

General Description

The MY8808BBNE3 is the highest performance trench N-CH MOSFETs with extreme high cell density, which provide excellent $R_{DS(ON)}$ and gate charge for most of the small power switching and load switch applications.

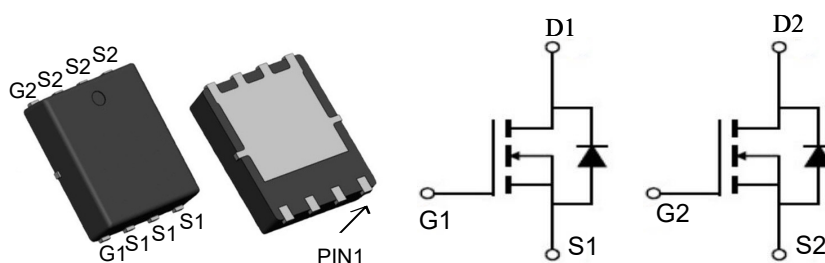


Features

V_{DSS}	20	V
I_D	7	A
$R_{DS(ON)}(at V_{GS}=4.5V)$	<14.5	m Ω
$R_{DS(ON)}(at V_{GS}=2.5V)$	<17	m Ω

Application

- Battery protection
- Load switch
- Uninterruptible power supply



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MY8808BBNE3	PDFN3*3-8	NULL	5000

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	± 12	V
$I_D@T_A=25^{\circ}\text{C}$	Continuous Drain Current, $V_{GS} @ 4.5V^1$	7	A
$I_D@T_A=70^{\circ}\text{C}$	Continuous Drain Current, $V_{GS} @ 4.5V^1$	5.8	A
I_{DM}	Pulsed Drain Current ²	70	A
$P_D@T_A=25^{\circ}\text{C}$	Total Power Dissipation ¹	1.56	W
T_{STG}	Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$
T_J	Operating Junction Temperature Range	-55 to 150	$^{\circ}\text{C}$
$R_{\theta JA}$	Thermal Resistance Junction-Ambient ¹ ($t \leq 10s$)	80	$^{\circ}\text{C/W}$

