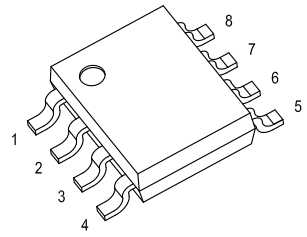
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOP8 Plastic-Encapsulate MOSFETS

CJQ4822 Dual N-Channel MOSFET

SOP8

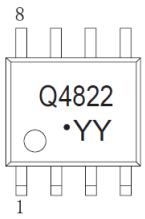


$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
30V	16mΩ@10V	8.5A
	26mΩ@4.5V	

DESCRIPTION

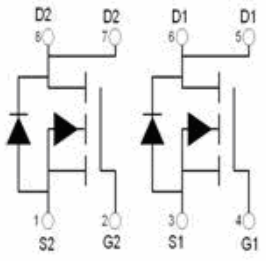
The CJQ4822 uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. This device is suitable for use as a load switch or in PWM applications.

MARKING:



Q4822= Device code
YY=Date Code
Solid dot = Pin1 indicator
Solid dot = Green molding compound device, if none,the normal device.

Equivalent Circuit



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current (t ≤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 ≤10s) (note 1)	$R_{\theta JA}$	89	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~+150	℃

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

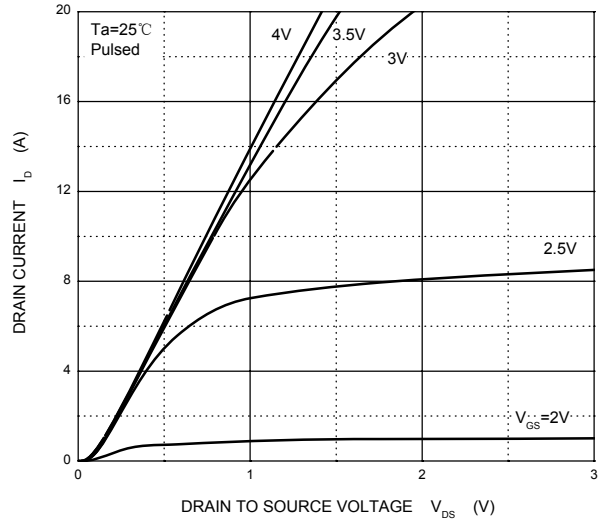
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =24V,V_{GS} = 0V			1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±20V, V_{DS} = 0V			±100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1	1.25	3	V
Drain-source on-resistance (note 3)	$R_{DS(on)}$	V_{GS} =10V, I_D =8.5A		11	16	mΩ
		V_{GS} =4.5V, I_D =6A		13	26	mΩ
Forward tranconductance (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
DYNAMIC PARAMETERS (note 4)						
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
SWITCHING PARAMETERS (note 4)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=10V,V_{DS}=15V, R_L=1.8Ω,R_{GEN}=3Ω			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 :

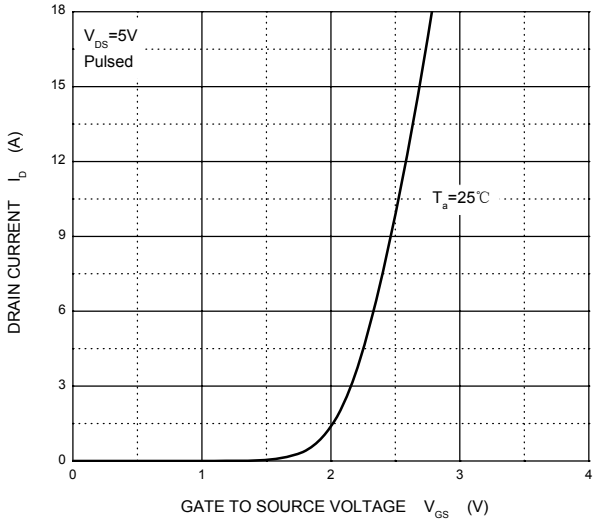
1. The value of $R_{\theta JA}$ is measure with the device mounted on 1in^2 FR-4 board with 2oz. Copper, in a still air environment with T_a=25℃. The value in any given application depends on the user's specific board design. The current rating is based on the t≤10s thermal resistance rating.
2. Repetitive 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.

