

Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
100V	26mΩ@10V	6A
	28mΩ@6V	
	31mΩ@4.5V	

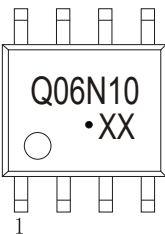
Feature

- High density cell design for ultra low $R_{DS(ON)}$
- Excellent package for good heat dissipation

Application

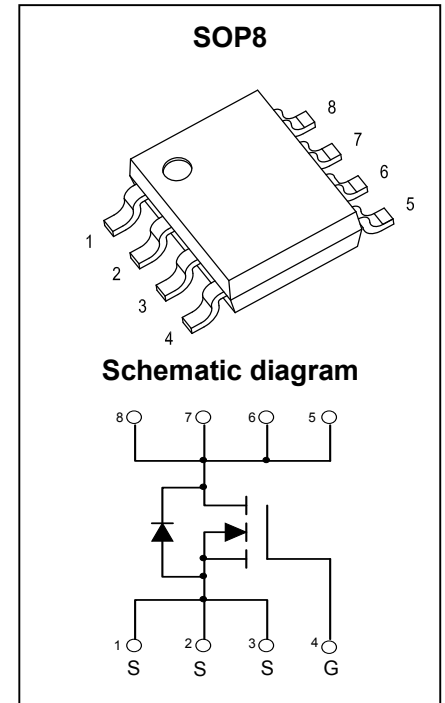
- Power switching application
- Hard switched and high frequency circuits
- Uninterruptible power supply

MARKING:



Q06N10 = Device Code

XX = Date Code



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	100	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current ^{1,2}	I_D	6	A
Pulsed Drain Current	I_{DM}	28	A
Single Pulsed Avalanche Current ⁴	I_{AS}	35	A
Single Pulsed Avalanche Energy ⁴	E_{AS}	306	mJ
Power Dissipation	P_D	1.7	W
Thermal Resistance from Junction to Ambient ^{1,2}	$R_{\theta JA}$	75	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^\circ\text{C}$

