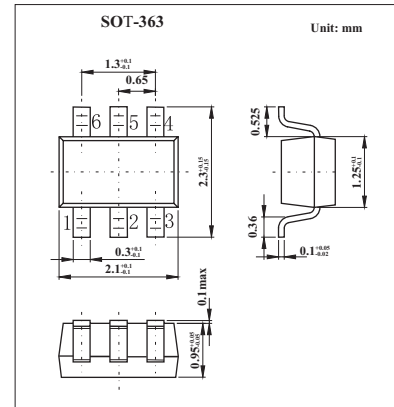
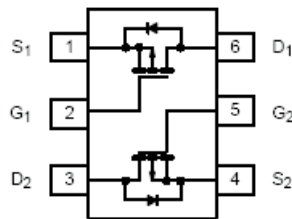


Dual P-Channel 1.8-V (G-S) MOSFET

KI1905DL

■ Features

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

Parameter	Symbol	5 secs	Steady State	Unit
Drain-source voltage	V_{DS}	-8		V
Gate-source voltage	V_{GS}	± 8		V
Continuous drain current ($T_J = 150^\circ\text{C}$)* $T_A = 25^\circ\text{C}$ $T_A = 85^\circ\text{C}$	I_D	± 0.60 ± 0.43	± 0.57 ± 0.41	A
Pulsed drain current	I_{DM}	± 1.0		A
Continuous source current (diode conduction) *	I_S	-0.25	-0.23	A
Power dissipation *	P_D	$T_A = 25^\circ\text{C}$ 0.30 $T_A = 85^\circ\text{C}$ 0.16	0.27 0.14	W
Operating junction and storage temperature range	T_J, T_{stg}	-55 to +150		$^\circ\text{C}$

* Surface Mounted on 1" X 1" FR4 Board.

■ Thermal Resistance Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Typical	Maximum	Unit	
Maximum Junction-to-Ambient*	R_{thJA}	$t \leq 5 \text{ sec}$	360	415	$^\circ\text{C}/\text{W}$
		Steady State	400	460	
Maximum Junction-to-Foot (Drain)	R_{thJF}	300	350		

* Surface Mounted on 1" X 1" FR4 Board.

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-0.45			V
Gate-body leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±8 V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} = -6.4 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -6.4 V, V _{GS} = 0 V, T _J = 85 °C			-5	
On-state drain current	I _{D(on)}	V _{DS} = -5 V, V _{GS} = -4.5 V	-1.0			A
Drain-source on-state resistance	r _{DS(on)}	V _{GS} = -4.5 V, I _D = -0.57 A		0.51	0.600	Ω
		V _{GS} = -2.5 V, I _D = -0.48 A		0.72	0.85	
		V _{GS} = -1.8V, I _D = -0.20A		1.0	1.2	
Forward transconductance	g _{fs}	V _{DS} = -10 V, I _D = -0.57 A		1.2		S
Diode forward voltage	V _{SD}	I _S = -0.23 A, V _{GS} = 0 V		-0.8	-1.2	V
Total gate charge *	Q _g	V _{DS} = -4V, V _{GS} = -4.5 V, I _D = -0.57A		1.5	2.3	nC
Gate-source charge *	Q _{gs}			0.17		
Gate-drain charge *	Q _{gd}			0.16		
Turn-on time	t _{d(on)}	V _{DD} = -4V, R _L = 8 Ω, I _D = -0.5A, V _{GEN} = -4.5V, R _G = 6 Ω		6	12	ns
	t _r			25	50	
Turn-off time	t _{d(off)}			10	20	
	t _f			10	20	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -0.23 A, di/dt = 100 A/μs		20	40	

* Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

■ Marking

Marking	QB
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