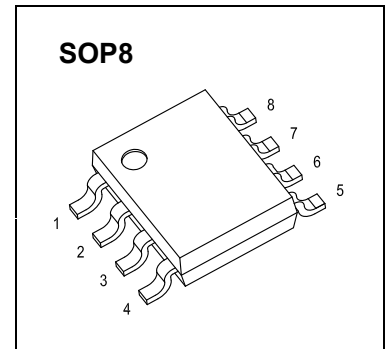




DONGGUAN NANJING ELECTRONICS LTD.,
SOP8 Plastic-Encapsulate MOSFETS

4822 Dual N-Channel MOSFET

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



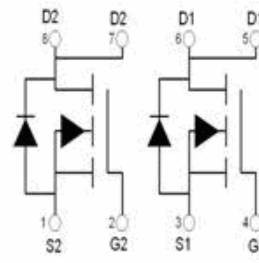
DESCRIPTION

The 4822 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:



Equivalent Circuit



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}	± 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	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

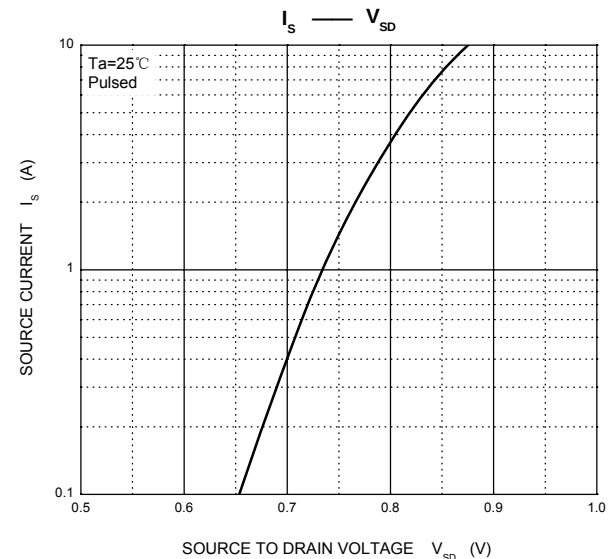
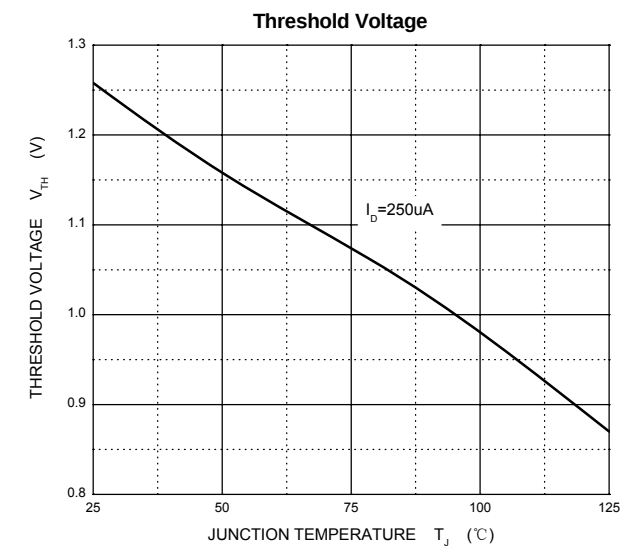
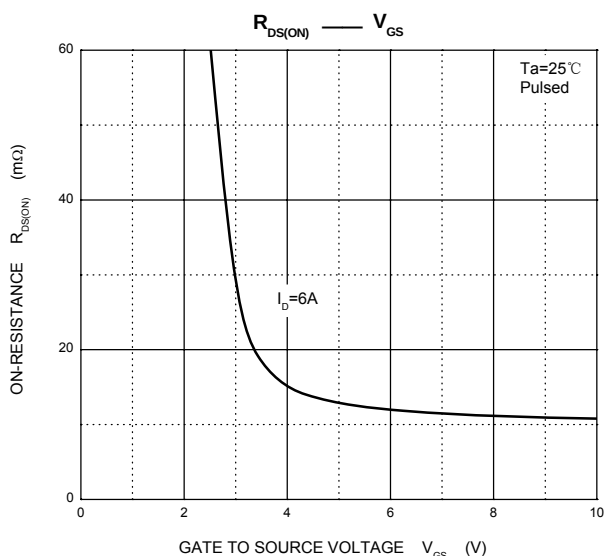
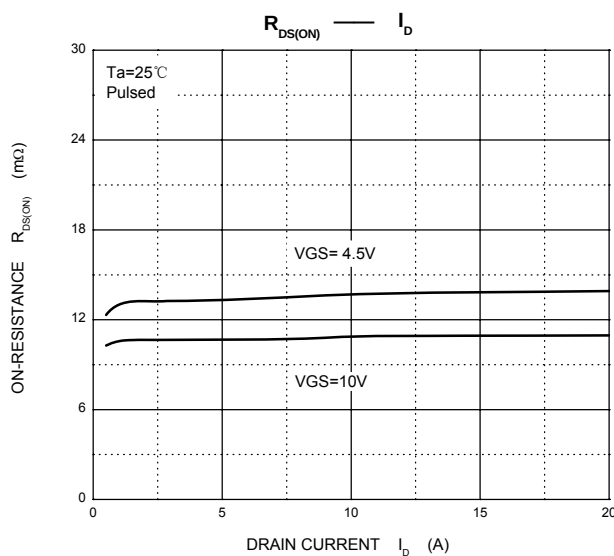
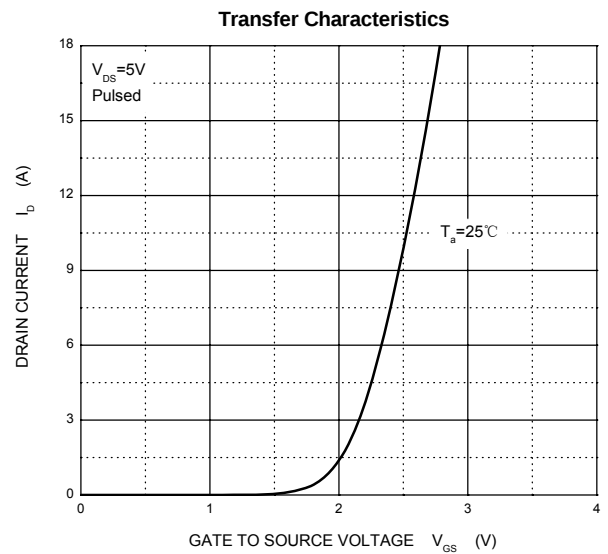
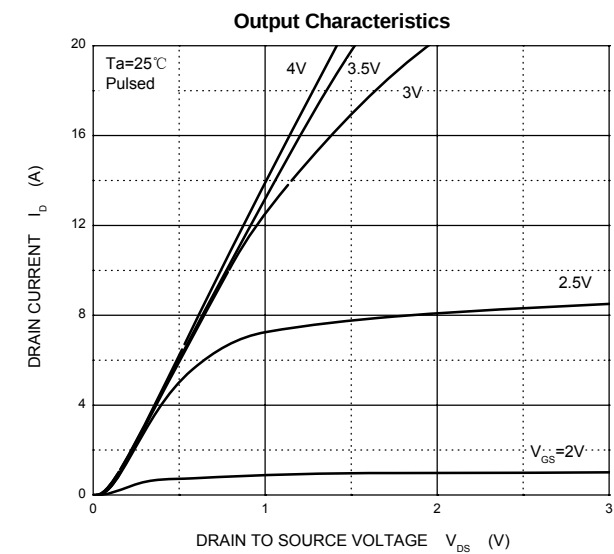
$T_a=25^{\circ}\text{C}$ unless otherwise specified

