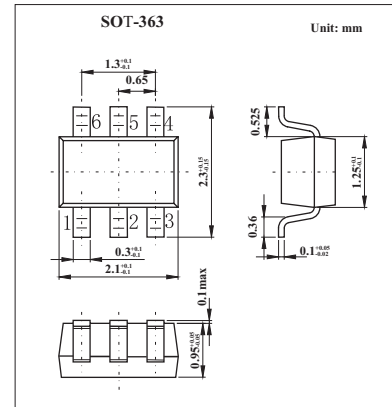
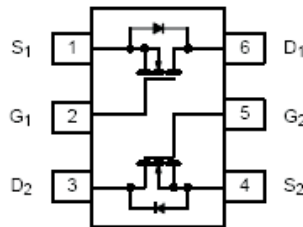


■ Features

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

Parameter	Symbol	5 secs	Steady State	Unit
Drain-source voltage	V_{DS}	20		V
Gate-source voltage	V_{GS}	± 12		V
Continuous drain current ($T_J = 150^\circ\text{C}$)*	I_D	$T_A = 25^\circ\text{C}$	0.70	A
		$T_A = 85^\circ\text{C}$	0.50	
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	W
		$T_A = 85^\circ\text{C}$	0.16	
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*	$t \leq 5 \text{ sec}$	R_{thJA}	360	415	$^\circ\text{C/W}$
	Steady State		400	460	
Maximum Junction-to-Foot (Drain)	Steady State	R_{thJF}	300	350	

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

■ 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 μ A	0.6		15	V
Gate-body leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±12 V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} = 16 V, V _{GS} = 0 V			1	μ A
		V _{DS} = 16 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 = 0.66 A		0.320	0.385	Ω
		V _{GS} = 2.5V, I _D = 0.40A		0.560	0.630	
Forward transconductance	g _{fs}	V _{DS} = 10 V, I _D = 0.66 A		1.5		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} = 10V, V _{GS} = 4.5 V, I _D = 0.66A		0.8	1.2	nC
Gate-source charge *	Q _{gs}			0.06		
Gate-drain charge *	Q _{gd}			0.30		
Turn-on time	t _{d(on)}	V _{DD} = 10V, R _L = 20 Ω, I _D = 0.5A, V _{GEN} = 4.5V, R _G = 6 Ω		10	20	ns
	t _r			16	30	
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/μ s		20	40	

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

■ Marking

Marking	PA
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