

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
30V	10mΩ@10V	10A
	14mΩ@4.5V	

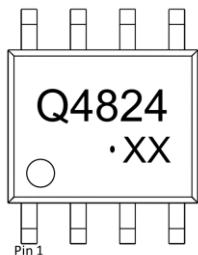
Feature

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

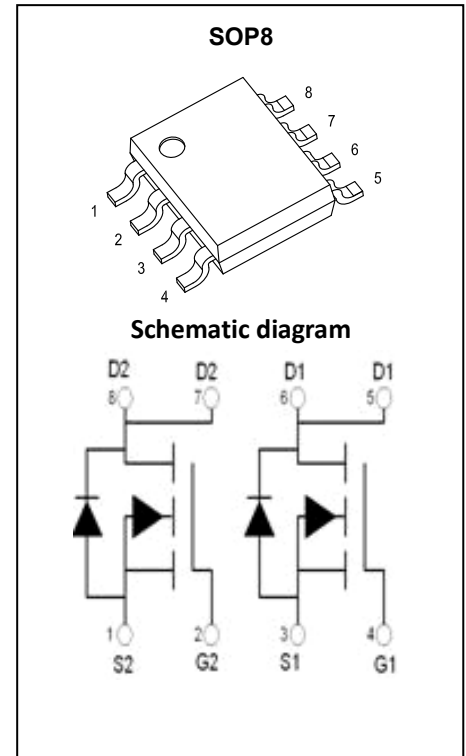
Application

- Battery protection applications
- Load switch

MARKING:



Q4824 = Device Code
 XX = Date Code
 Solid Dot = Green Device



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}	±20	V
Continuous Drain Current	$I_D^{(1)}$	10	A
Pulsed Drain Current	$I_{DM}^{(1), (2)}$	30	A
Single Pulsed Avalanche Energy	E_{AS}^*	7.2	mJ
Avalanche Current	I_{AS}	12	A
Power Dissipation	$P_D^{(3)}$	1.25	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	100	$^{\circ}C/W$
Junction Temperature	T_J	150	$^{\circ}C$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}C$

