

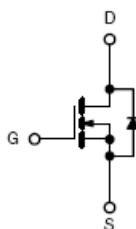
## SOT-23 Plastic-Encapsulate MOSFETS

### **CJ3406** N-Channel Enhancement Mode Field Effect Transistor

#### DESCRIPTION

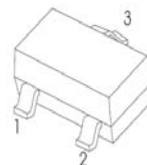
The CJ3406 use advanced trench technology to provide excellent  $R_{DS(ON)}$  and low gate charge. This device is suitable for use as a load switch or in PWM applications.

#### MARKING: R6



#### SOT-23

1. GATE
2. SOURCE
3. DRAIN



#### Maximum ratings ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	3.6	A
Drain Current-Pulsed (note 1)	$I_{DM}$	15	A
Power Dissipation	$P_D$	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}\text{C}$

**Electrical characteristics (T<sub>a</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 24V, V <sub>GS</sub> = 0V			1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V			±100	nA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA	1		3	V
Drain-source on-resistance (note 2)	R <sub>DS(on)</sub>	V <sub>GS</sub> = 10V, I <sub>D</sub> = 3.6A			65	mΩ
		V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 2.8A			105	mΩ
Forward tranconductance (note 2)	g <sub>FS</sub>	V <sub>DS</sub> = 5V, I <sub>D</sub> = 3.6A	3			S
Diode forward voltage	V <sub>SD</sub>	I <sub>S</sub> = 1A			1	V
<b>DYNAMIC PARAMETERS (note 3)</b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V, f = 1MHz			375	pF
Output capacitance	C <sub>oss</sub>			57		pF
Reverse transfer capacitance	C <sub>rss</sub>			39		pF
Gate resistance	R <sub>g</sub>	V <sub>DS</sub> = 0V, V <sub>GS</sub> = 0V, f = 1MHz			6	Ω
<b>SWITCHING PARAMETERS (note 3)</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> = 10V, V <sub>DS</sub> = 15V, R <sub>L</sub> = 2.2Ω, R <sub>GEN</sub> = 3Ω		4.6		ns
Turn-on rise time	t <sub>r</sub>			1.9		ns
Turn-off delay time	t <sub>d(off)</sub>			20.1		ns
Turn-off fall time	t <sub>f</sub>			2.6		ns

**Notes :**

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 0.5%.
3. These parameters have no way to verify.