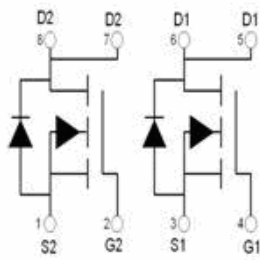
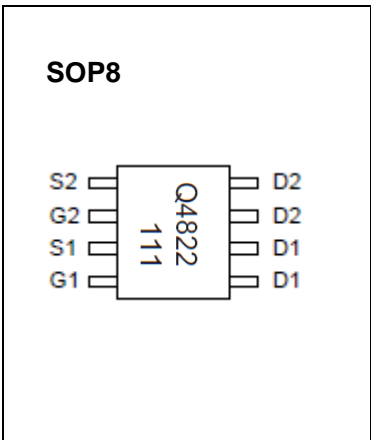


## SOP8 Plastic-Encapsulate MOSFETS

**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 ( $T_a=25^{\circ}C$  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 ( $t \leq 10s$ ) (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 ( $t \leq 10s$ ) (note 1)	$R_{\theta JA}$	89	$^{\circ}C/W$
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~+150	$^{\circ}C$

Electrical characteristics ( $T_a=25^\circ\text{C}$  unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 24V, V_{GS} = 0V$			1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1		3	V
Drain-source on-resistance (note 3)	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 8.5A$			16	m $\Omega$
		$V_{GS} = 4.5V, I_D = 6A$			26	m $\Omega$
Forward transconductance (note 3)	$g_{fs}$	$V_{DS} = 5V, I_D = 8.5A$		20		S
Diode forward voltage (note 3)	$V_{SD}$	$I_S = 1A, V_{GS} = 0V$			1	V
<b>DYNAMIC PARAMETERS (note 4)</b>						
Input capacitance	$C_{iss}$	$V_{DS} = 15V, V_{GS} = 0V, f = 1MHz$			1250	pF
Output capacitance	$C_{oss}$			180		pF
Reverse transfer capacitance	$C_{rss}$			110		pF
<b>SWITCHING PARAMETERS (note 4)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 10V, V_{DS} = 15V,$ $R_L = 1.8\Omega, R_{GEN} = 3\Omega$			7.5	ns
Turn-on rise time	$t_r$				6.5	ns
Turn-off delay time	$t_{d(off)}$				25	ns
Turn-off fall time	$t_f$				5	ns
Total gate charge (10V)	$Q_g$	$V_{DS} = 15V, V_{GS} = 10V, I_D = 8.5A$			23	nC
Total gate charge (4.5V)					11.2	nC
Gate-source charge	$Q_{gs}$			2.6		nC
Gate-drain charge	$Q_{gd}$			4.2		nC

**Notes :**

1. The value of  $R_{\theta JA}$  is measure with the device mounted on 1in<sup>2</sup> FR-4 board with 2oz. Copper, in a still air environment with  $T_a=25^\circ\text{C}$ . The value in any given application depends on the user's specific board design. The current rating is based on the  $t \leq 10s$  thermal resistance rating.
2. Repetitive rating : Pulse width limited by junction temperature.
3. Pulse Test : Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$ .
4. Guaranteed by design, not subject to production testing.