

### Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
30V	20mΩ@10V	6.0A
	29mΩ@4.5V	

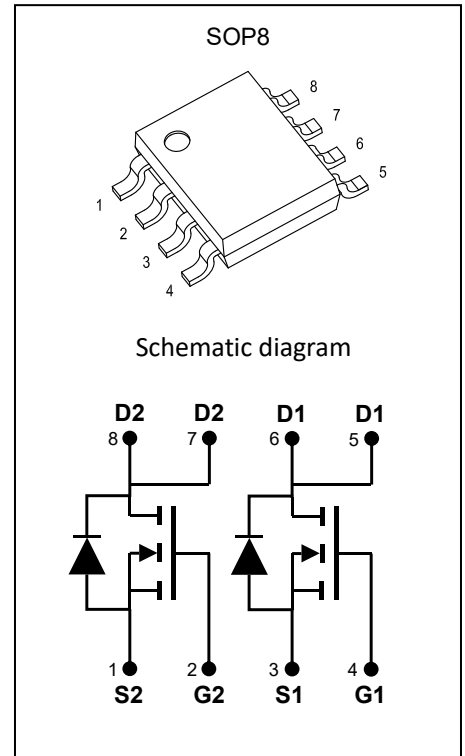
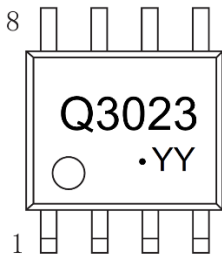
### Feature

- High cell density trench N-ch MOSFETs
- Super low gate charge
- Advanced high cell density Trench technology

### Application

- Battery protection applications
- Load switch

### MARKING:



### ABSOLUTE MAXIMUM RATINGS ( $T_C=25^{\circ}C$ 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 <sup>1</sup>	$I_D$	6.0	A
Pulsed Drain Current	$I_{DM}$	18	A
Power Dissipation	$P_D$	1.4	W
Thermal Resistance from Junction to Ambient <sup>2</sup>	$R_{\theta JA}$	89	$^{\circ}C/W$
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55~ +150	$^{\circ}C$

