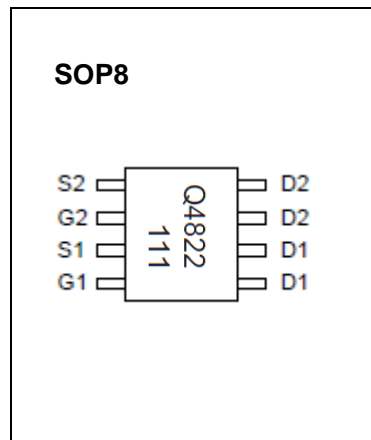
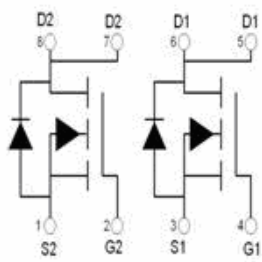


## SOP8 Plastic-Encapsulate MOSFETS

### CJQ4822 Dual N-Channel MOSFET

#### DESCRIPTION

The CJQ4822 uses 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.



#### 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 ( $t \leq 10\text{s}$ ) (note 1)	$I_D$	8.5	A
Pulsed Drain Current (note 2)	$I_{DM}$	30	A
Power Dissipation	$P_D$	1.4	W
Thermal Resistance from Junction to Ambient ( $t \leq 10\text{s}$ ) (note 1)	$R_{\theta JA}$	89	$^{\circ}\text{C}/\text{W}$
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	Unit
<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 3)	R <sub>DS(on)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =8.5A			16	mΩ
		V <sub>GS</sub> =4.5V, I <sub>D</sub> =6A			26	mΩ
Forward tranconductance (note 3)	g <sub>fs</sub>	V <sub>DS</sub> =5V, I <sub>D</sub> =8.5A		20		S
Diode forward voltage (note 3)	V <sub>SD</sub>	I <sub>S</sub> =1A, V <sub>GS</sub> = 0V			1	V
<b>DYNAMIC PARAMETERS (note 4)</b>						
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0V, f =1MHz			1250	pF
Output capacitance	C <sub>oss</sub>			180		pF
Reverse transfer capacitance	C <sub>rss</sub>			110		pF
<b>SWITCHING PARAMETERS (note 4)</b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>GS</sub> =10V, V <sub>DS</sub> =15V, R <sub>L</sub> =1.8Ω, R <sub>GEN</sub> =3Ω			7.5	ns
Turn-on rise time	t <sub>r</sub>				6.5	ns
Turn-off delay time	t <sub>d(off)</sub>				25	ns
Turn-off fall time	t <sub>f</sub>				5	ns
Total gate charge (10V)	Q <sub>g</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =10V, I <sub>D</sub> =8.5A			23	nC
Total gate charge (4.5V)					11.2	nC
Gate-source charge	Q <sub>gs</sub>			2.6		nC
Gate-drain charge	Q <sub>gd</sub>			4.2		nC

**Notes :**

1. The value of R<sub>θJA</sub> is measure with the device mounted on 1in<sup>2</sup> FR-4 board with 2oz. Copper, in a still air environment with T<sub>a</sub>=25°C. The value in any given application depends on the user’s specific board design. The current rating is based on the t≤10s thermal resistance rating.
2. Repetitive rating : Pulse width limited by junction temperature.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤2%.
4. Guaranteed by design, not subject to production testing.