Typical Characteristics

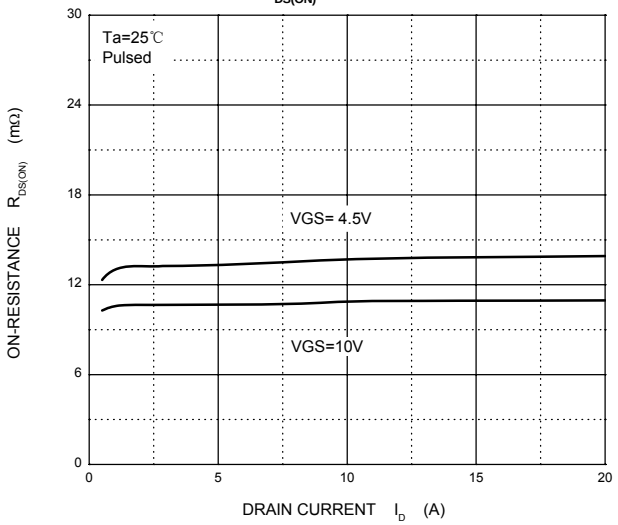
Output Characteristics



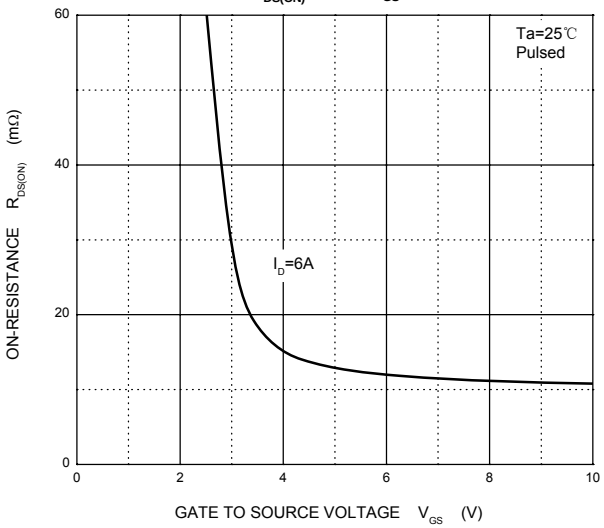
Transfer Characteristics



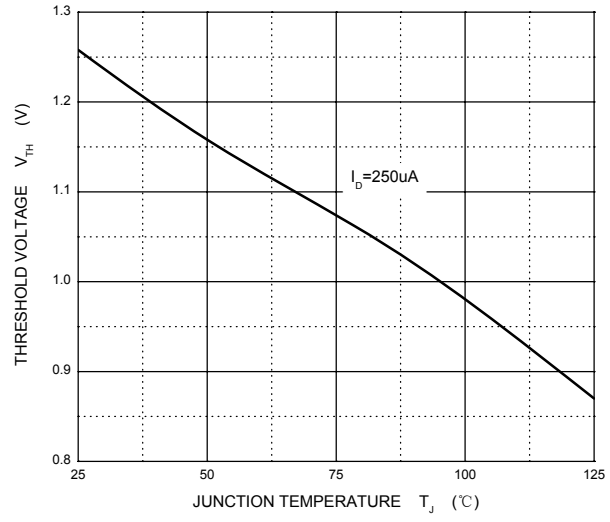
$R_{DS(ON)}$ —— I_D



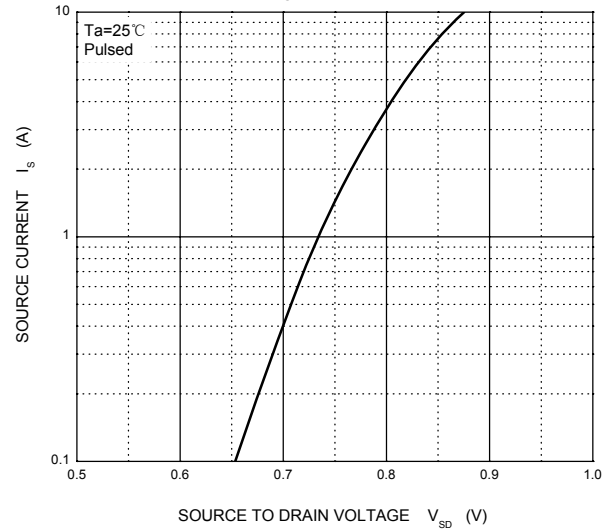
$R_{DS(ON)}$ —— V_{GS}



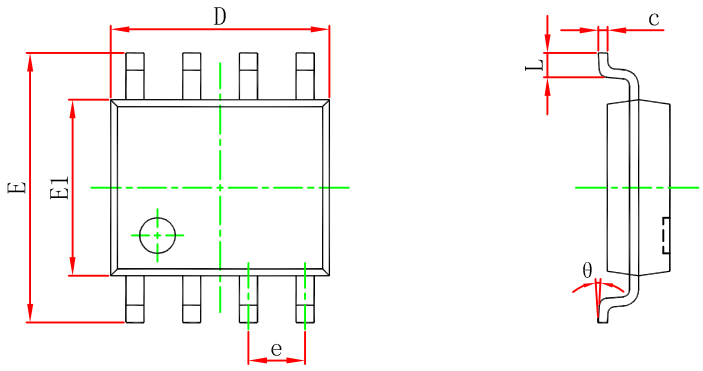
Threshold Voltage

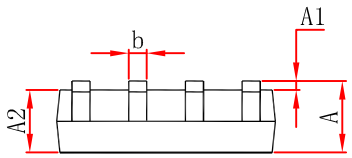


I_S —— V_{SD}



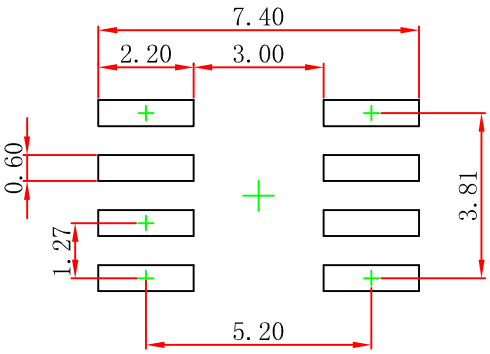
SOP8 Package Outline Dimensions





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	**Max**	**Min**	**Max**
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.007	0.010
D	4.800	5.000	0.189	0.197
e	1.270 (BSC)		0.050 (BSC)	
E	5.800	6.200	0.228	0.244
E1	3.800	4.000	0.150	0.157
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

SOP8 Suggested Pad Layout



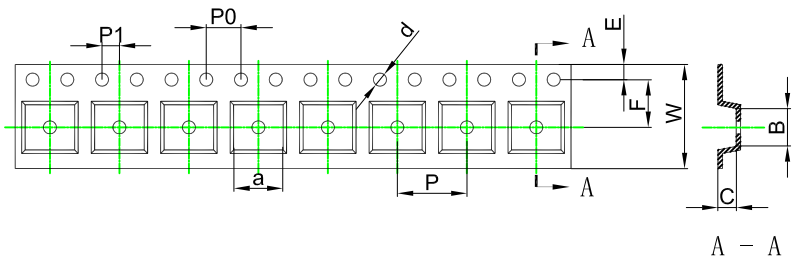
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

