



Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
20V	16m Ω @10V	6A
	21m Ω @4.5V	

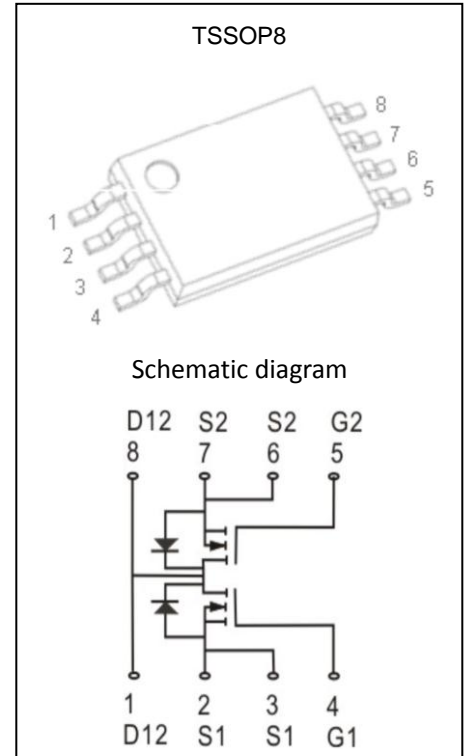
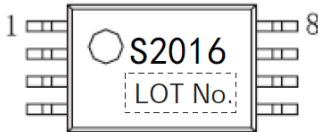
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$
- Low Gate Charge
- High Power and Current Handling Capability
- Surface Mount Package

Application

- Battery Protection
- Load Switch
- Power Management

MARKING:



ABSOLUTE 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}	± 10	V
Continuous Drain Current	I_D	6	A
Pulsed Drain Current ⁽¹⁾	I_{DM}	25	A
Power Dissipation	P_D	2	W
Thermal Resistance from Junction to Ambient ⁽²⁾	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$
Lead Temperature for Soldering Purposes(1/8" from case for 10s)	T_L	260	$^\circ\text{C}$