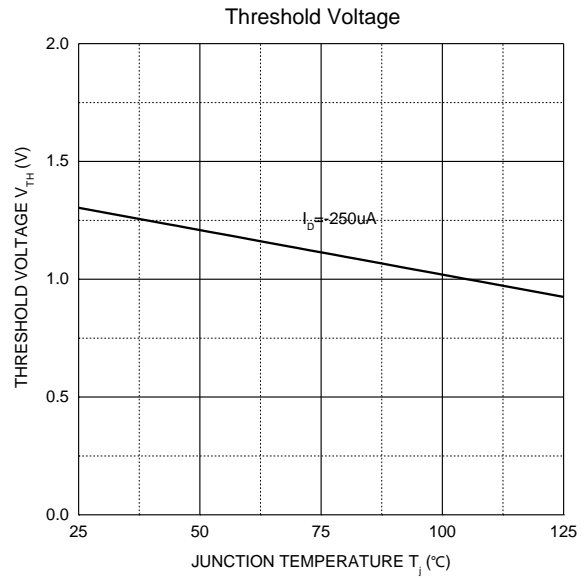
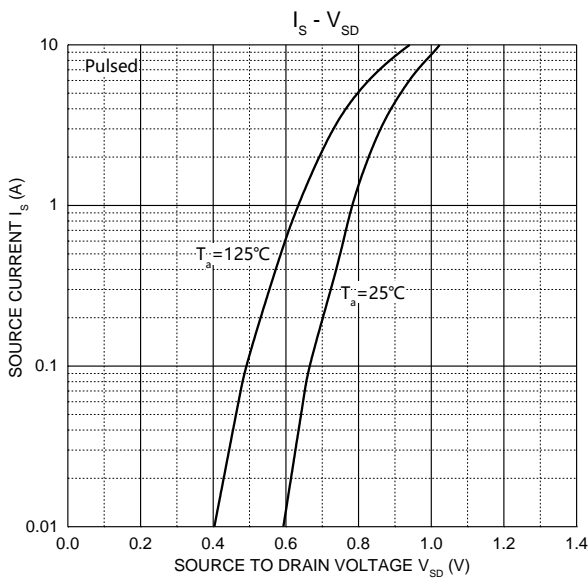
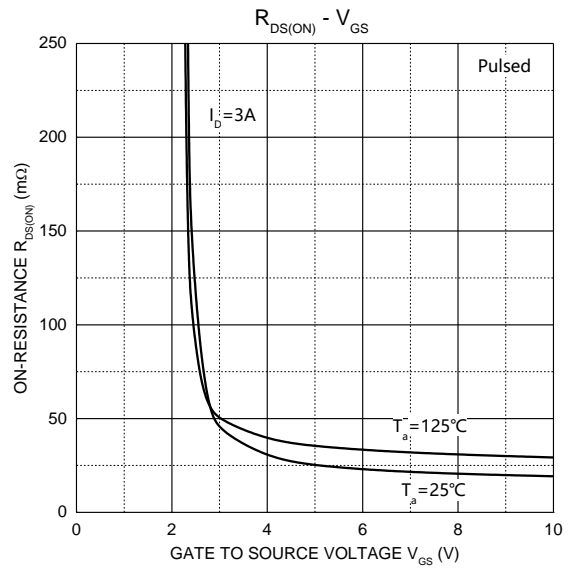
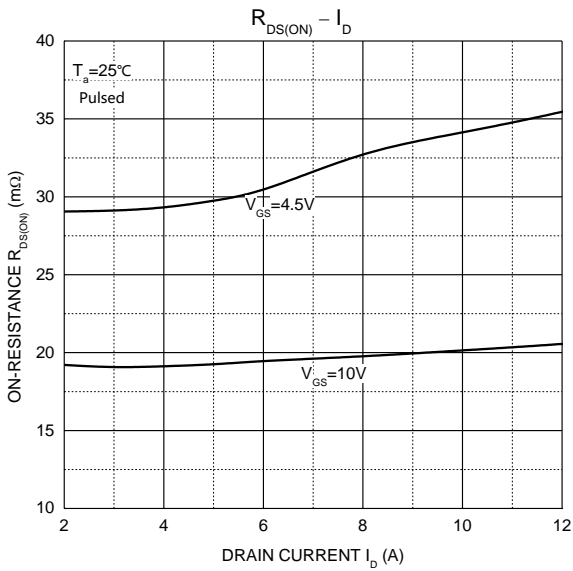
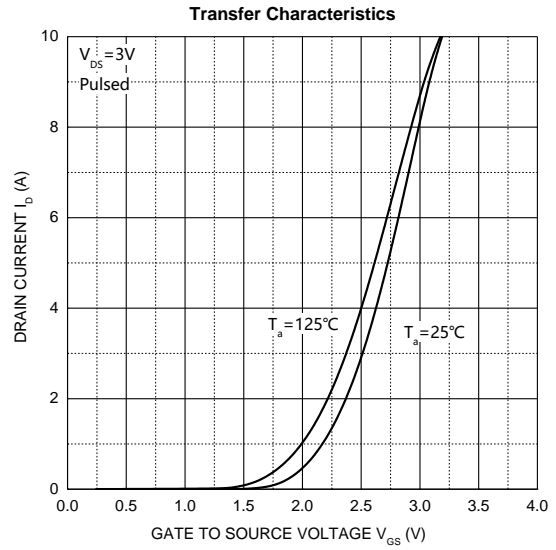
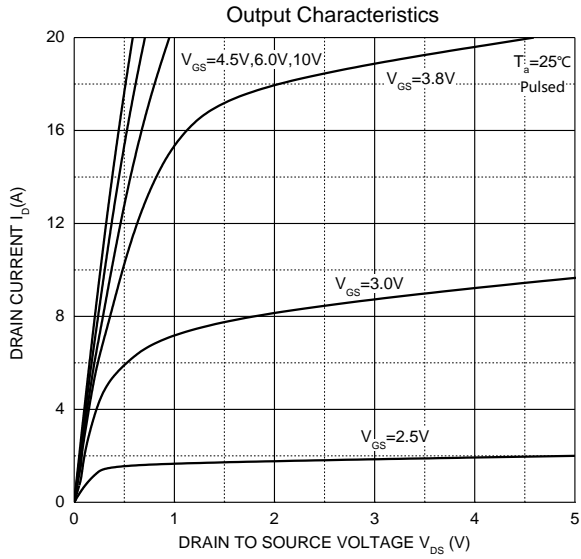
**MOSFET ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C unless otherwise noted)**