* E_{AS} Test Condition $V_{DD}=15V, V_{GS}=10V, L=0.1mH, I_{AS}=12A$

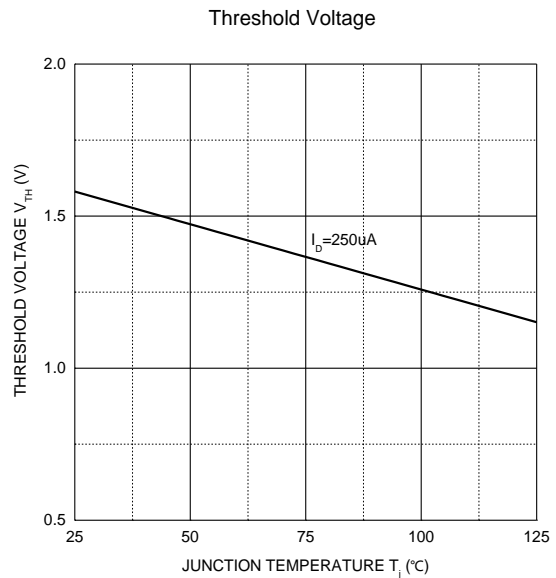
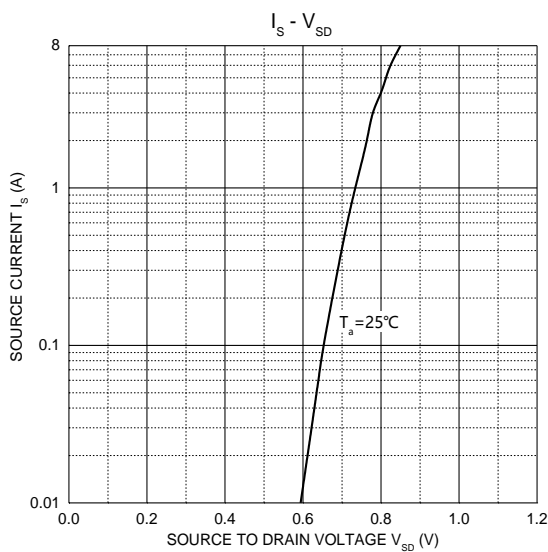
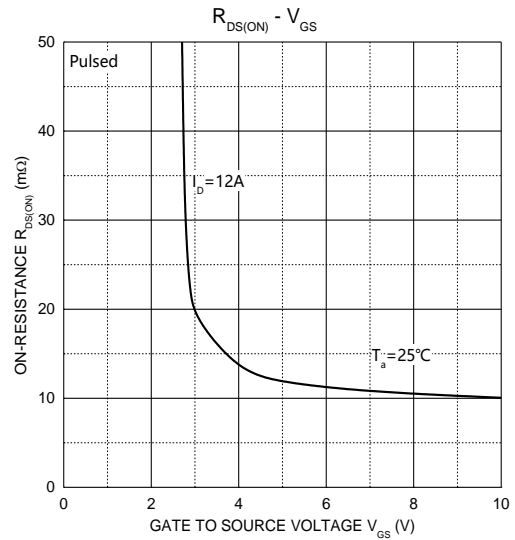
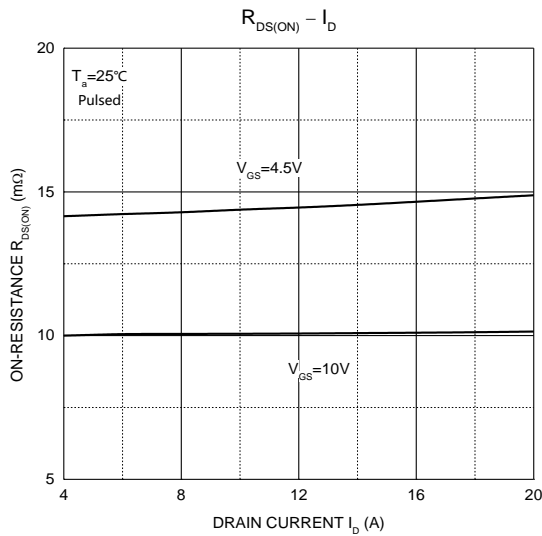
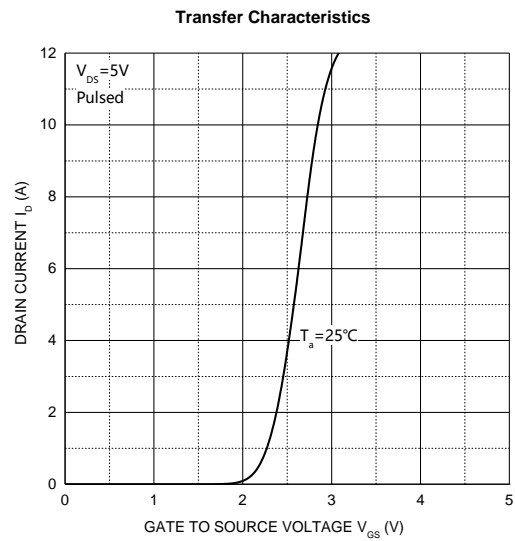
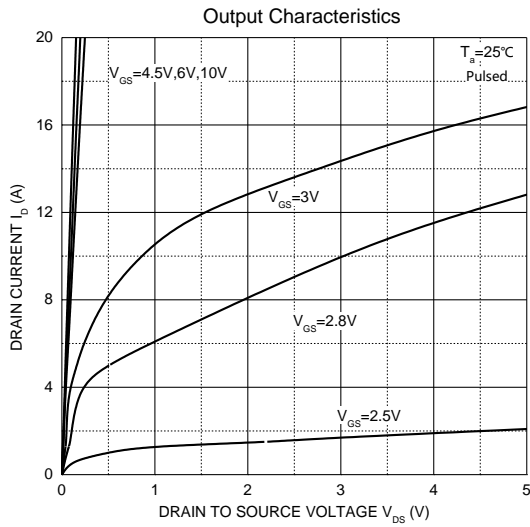
MOSFET ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =30V, 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)} ⁽⁴⁾	V _{DS} =V _{GS} , I _D =250μA	1.0	1.6	3.0	V
Drain-source on-resistance	R _{DS(on)} ⁽⁴⁾	V _{GS} =10V, I _D =12A		10	15	mΩ
		V _{GS} =4.5V, I _D =10A		14	20	
Forward tranconductance	g _{FS} ⁽⁴⁾	V _{DS} =5V, I _D =10A		100		S
Dynamic characteristics⁽⁵⁾						
Input capacitance	C _{iSS}	V _{DS} =15V, V _{GS} =0V, f =1MHz		825		pF
Output capacitance	C _{oSS}			136		
Reverse transfer capacitance	C _{rSS}			110		
Switching Characteristics⁽⁵⁾						
Total gate charge	Q _g	V _{DS} =15V, V _{GS} =10V, I _D =10A		13		nC
Gate-source charge	Q _{gs}			3		
Gate-drain charge	Q _{gd}			4.5		
Turn-on delay time	t _{d(on)}	V _{DD} =15V , V _{GS} =10V , R _G =1.8Ω, R _L =1.8Ω			10	ns
Turn-on rise time	t _r				8	
Turn-off delay time	t _{d(off)}				30	
Turn-off fall time	t _f				5	
Diode Characteristics						
Continuous Source Current	I _S	V _G =V _D =0V , Force Current			20	A
Pulsed Source Current	I _{SM}				60	
Diode Forward Voltage	V _{SD} ⁽⁴⁾	V _{GS} =0V , I _S =10A , T _J =25°C			1.2	V

