

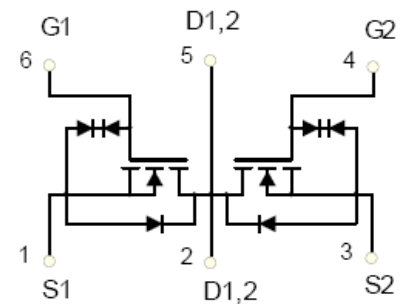
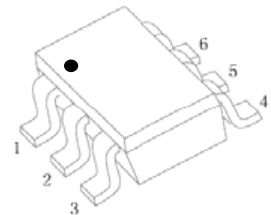


Dual N-Channel MOSFET

DESCRIPTION

The PT8810A uses advanced trench technology to provide excellent $R_{DS(ON)}$ and low gate charge. It is ESD protected. This device is suitable for use as a uni-directional or bi-directional load switch, facilitated by its common-drain configuration.

SOT-23-6L



Order Information

Product	Package	Packing
PT8810A	SOT-23-6L	3000PCS/Reel

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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	V
Continuous Drain Current	I_D	7	A
Pulsed Drain Current	I_{DM}^*	30	A
Thermal Resistance from Junction to Ambient	$R_{\theta JA}^{**}$	208.3	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10 s)	T_L	260	$^{\circ}\text{C}$

*Repetitive rating: Pulse width limited by junction temperature.

** Surface mounted on FR4 board using 1 square inch pad size, 1oz single-side copper.

**Dual N-Channel MOSFET****T_a=25 °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	20			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =16V, V _{GS} = 0V			1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±8V, V _{DS} = 0V			±10	μA
Gate threshold voltage (note 1)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.4	0.77	1	V
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =4.5V, I _D =6.6A		11.8	16	mΩ
		V _{GS} =2.5V, I _D =5.5A		15	22	mΩ
		V _{GS} =1.8V, I _D =5A		22	35	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =5V, I _D =7A		9		S
Diode forward voltage(note 1)	V _{SD}	I _S =1A, V _{GS} = 0V			1	V
DYNAMIC PARAMETERS (note 2)						
Input Capacitance	C _{iss}	V _{DS} =10V,V _{GS} =0V,f =1MHz		1150		pF
Output Capacitance	C _{oss}			185		pF
Reverse Transfer Capacitance	C _{rss}			145		pF
Total gate charge	Q _g	V _{DS} =10V,V _{GS} =4.5V,I _D =7A		15		nC
Gate-source charge	Q _{gs}			0.8		nC
Gate-drain charge	Q _{gd}			3.2		nC
SWITCHING PARAMETERS(note 2)						
Turn-on delay time	t _{d(on)}	V _{GS} =5V,V _{DD} =10V, R _L =1.35Ω,R _{GEN} =3Ω		6		ns
Turn-on rise time	t _r			13		ns
Turn-off delay time	t _{d(off)}			52		ns
Turn-off fall time	t _f			16		ns

