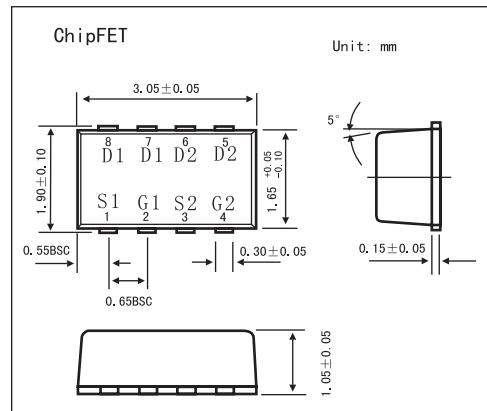
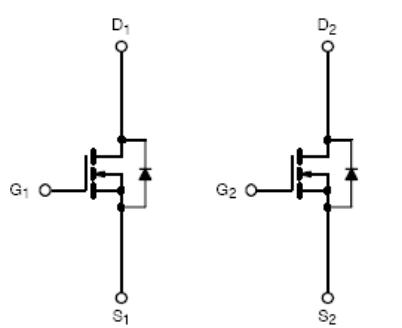


Dual N-Channel 30-V (D-S) MOSFET

KI5902DC

■ Features

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■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	5secs	Steady State	Unit
Drain-Source Voltage	V _{DS}	30		V
Gate-Source Voltage	V _{Gs}	±20		
Continuous Drain Current (T _J = 150 °C) T _A = 25°C T _A = 85°C	I _D	±3.9	±2.9	A
		±2.8	±2.1	
Pulsed Drain Current	I _{DM}	±10		
Continuous Source Current (Diode Conduction)*	I _S	4.8	0.9	
Maximum Power Dissipation * T _A = 25°C T _A = 85°C	P _D	2.1	1.1	W
		1.1	0.6	
Operating Junction and Storage Temperature Range	T _J , T _{stg}	-55 to 150		°C
Soldering Recommendations		260		°C

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

■ Thermal Resistance Ratings

Parameter	Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient *	t ≤ 5 sec	50	60	°C/W
	Steady-State	90	110	
Maximum Junction-to-Foot (Drain)	R _{thJF}	30	40	

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

KI5902DC

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Gate Threshold Voltage	V _{GS(th)}	V _{Ds} = V _{GS} , I _D = 250 μA	1.0			V
Gate-Body Leakage	I _{GSS}	V _{Ds} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{Ds} = 24 V, V _{GS} = 0 V			1	μA
		V _{Ds} = 24 V, V _{GS} = 0 V, T _J = 85°C			5	
On-State Drain Current*	I _{D(on)}	V _{Ds} ≥ 5 V, V _{GS} = 10 V	10			A
Drain Source On State Resistance*	r _{Ds(on)}	V _{GS} = 10 V, I _D = 2.9 A		0.072	0.085	Ω
		V _{GS} = 4.5 V, I _D = 2.2A		0.120	0.143	
Forward Transconductanceb	g _f s	V _{Ds} = 15 V, I _D = 2.9 A		20		S
Schottky Diode Forward Voltage*	V _{SD}	I _S = 0.9 A, V _{GS} = 0 V		0.8	1.2	V
Total Gate Charge	Q _g	V _{Ds} = 15 V, V _{GS} = 10 V, I _D = 2.9 A		5	7.5	nC
Gate-Source Charge	Q _{gs}			0.8		
Gate-Drain Charge	Q _{gd}			1.0		
Turn-On Delay Time	t _{d(on)}	V _{DD} =15V,R _L =15 Ω ,I _D =1A,V _{GEN} =10V,R _G =6Ω		7	11	ns
Rise Time	t _r			12	18	
Turn-Off Delay Time	t _{d(off)}			12	18	
Fall Time	t _f			7	11	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = 0.9 A, d _i /d _t = 100 A/μs		40	80	ns

* Pulse test :Pulse width ≤300 μ s,duty cycle≤2%