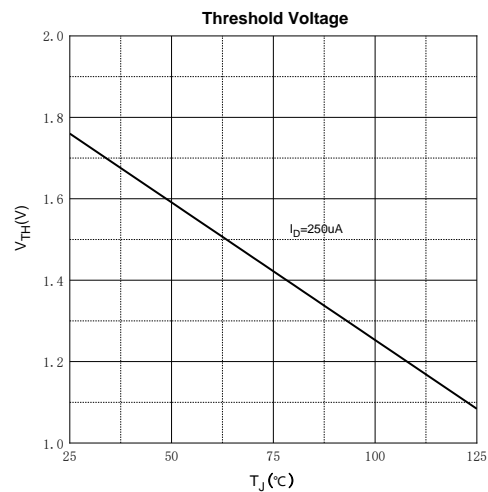
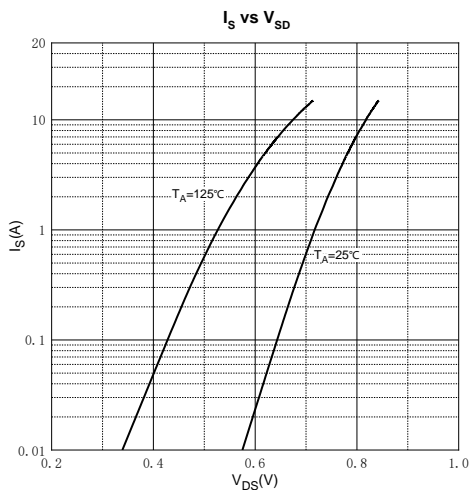
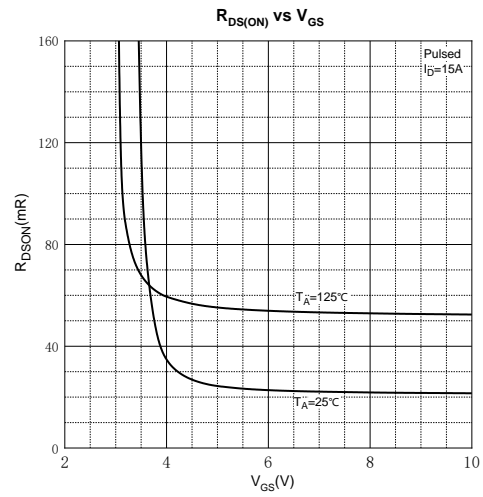
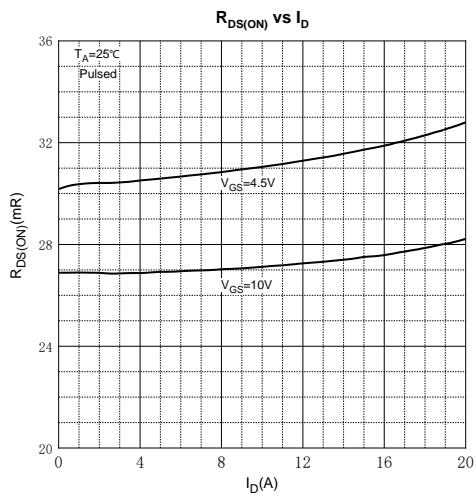
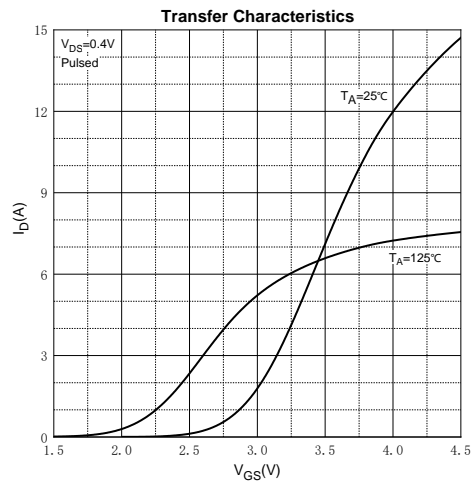
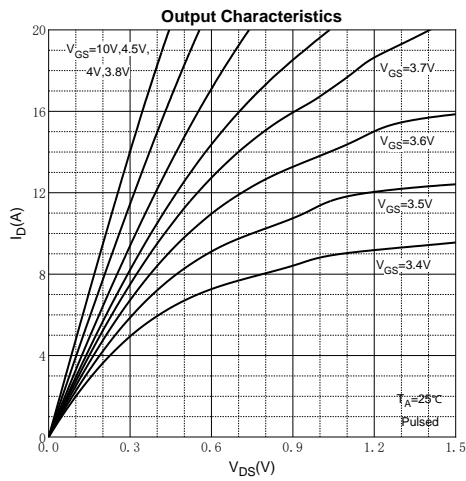
MOSFET ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	100			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 100V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
On Characteristics³						
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.0	1.7	2.5	V
Drainsource onresistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 6A$		26	39	m Ω
		$V_{GS} = 6V, I_D = 5A$		28	42	
		$V_{GS} = 4.5V, I_D = 4A$		31	46	
Forward transconductance	g_{FS}	$V_{DS} = 5V, I_D = 6A$		35		S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS} = 20V, V_{GS} = 0V, f = 1MHz$		2249		pF
Output Capacitance	C_{oss}			87.7		
Reverse Transfer Capacitance	C_{rss}			82.8		
Gate resistance	R_g	$V_{DS} = 0V, V_{GS} = 0V, f = 1MHz$		1.6		Ω
Switching Characteristics						
Total Gate Charge	Q_g	$V_{DS} = 50V, V_{GS} = 10V, I_D = 6A$		57.7		nC
GateSource Charge	Q_{gs}			16.7		
GateDrain Charge	Q_{gd}			6.0		
Turnon delay time	$t_{d(on)}$	$V_{DD} = 50V, R_G = 8.3\Omega, V_{GS} = 10V, R_L = 3\Omega$		7		ns
Turnon rise time	t_r			7		
Turnoff delay time	$t_{d(off)}$			28		
Turnoff fall time	t_f			7		
Diode Characteristics						
Diode Forward Voltage ³	V_{SD}	$V_{GS} = 0V, I_S = 6A$			1.2	V