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

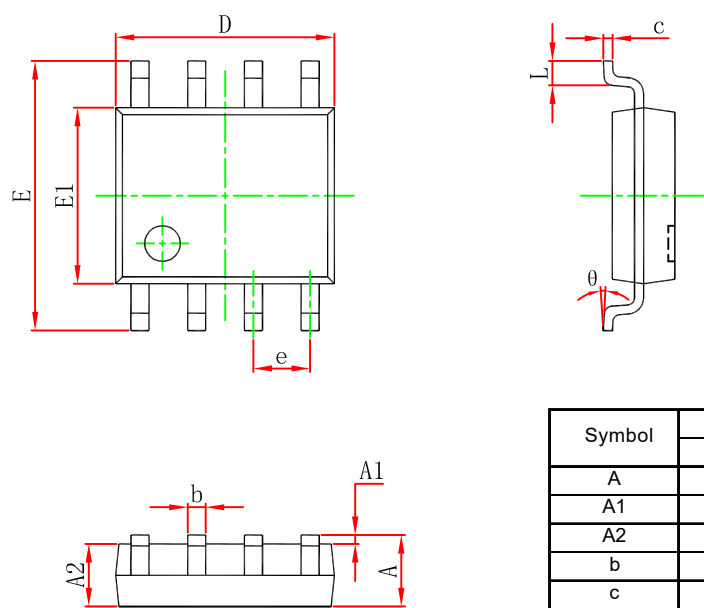
Notes :

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 $T_a=25^{\circ}\text{C}$. 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.