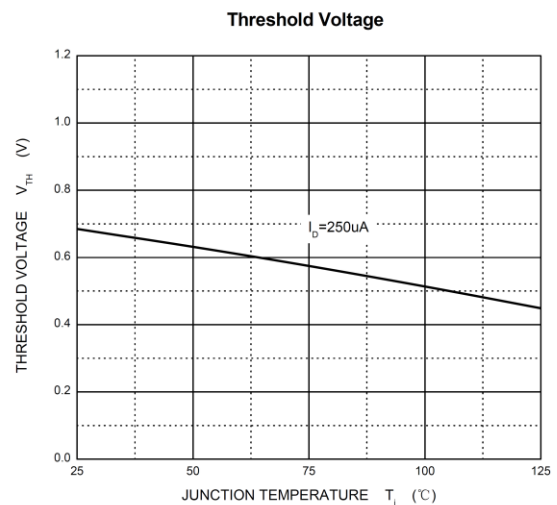
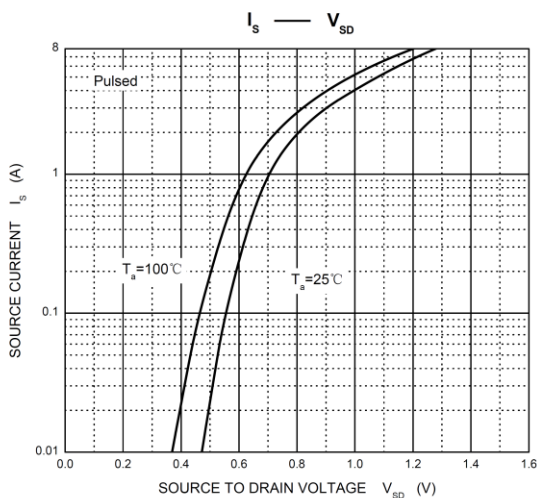
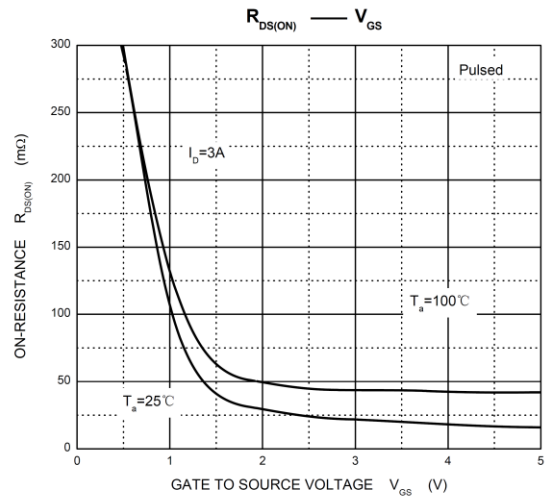
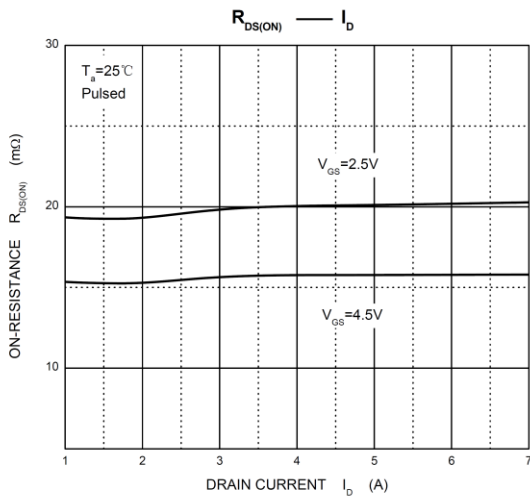
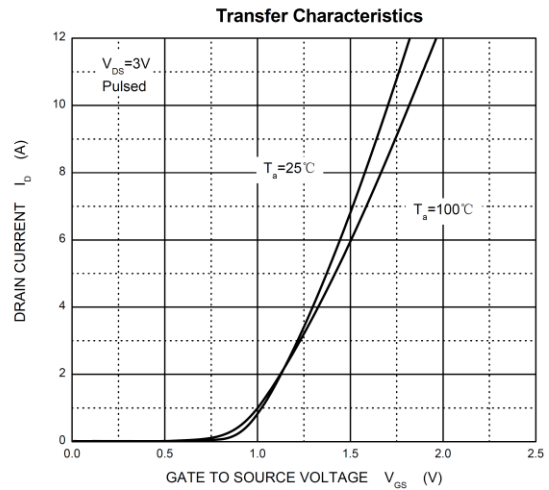
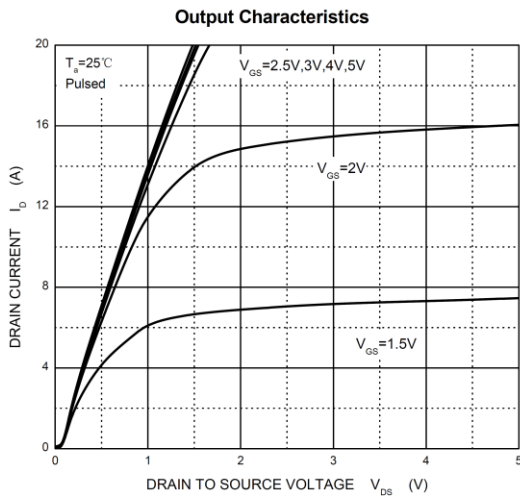
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 18V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage ⁽³⁾	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.45	0.7	1.2	V
Drain-source on-resistance ⁽³⁾	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 5A$		16	20	m Ω
		$V_{GS} = 2.5V, I_D = 6A$		21	27	
Forward transconductance ⁽³⁾	g_{FS}	$V_{DS} = 5V, I_D = 4.5A$		10		S
Diode Forward voltage ⁽³⁾	V_{DS}	$V_{GS} = 0V, I_S = 1.25A$			1.2	V
Dynamic characteristics⁽⁴⁾						
Input Capacitance	C_{iss}	$V_{DS} = 8V, V_{GS} = 0V, f = 1MHz$		800		pF
Output Capacitance	C_{oss}			155		
Reverse Transfer Capacitance	C_{rss}			125		
Total gate charge	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V, I_D = 4A$		11		nC
Gate-source charge	Q_{gs}			2.3		
Gate-drain charge	Q_{gd}			2.5		
Switching Characteristics⁽⁴⁾						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 4V, V_{DD} = 10V,$ $I_D = 1A, R_{GEN} = 10\Omega$		18		ns
Turn-on rise time	t_r			5		
Turn-off delay time	$t_{d(off)}$			43		
Turn-off fall time	t_f			20		

