

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	9.2mΩ@-10V	-12A
	10.7mΩ@-6V	

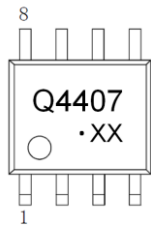
Feature

- High cell density trench P-ch MOSFETs
- Super low gate charge
- Excellent CdV/dt effect decline
- Advanced high cell density Trench technology

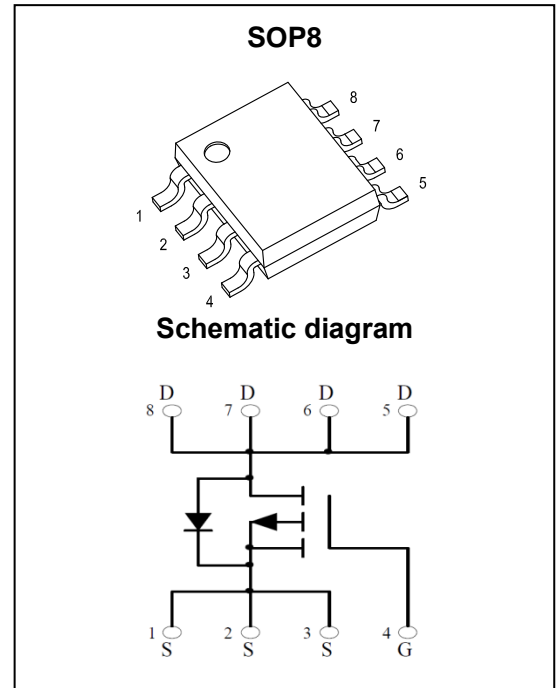
Application

- Battery protection applications
- Load switch

MARKING:



Q4407 = Device Code;
 XX = Date Code;
 Solid Dot = Green Molding Compound Device;
 Solid Dot = Pin1 Indicator;



ABSOLUTE MAXIMUM RATINGS (T_C=25°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	-12	A
Pulsed Drain Current	I_{DM}	-48	A
Power Dissipation	P_D	1.4	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	89	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