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
<b>Static Characteristics</b>						
Drain-source breakdown voltage	V <sub>(BR)DSS</sub>	V <sub>GS</sub> = 0V, I <sub>D</sub> = -250μA	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 24V, V <sub>GS</sub> = 0V			1	μA
Gate-body leakage current	I <sub>GSS</sub>	V <sub>GS</sub> = ±20V, V <sub>DS</sub> = 0V			±100	nA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = -250μA	1.0	1.4	2.5	V
Drain-source on-resistance <sup>3</sup>	R <sub>DS(on)</sub>	V <sub>GS</sub> = 10V, I <sub>D</sub> = 6.0A		20	26	mΩ
		V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 5.0A		29	42	
Forward transconductance	g <sub>FS</sub>	V <sub>DS</sub> = 5V, I <sub>D</sub> = 5A	8	12		S
<b>Dynamic characteristics<sup>4</sup></b>						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 15V, V <sub>GS</sub> = 0V, f = 1MHz		633		pF
Output Capacitance	C <sub>oss</sub>			65		
Reverse Transfer Capacitance	C <sub>rss</sub>			55		
Total gate charge	Q <sub>g</sub>	V <sub>DS</sub> = 15V, I <sub>D</sub> = 5.8A, V <sub>GS</sub> = 4.5V		9.5		nC
Gate-source charge	Q <sub>gs</sub>			1.5		
Gate-drain charge	Q <sub>gd</sub>			3		
Gate resistance	R <sub>g</sub>	V <sub>DS</sub> = 0V, V <sub>GS</sub> = 0V, f = 1MHz		4		Ω
<b>Switching Characteristics<sup>4</sup></b>						
Turn-on delay time	t <sub>d(on)</sub>	V <sub>DD</sub> = 15V, R <sub>L</sub> = 2.7Ω V <sub>GS</sub> = 10V, R <sub>GEN</sub> = 3Ω		3.3		ns
Turn-on rise time	t <sub>r</sub>			4.8		
Turn-off delay time	t <sub>d(off)</sub>			26		
Turn-off fall time	t <sub>f</sub>			4		
<b>Source-Drain Diode characteristics</b>						
Diode Forward voltage <sup>3</sup>	V <sub>SD</sub>	V <sub>GS</sub> = 0V, I <sub>S</sub> = 1A		0.76	1	V

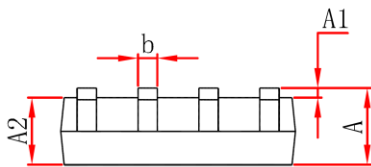
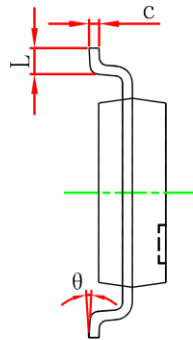
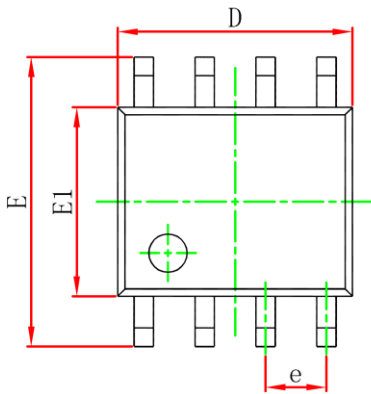
**Notes:**