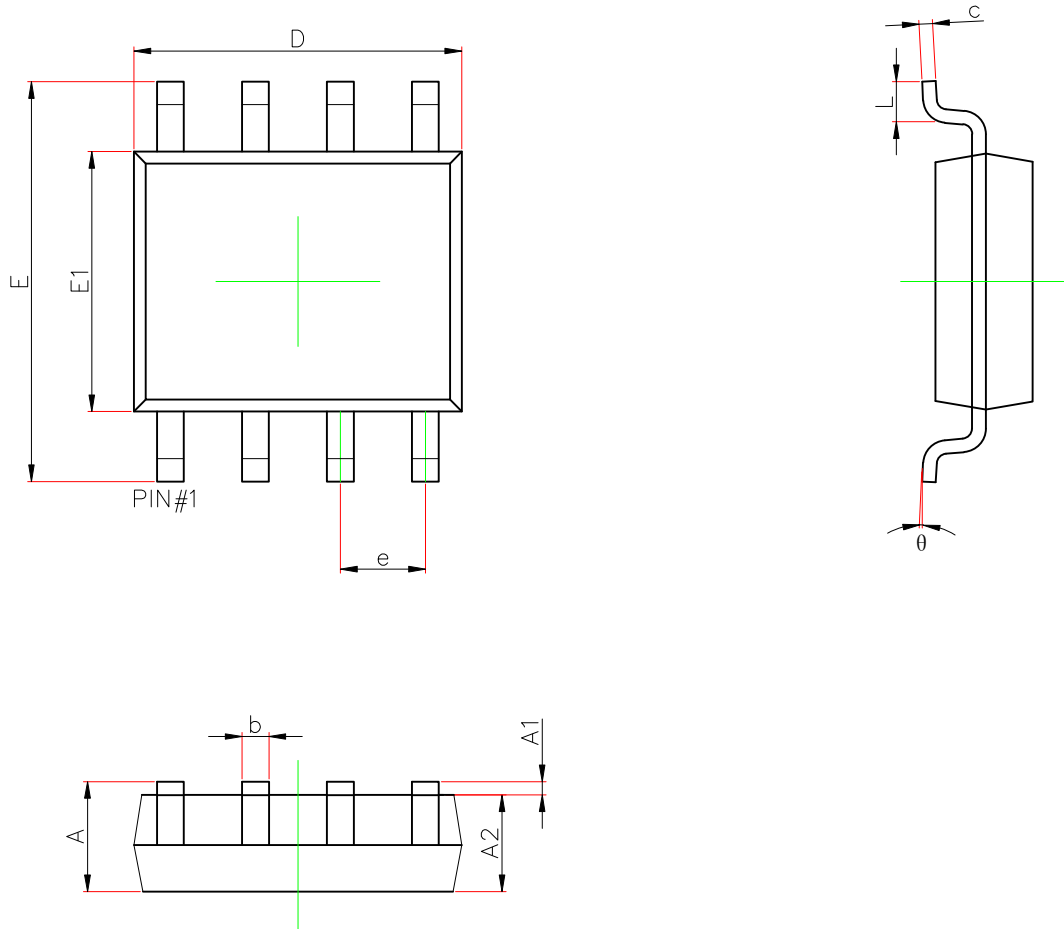
Notes :

1. $R_{\theta JA}$ is measured with the device mounted on 1 in² FR4 board with 1oz. single side copper, in a still air environment with $T_A = 25^\circ\text{C}$.
2. $R_{\theta JA}$ is measured in the steady state
3. Pulse test : Pulse width $\leq 380\mu s$, duty cycle $\leq 2\%$.
4. E_{AS} condition: $V_{DD} = 50V, V_{GS} = 10V, L = 0.5mH, R_G = 25\Omega$ Starting $T_J = 25^\circ\text{C}$.

Typical 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	0.156	0.250	0.006	0.010
D	4.700	5.100	0.185	0.201
e	1.270(BSC)		0.050(BSC)	
E	5.800	6.200	0.228	0.244
E1	3.700	4.100	0.146	0.161
L	0.400	1.270	0.016	0.05
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)