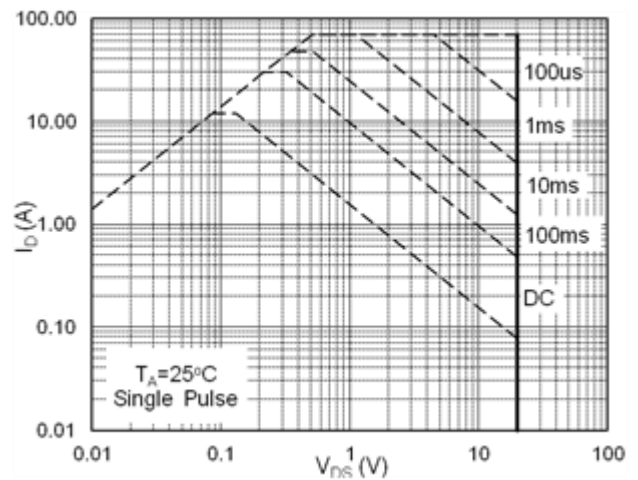
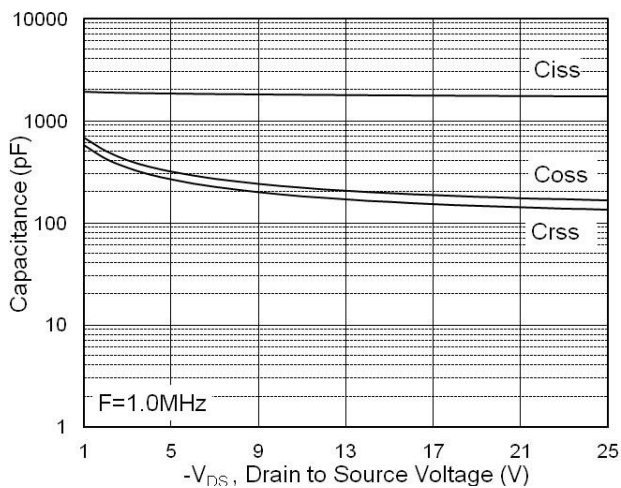
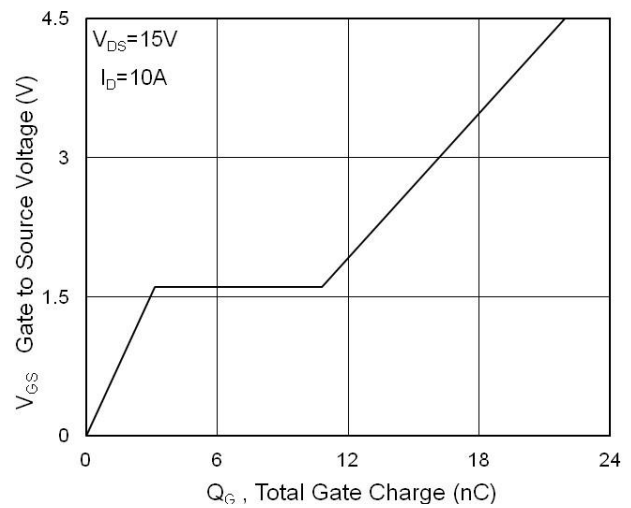
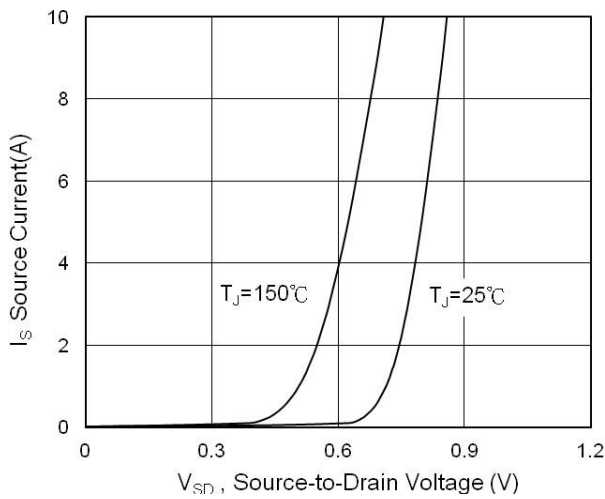
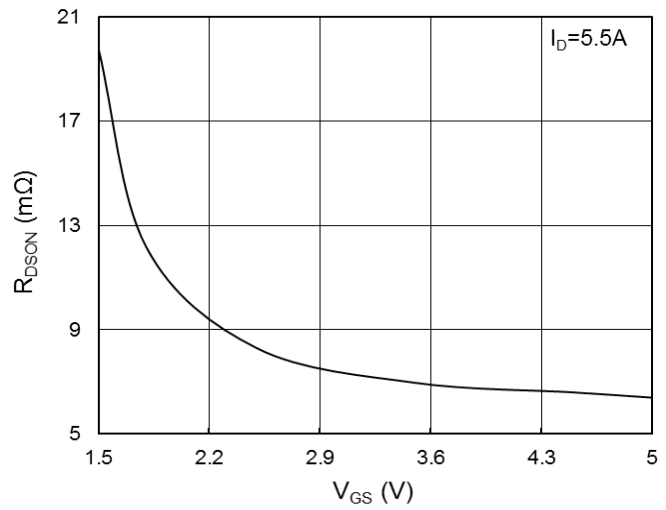
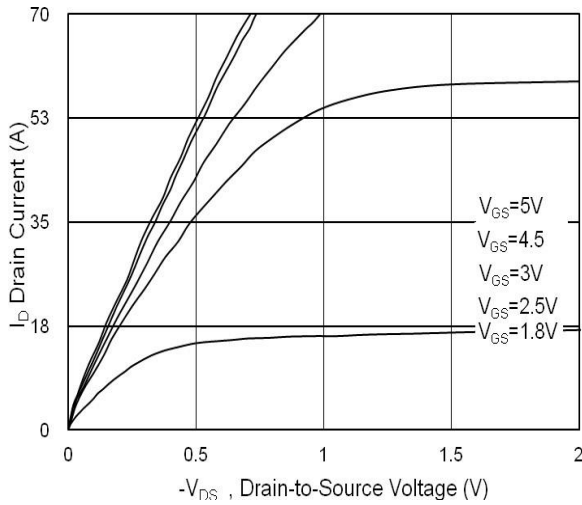
Electrical Characteristics ($T_J=25^\circ\text{C}$, unless otherwise noted)