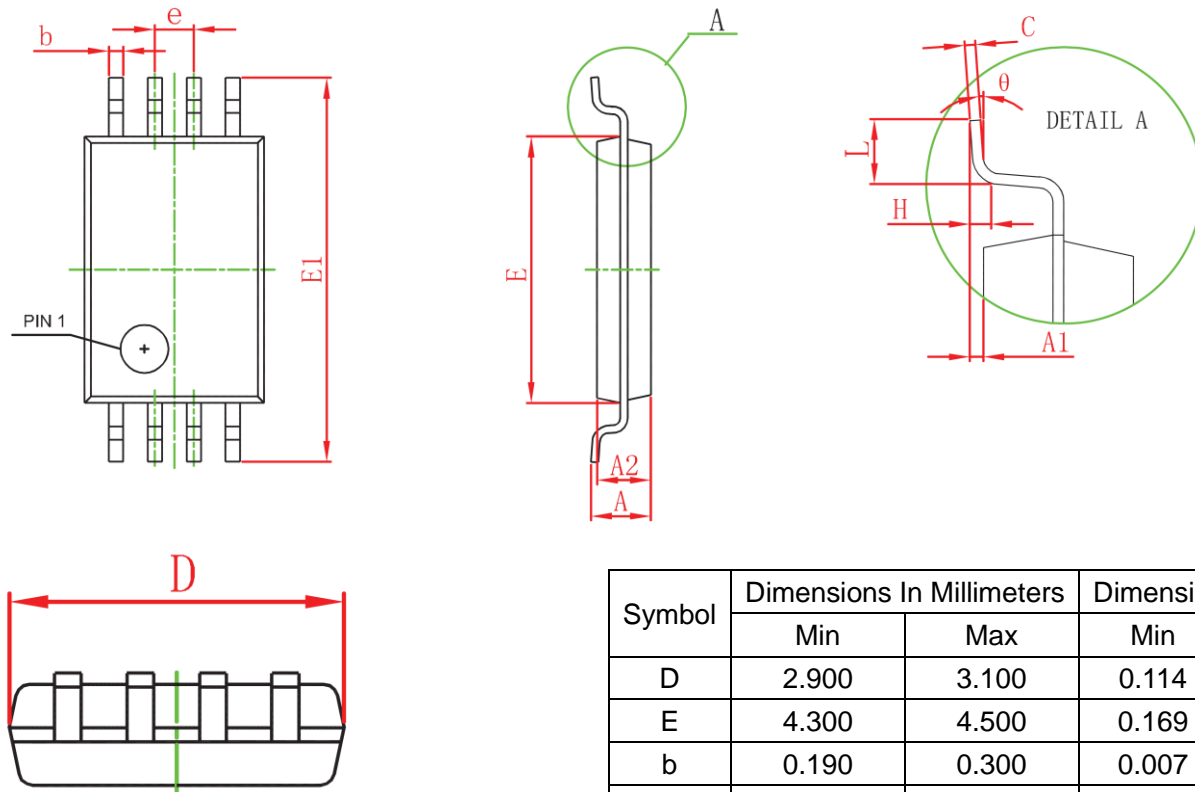
Notes :

- 1.Repetitive rating: Pulse width limited by maximum junction temperature
- 2.Surface Mounted on FR4 board, $t \leq 10$ sec.
3. Pulse test : Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
4. Guaranteed by design, not subject to production.