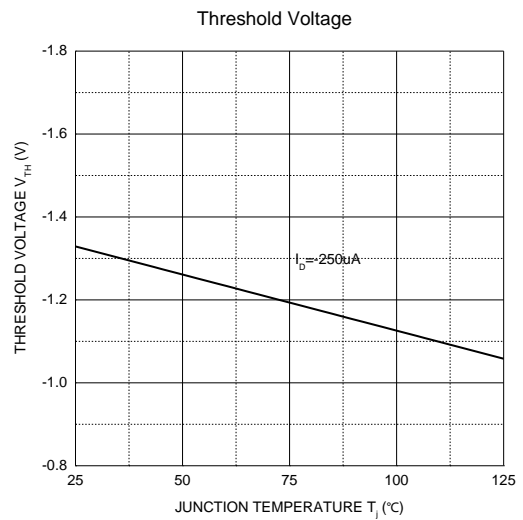
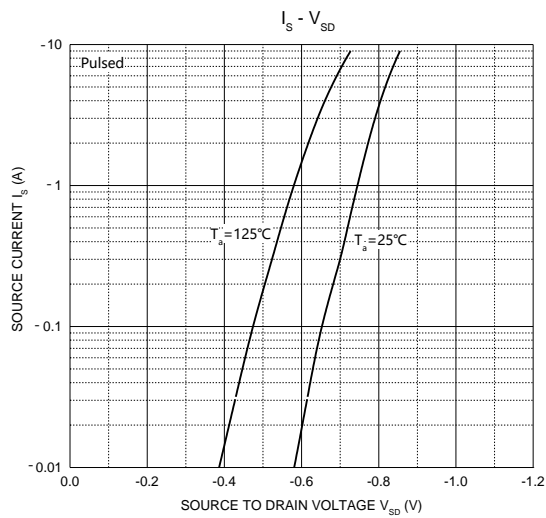
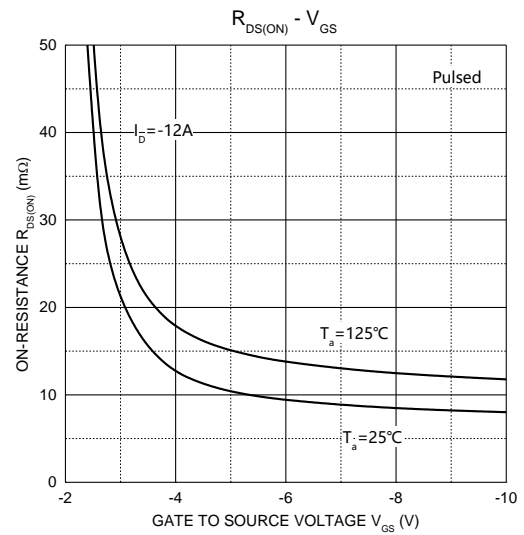
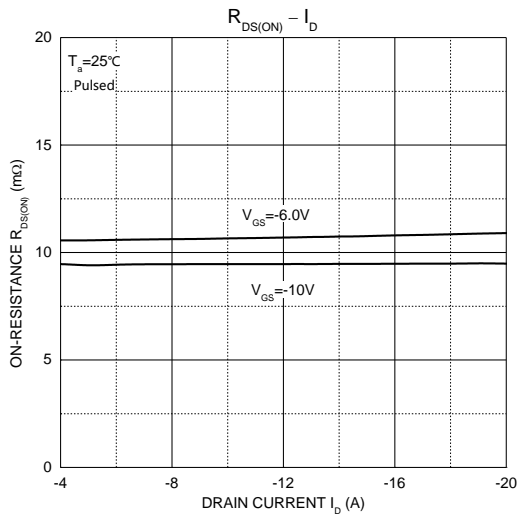
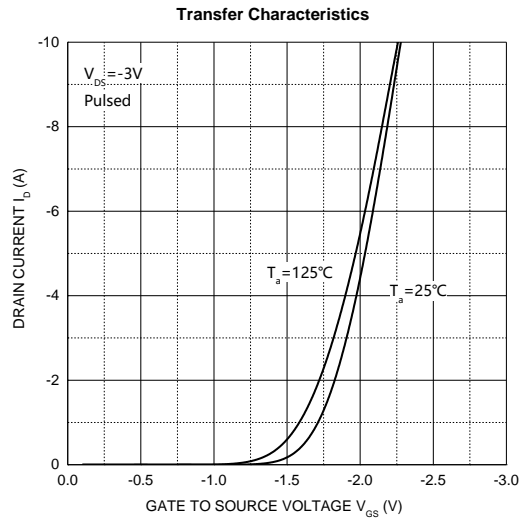
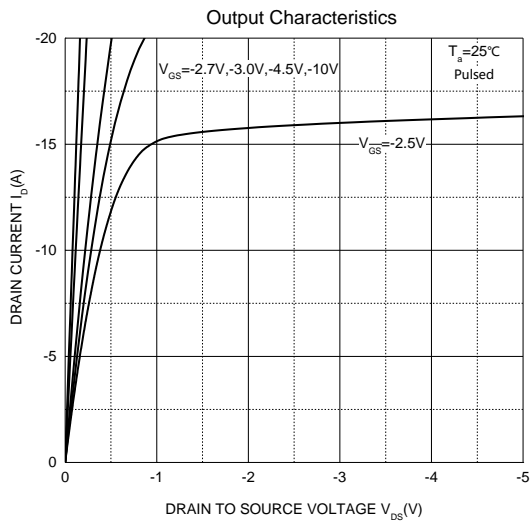
MOSFET ELECTRICAL CHARACTERISTICS (T_J=25°C unless otherwise noted)

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 ¹	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250μA	-1.0	-1.3	-2.2	V
Drain-source on-resistance ¹	R _{DS(on)}	V _{GS} = -10V, I _D = -12A		9.2	12	mΩ
		V _{GS} = -6V, I _D = -10A		10.7	15	
Forward tranconductance ¹	g _{FS}	V _{DS} = -5V, I _D = -15A		30		S
Dynamic characteristics²						
Input capacitance	C _{iss}	V _{DS} = -15V, V _{GS} = 0V, f = 1MHz		3900		pF
Output capacitance	C _{oss}			420		
Reverse transfer capacitance	C _{rss}			400		
Switching Characteristics²						
Total gate charge	Q _g	V _{DS} = -15V, V _{GS} = -10V, I _D = -10A		62		nC
Gate-source charge	Q _{gs}			16		
Gate-drain charge	Q _{gd}			18		
Turn-on delay time	t _{d(on)}	V _{DD} = -15V, V _{GS} = -10V, R _G = 3Ω, R _L = 1.25Ω		20		ns
Turn-on rise time	t _r			14		
Turn-off delay time	t _{d(off)}			57		
Turn-off fall time	t _f			27		
Gate Resistance	R _g	f = 1MHz, V _{DS} = 0V, V _{GS} = 0V			10	Ω
Diode Characteristics						
Continuous Source Current	I _S	V _G = V _D = 0V, Force Current			-12	A
Pulsed Source Current	I _{SM}				-48	
Diode Forward Voltage ¹	V _{SD}	V _{GS} = 0V, I _S = -2A, T _J = 25°C		-0.73	-1.2	V