1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5 sec.
3. Pulse Test : Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

**Typical Electrical and Thermal Characteristics**



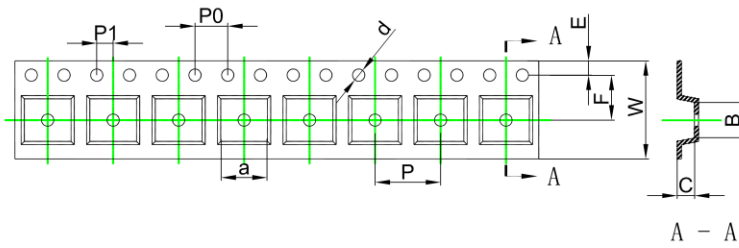
**SOP8 Package Information**



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°

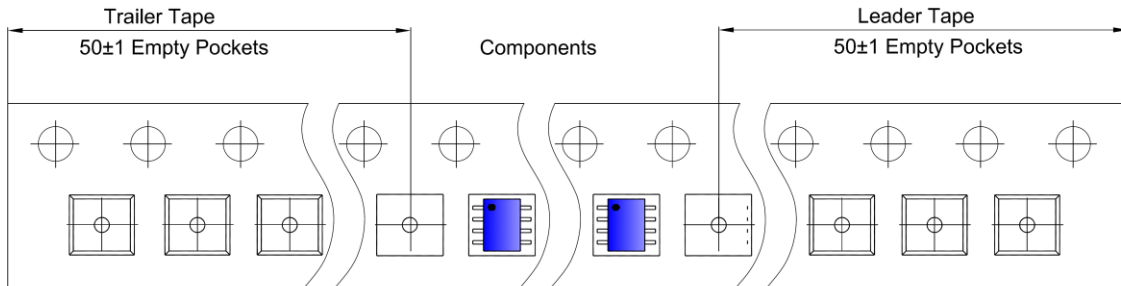
**SOP8 Tape and Reel**

**SOP8 Embossed Carrier Tape**

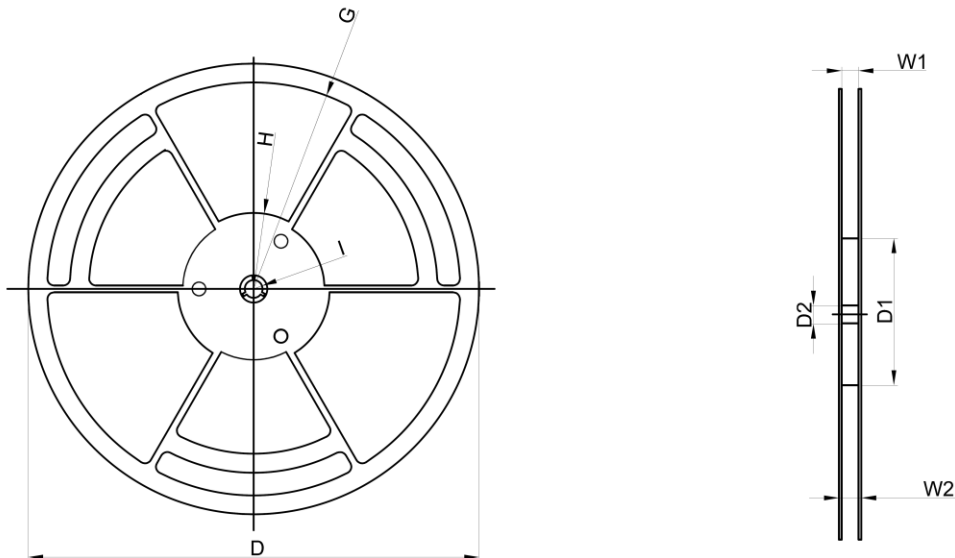


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

**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	64,000 pcs	565×380×390	

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)