on)}$	V_{DS} = 10V , R_L = 20Ω , I_D= 0.5 A V_{GS}= 4.5V , R_{GEN} = 6Ω		45	70	ns
Rise Time (Note 3)	t_r			85	130	
Turn-Off Delay Time (Note 3)	$t_{d(off)}$			350	530	
Fall Time (Note 3)	t_f			210	320	
Diode Forward Voltage (Note 2)	V_{SD}	I_S = 0.48 A, V_{GS} = 0 V			1.2	V

Notes: 2. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.

3. Guaranteed by design, not subject to production testing.