JCET reserve the right to make modifications,enhancements, improvements, corrections or other changes without further notice to any product herein.JCET does not assume any liability arising out of the application or use of any product described herein.

SOP8 Tape and Reel

SOP8 Embossed Carrier Tape



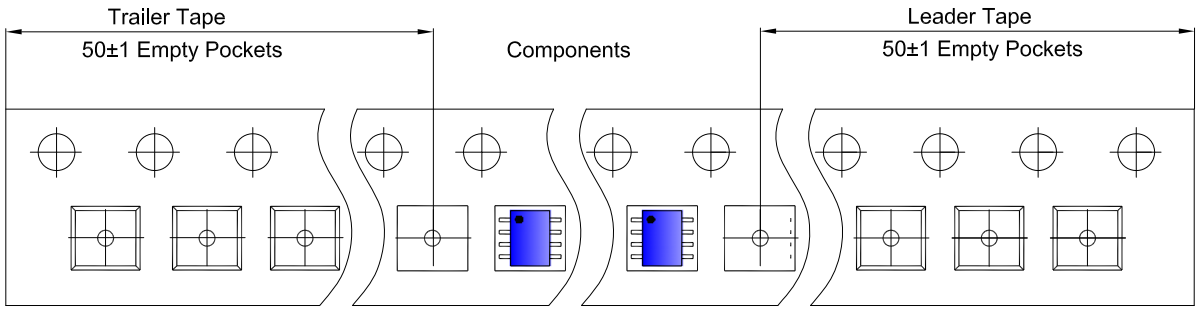
Packaging Description:

SOP8 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 2,500 units per 13" or 33cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

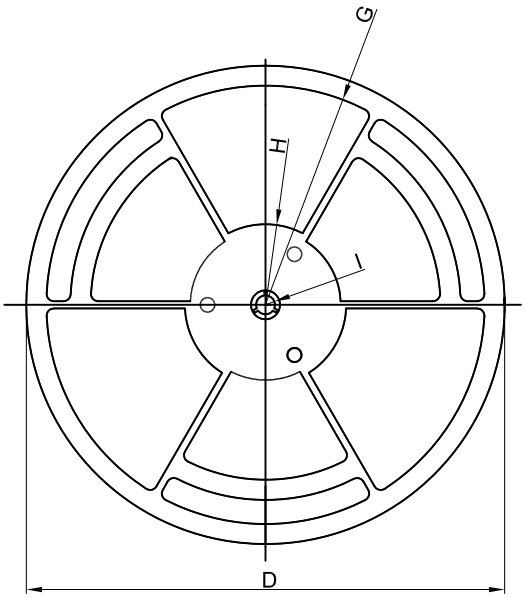
ALL DIM IN mm

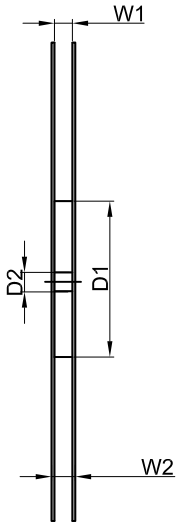
Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

SOP8 Tape Leader and Trailer



SOP8 Reel





Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
13"Dia	Ø330.00	100.00	13.00	R151.00	R56.00	R6.50	12.40	17.60

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
4,000 pcs	13 inch	8,000 pcs	360×360×65	64,000 pcs	565×380×390	