Typical Characteristics

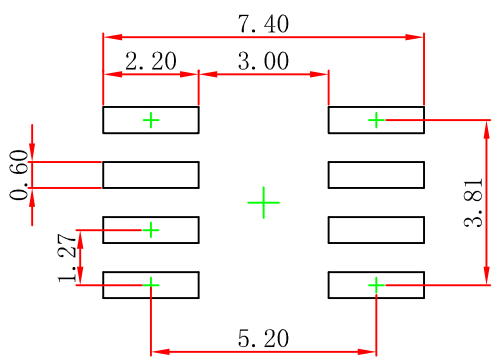


SOP8 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.450	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	4.700	5.100	0.185	0.201
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°

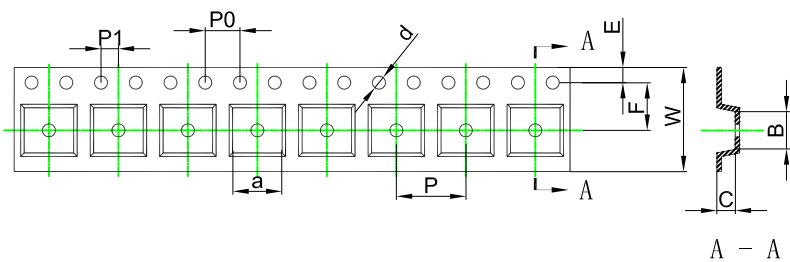
SOP8 Suggested Pad Layout



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

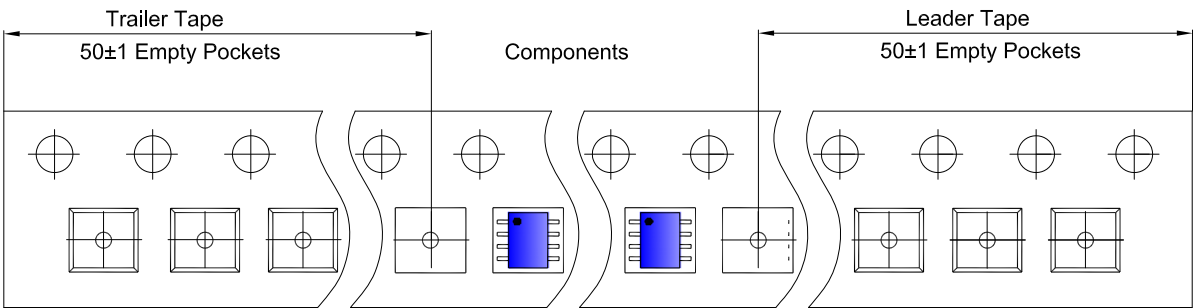
SOP8 Tape and Reel

SOP8 Embossed Carrier Tape

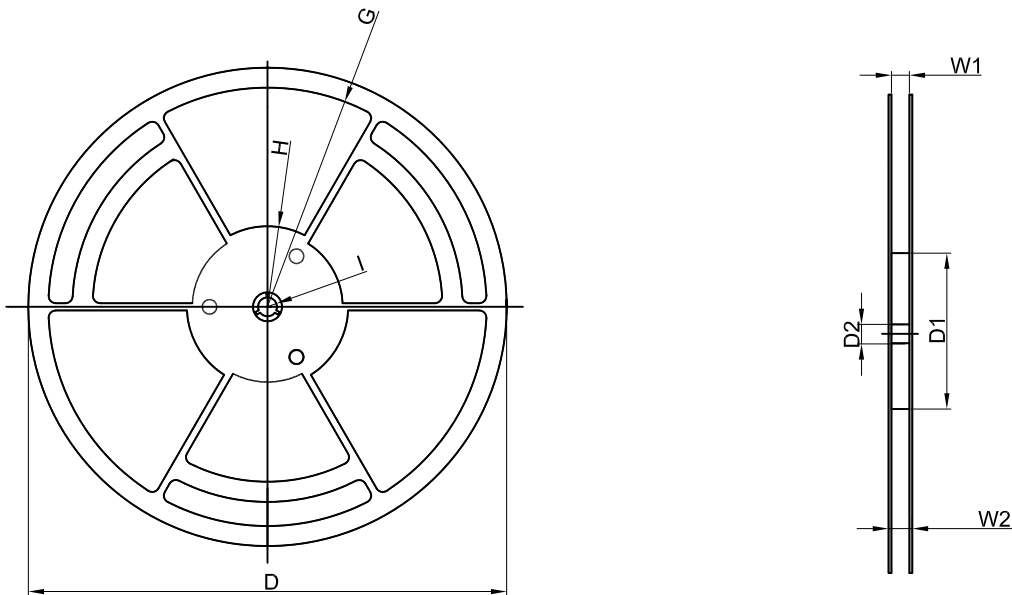


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

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	40,000 pcs	565×380×390	