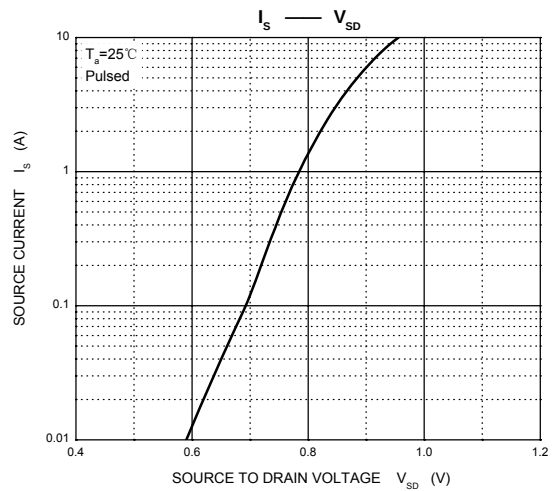
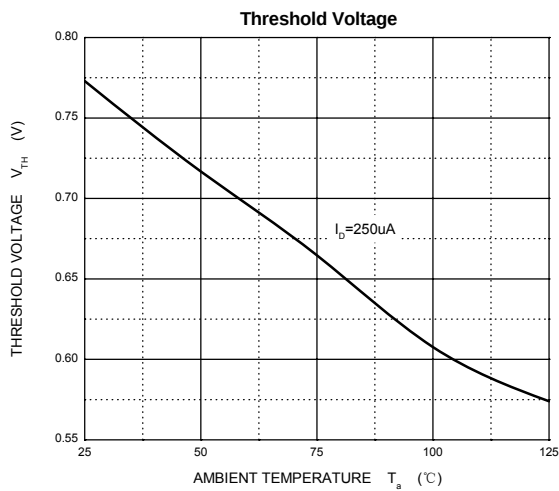
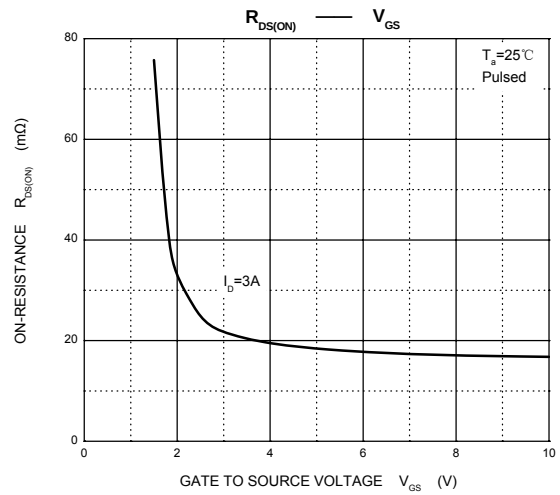
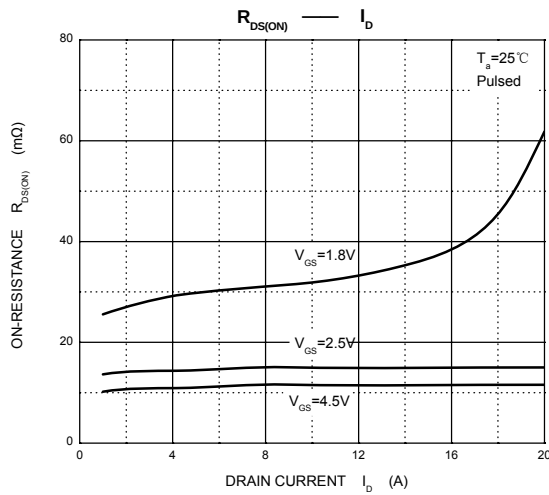
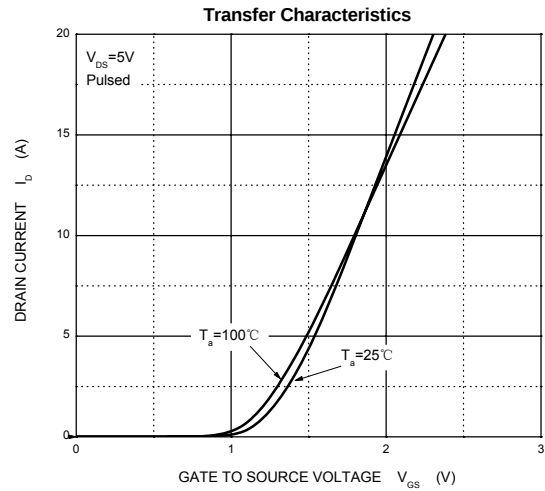
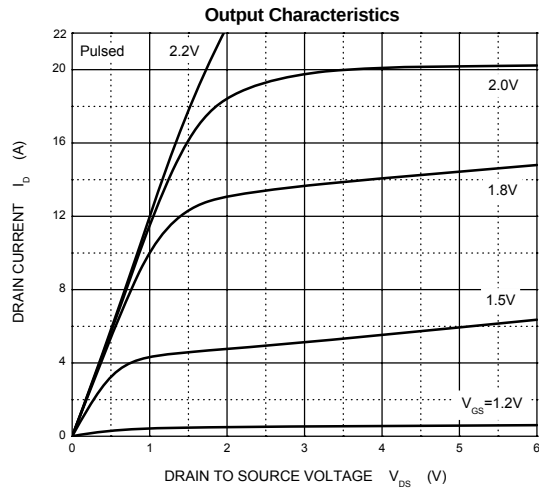
Notes :

1. Pulse Test : Pulse width $\leq 300\mu s$, duty cycle $\leq 0.5\%$.
2. Guaranteed by design, not subject to production testing.



