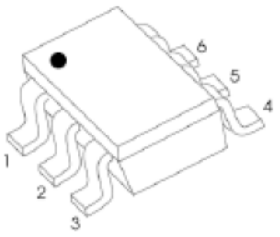
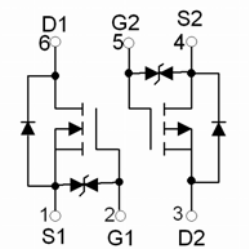
SOT-363 Plastic-Encapsulate MOSFETS

CJ3439KDW N channel+P Channel MOSFET

SOT-363





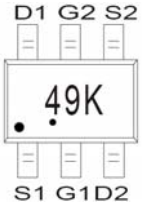
FEATURE

- Surface Mount Package
- Low R_{DS}(on)
- Operated at Low Logic Level Gate Drive
- ESD Protected Gate
- Including a N-ch CJ3134K and a P-ch CJ3139K (independently) In a Package

APPLICATION

- Load/ Power Switching
- Interfacing Switching
- Battery Management for Ultra Small Portable Electronics
- Logic Level Shift

MARKING



（Green compound）

（Normal compound）

(49K=Device Code
Solid Dot=Pin 1 indicator)

ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
N-MOSFET			
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current (note 1)	I_D	0.75	A
Pulsed Drain Current (tp=10us)	I_{DM}	1.8	A
P-MOSFET			
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current (note 1)	I_D	-0.66	A
Pulsed Drain Current (tp=10us)	I_{DM}	-1.2	A
Temperature and Thermal Resistance			
Thermal Resistance from Junction to Ambient (note 1)	$R_{\theta JA}$	833	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~+150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10 s)	T_L	260	℃

N-ch MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =20V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±50	uA
Gate threshold voltage (note 2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.35		1	V
Drain-source on-resistance(note 2)	$R_{DS(on)}$	V_{GS} =4.5V, I_D =0.65A			380	mΩ
		V_{GS} =2.5V, I_D =0.55A			450	mΩ
		V_{GS} =1.8V, I_D =0.45A			800	mΩ
Forward tranconductance(note 2)	g_{FS}	V_{DS} =10V, I_D =0.8A		1.6		S
Diode forward voltage	V_{SD}	I_S=0.15A, V_{GS} = 0V			1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
Input Capacitance	C_{iss}	V_{DS} =16V,V_{GS} =0V,f =1MHz		79	120	pF
Output Capacitance	C_{oss}			13	20	pF
Reverse Transfer Capacitance	C_{rss}			9	15	pF
SWITCHING CHARACTERISTICS (note 3,4)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=4.5V,V_{DS}=10V, I_D=500mA,R_{GEN}=10Ω		6.7		ns
Turn-on rise time	t_r			4.8		ns
Turn-off delay time	$t_{d(off)}$			17.3		ns
Turn-off fall time	t_f			7.4		ns

P-ch MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC CHARACTERISTICS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-20V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±20	uA
Gate threshold voltage (note 2)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.35		-1.1	V
Drain-source on-resistance(note 2)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-1A			520	mΩ
		V_{GS} =-2.5V, I_D =-0.8A			700	mΩ
		V_{GS} =-1.8V, I_D =-0.5A			950	mΩ
Forward tranconductance(note 2)	g_{FS}	V_{DS} =-10V, I_D =-0.54A		1.2		S
Diode forward voltage	V_{SD}	I_S=-0.5A, V_{GS} = 0V			-1.2	V
DYNAMIC CHARACTERISTICS (note 4)						
Input Capacitance	C_{iss}	V_{DS} =-16V,V_{GS} =0V,f =1MHz		113	170	pF
Output Capacitance	C_{oss}			15	25	pF
Reverse Transfer Capacitance	C_{rss}			9	15	pF
SWITCHING CHARACTERISTICS (note 3, 4)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-4.5V,V_{DS}=-10V, I_D=-200mA,R_{GEN}=10Ω		9		ns
Turn-on rise time	t_r			5.8		ns
Turn-off delay time	$t_{d(off)}$			32.7		ns
Turn-off fall time	t_f			20.3		ns

Notes :

1.Surface mounted on FR4 board using the minimum recommended pad size.

2. Pulse Test : Pulse width=300μs, duty cycle≤2%.

3. Switching characteristics are independent of operating junction temperature.

4. Graranted by design，not subject to producting.