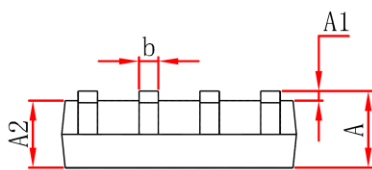
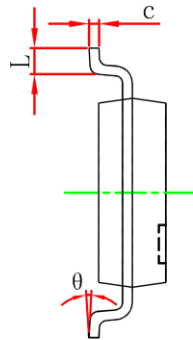
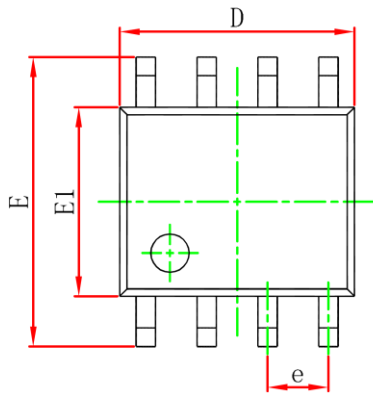
Notes:

- 1.The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ c opper
- 2.Pulse Test:Pulse Width < 10us, Duty Cycle < 0.5%.
- 3.The power dissipation is limited by 150°C junction temperature
- 4.Pulse Test : Pulse width≤300μs, duty cycle≤0.5%.
- 5.Guaranteed by design, not subject to production testing.
- 6.The data is theoretically the same as I_D, in real applications , should be limited by total power dissip ation.

Typical Electrical and Thermal Characteristics



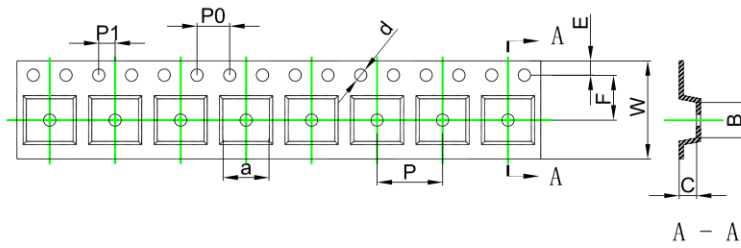
SOP8 Package Information



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°

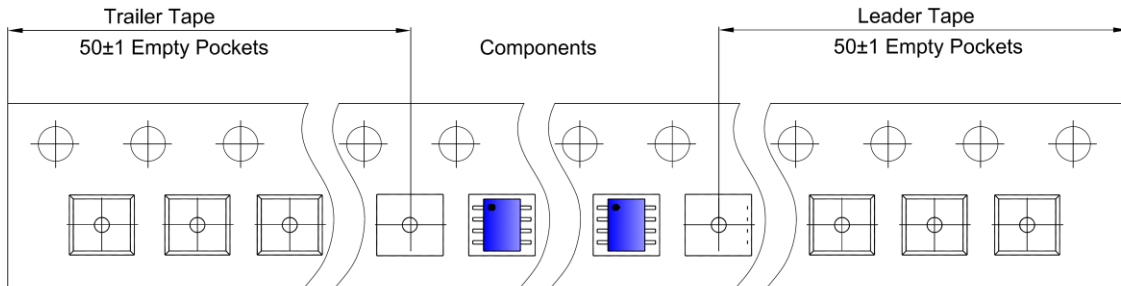
SOP8 Tape and Reel

SOP8 Embossed Carrier Tape

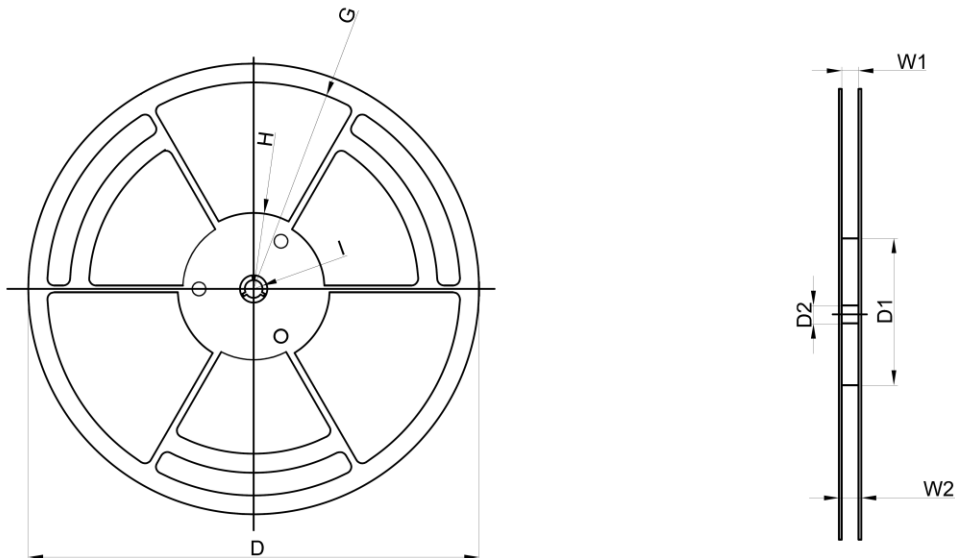


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

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\(格瑞宝\)](#)