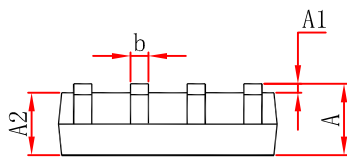
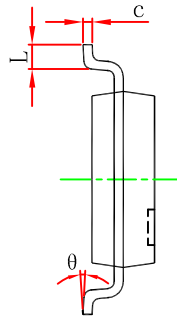
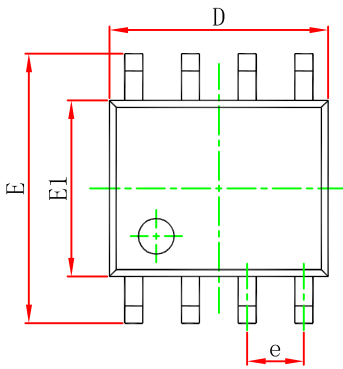
Notes:

1. Pulse Test : Pulse Width ≤ 300μs, duty cycle ≤ 2%.
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics



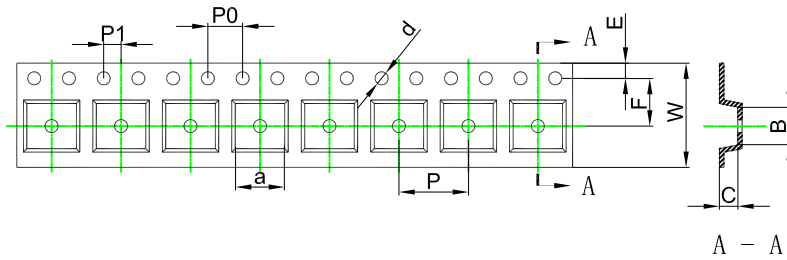
SOP8 Package Information



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°

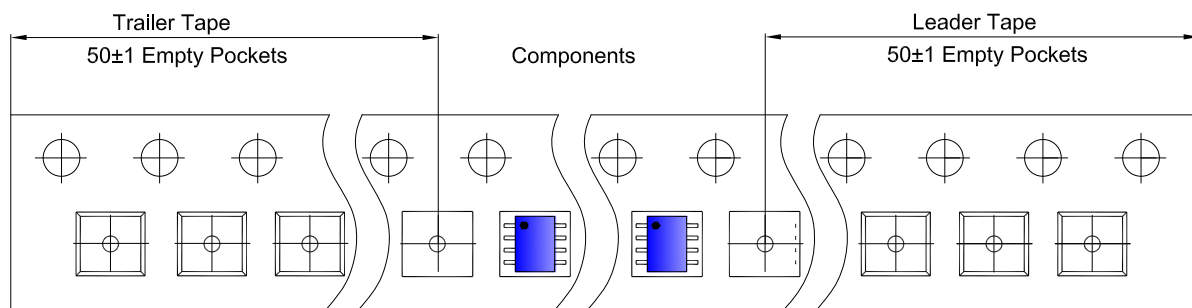
SOP8 Tape and Reel

SOP8 Embossed Carrier Tape

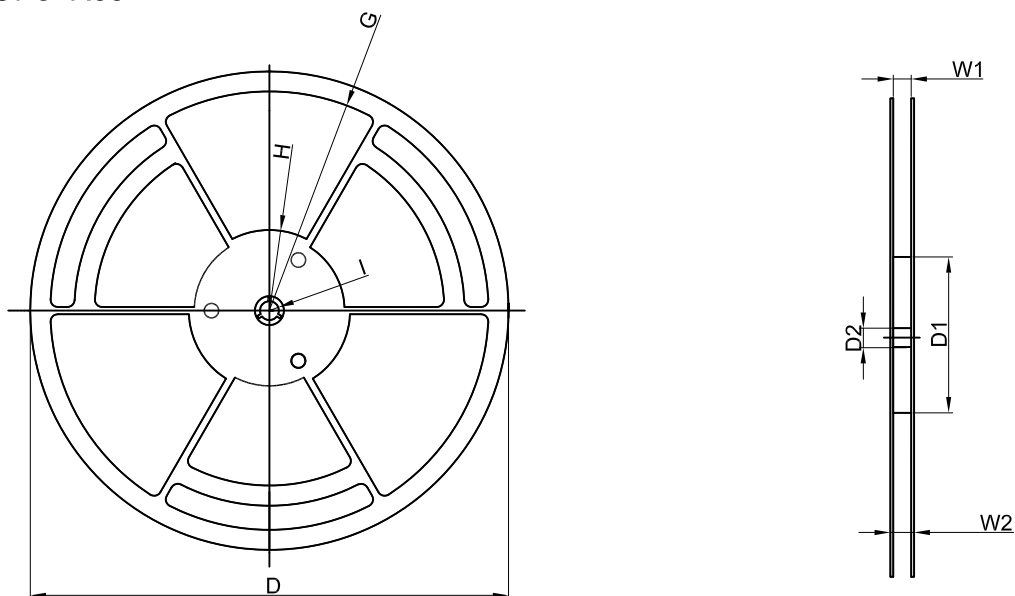


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
SOP8	6.40	5.40	2.10	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

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\(格瑞宝\)](#)