Typical Electrical and Thermal Characteristics



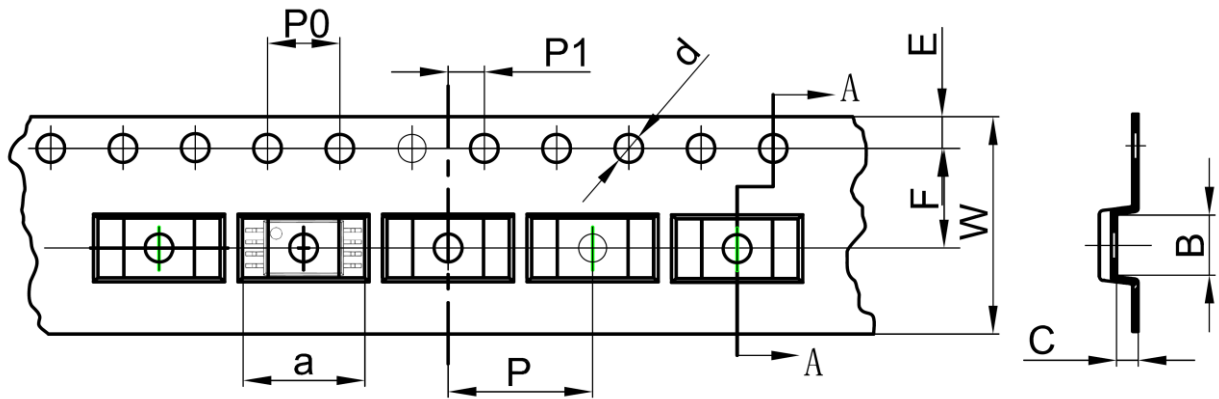
TSSOP8 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
D	2.900	3.100	0.114	0.122
E	4.300	4.500	0.169	0.177
b	0.190	0.300	0.007	0.012
c	0.090	0.200	0.004	0.008
E1	6.250	6.550	0.246	0.258
A		1.200		0.047
A2	0.800	1.000	0.031	0.039
A1	0.050	0.150	0.002	0.006
e	0.65(BSC)		0.026(BSC)	
L	0.500	0.700	0.020	0.028
H	0.25(TYP)		0.01(TYP)	
θ	1°	7°	1°	7°

TSSOP8 Tape and Reel

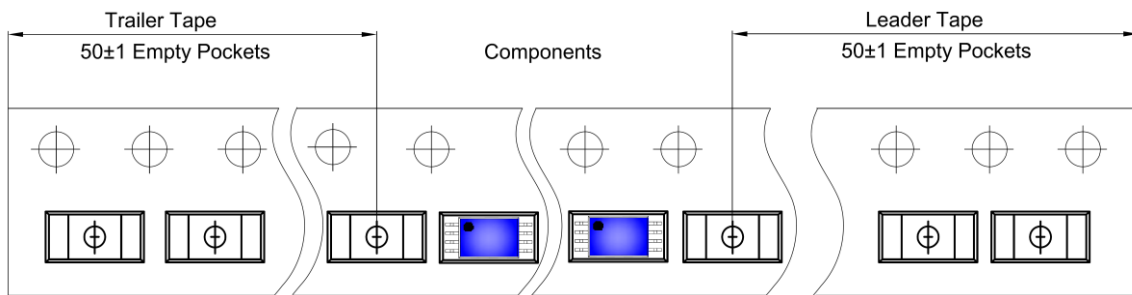
TSSOP8 Embossed Carrier Tape



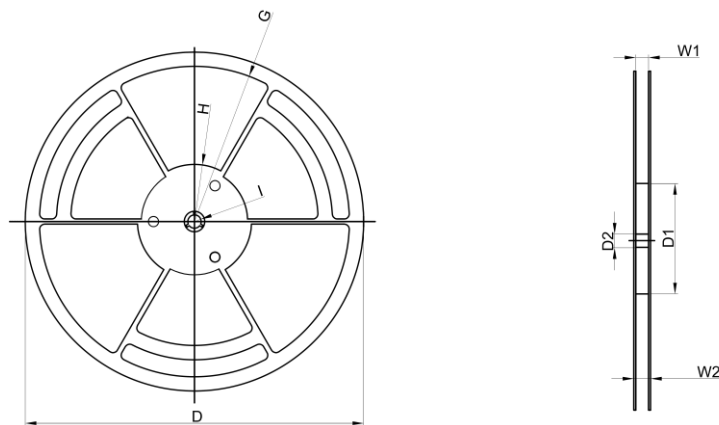
Dimensions are in millimeter

Pkg type	a	B	C	d	E	F	P0	P	P1	W
TSSOP8	6.76	3.30	1.20	Φ1.50	1.75	5.50	4.00	8.00	2.00	12.00

TSSOP8 Tape Leader and Trailer



TSSOP8 Reel



Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
13` Dia	Φ330.00	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)
3000pcs	13 inch	30,000pcs	336x336x48	24,000pcs	445x355x365	