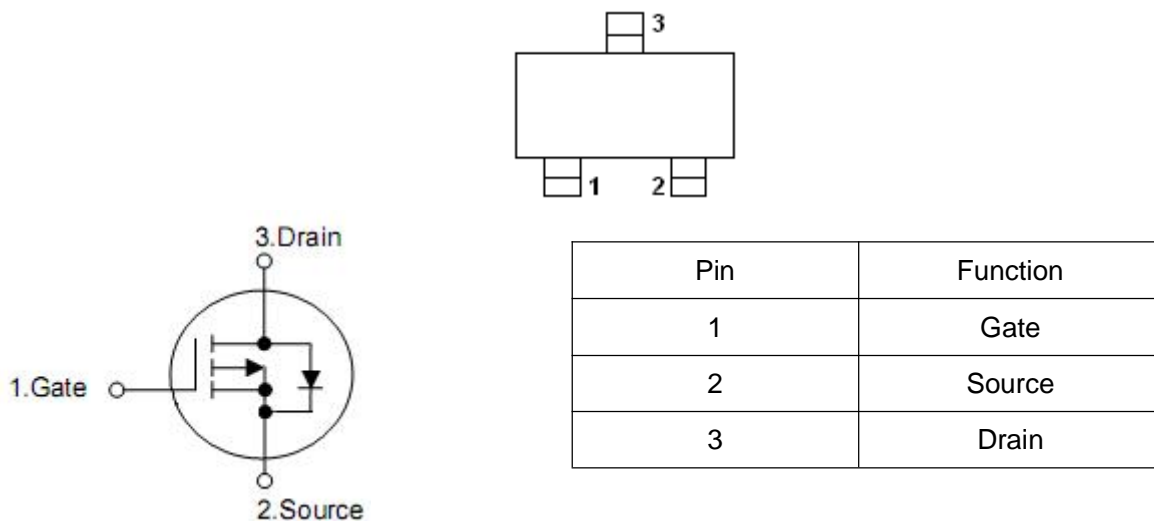


1. Features

n $V_{DS}=-20V, R_{DS(on)}=0.12\Omega @ V_{GS}=-4.5V, I_D=-2.8A$

n $V_{DS}=-20V, R_{DS(on)}=0.19\Omega @ V_{GS}=-2.5V, I_D=-1.8A$

2. Symbol



3. Absolute maximum ratings

Parameter	Symbol	Rating	Units
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	± 8	V
Drain current continuous ($T_J=150^\circ\text{C}$) ^b	I_D	$T_A=25^\circ\text{C}$	-2.8
		$T_A=70^\circ\text{C}$	-1.5
Pulsed drain current ^a	I_{DM}	-10	A
Continuous source current (diode conduction) ^b	I_S	-1.6	
Power dissipation ^b	P_D	$T_A=25^\circ\text{C}$	1.25
		$T_A=70^\circ\text{C}$	0.8
Junction and storage temperature range	T_J, T_{STG}	-55 to 150	$^\circ\text{C}$

Parameter	Symbol	Rating	Units
Maximum junction-ambient ^b	R_{thJA}	100	$^\circ\text{C/W}$
Maximum junction-ambient ^c		166	

Notes

- Pulse width limited by maximum junction temperature.
- Surface mounted on FR4 board, $t \leq 5$ sec.
- Surface mounted on FR4 board.

4. Electrical characteristics

(T_J=25°C, unless otherwise noted)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} =0V, I _D =-250μA	-20	-	-	V
Gate threshold voltage*	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-0.5	-	-1.0	V
Gate- body leakage	I _{GSS}	V _{GS} =±8V, V _{DS} =0V	-	-	±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} =-16V, V _{GS} =0V	-	-	-50	nA
On-state drain current ^a	I _{D(on)}	V _{DS} ≤-5V, V _{GS} =-4.5V	-6	-	-	A
		V _{DS} ≤-5V, V _{GS} =-2.5V	-3	-	-	
Static drain-source on-resistance ^a	R _{DS(on)}	V _{GS} =-4.5V, I _D =-2.8A	-	0.105	0.12	Ω
		V _{GS} =-2.5V, I _D =-1.8A	-	0.145	0.19	
Forward transconductance ^a	g _{fs}	V _{DS} =-5V, I _D =-2.3A	-	6.5	-	S
Diode forward voltage	V _{SD}	V _{GS} =0V, I _S =-1.6A	-	-0.8	-1.2	V
Total gate charge	Q _g	V _{DS} =-6.0V, V _{GS} =-4.5V I _D =-2.3A	-	5.8	10	nC
Gate-source charge	Q _{gs}		-	0.85	-	
Gate-drain charge	Q _{gd}		-	1.7	-	
Input capacitance	C _{iss}	V _{DS} =-6V, V _{GS} =0V, f=1MHz	-	415	-	pF
Output capacitance	C _{oss}		-	223	-	
Reverse transfer capacitance	C _{rss}		-	87	-	
Turn-on delay time	t _{d(on)}	V _{DD} =-6V, I _D =-1.0A, R _L =6Ω, R _G =6Ω, V _{GEN} =-4.5V	-	13	25	ns
Rise time	t _r		-	36	60	
Turn-off delay time	t _{d(off)}		-	42	70	
Fall time	t _f		-	34	60	

Notes

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

5. Test circuits and waveforms