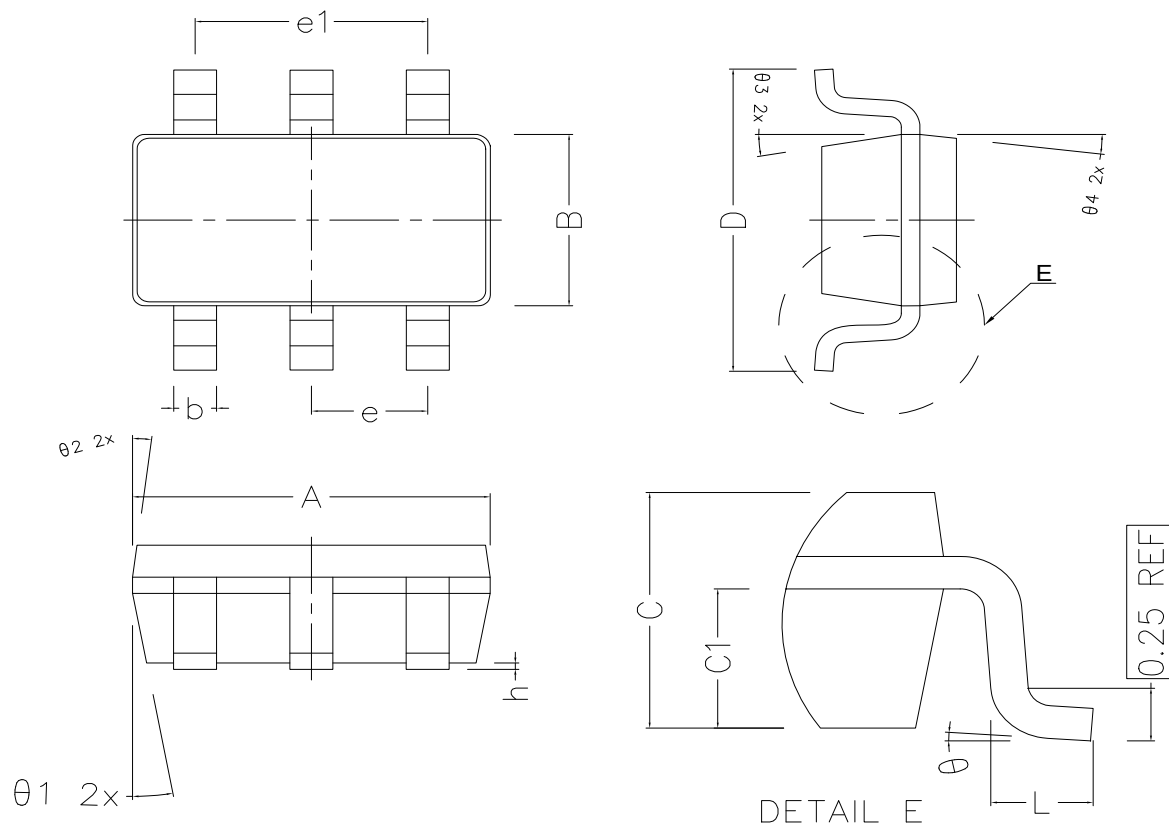
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Typical Characteristics





SOT-23-6L Package Outline Dimensions (Units: mm)



COMMON DIMENSIONS (UNITS OF MEASURE IS mm)			
	MIN	NORMAL	MAX
A	2.820	2.920	3.020
B	1.500	1.600	1.700
C	1.050	1.100	1.150
C1	0.600	0.650	0.700
D	2.650	2.800	2.950
L	0.300	0.450	0.600
b	0.280	0.350	0.420
h	0.020	0.050	0.100
K	0.120	—	0.230
e	0.950TYPE		
e1	1.900TYPE		
theta1	10° TYPE		
theta2	7° TYPE		
theta3	10° TYPE		
theta4	7° TYPE		
theta	0° ~ 8°		