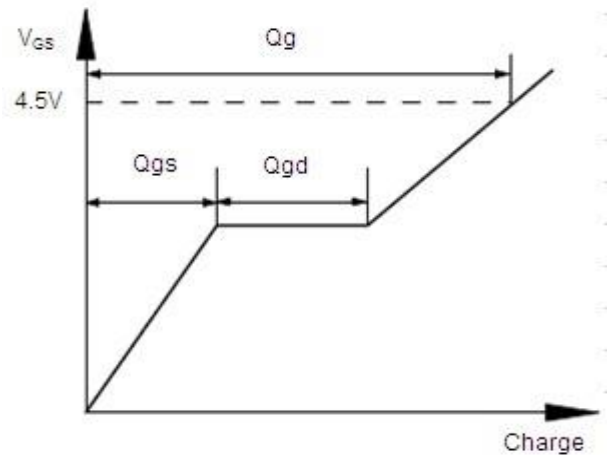
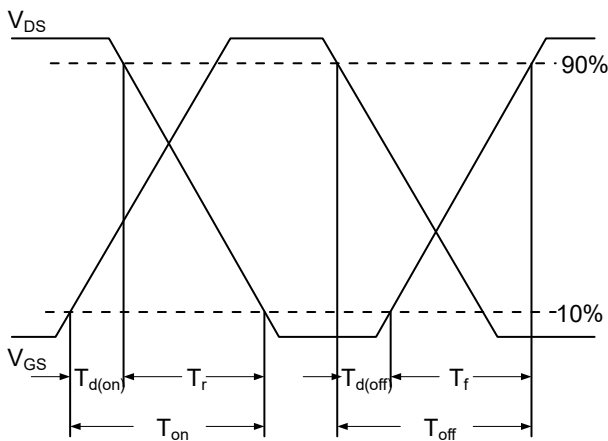
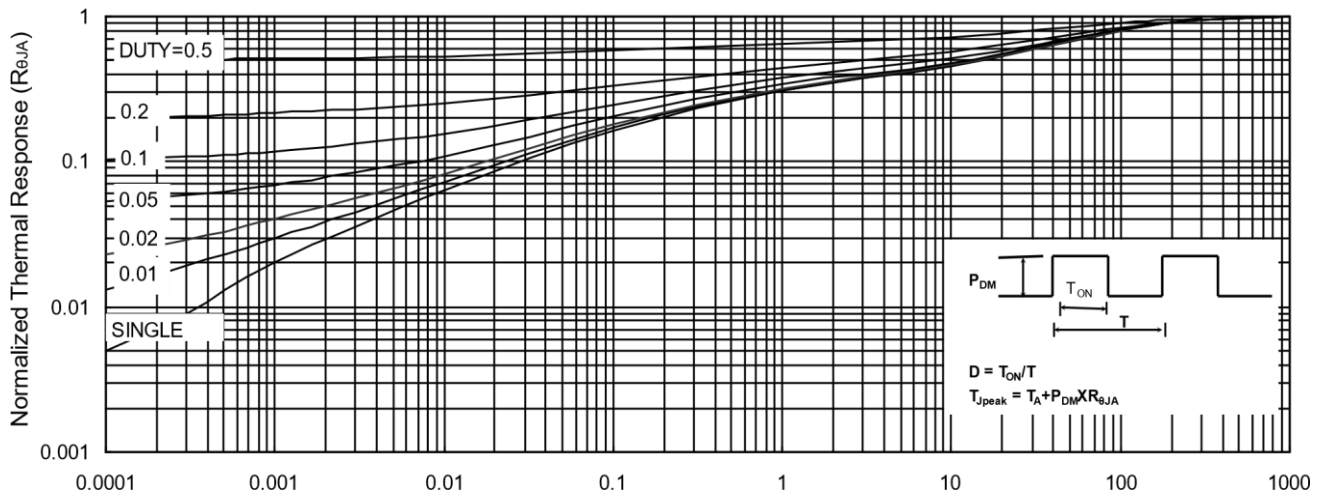
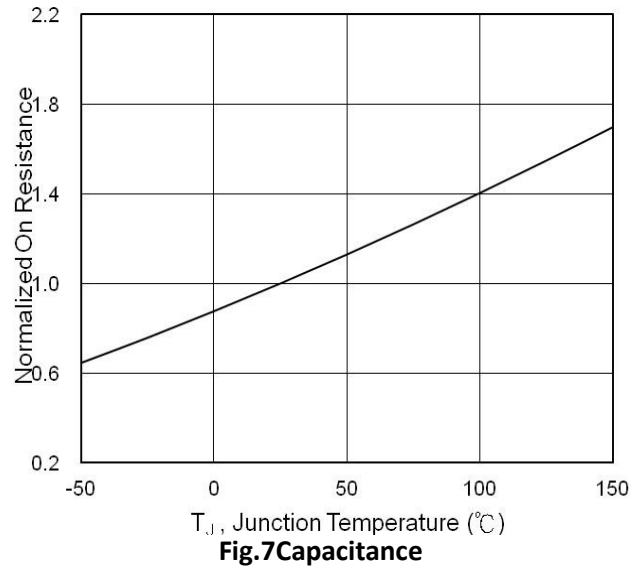
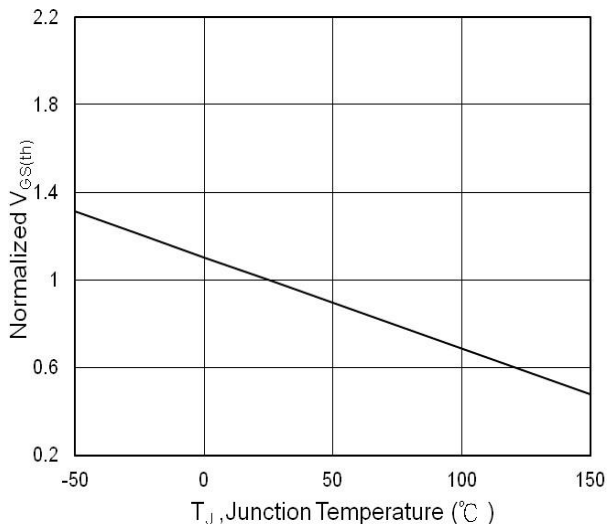
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	20	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance ²	$V_{GS}=4.5V$, $I_D=5.5A$	14.5	16	19.5	m Ω
		$V_{GS}=3.7V$, $I_D=5.5A$	15.0	17.5	20.5	
		$V_{GS}=2.5V$, $I_D=5.5A$	17	18.2	22.2	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	0.5	---	1.5	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=18V$, $V_{GS}=0V$, $T_J=25^\circ\text{C}$	---	---	1	uA
		$V_{DS}=18V$, $V_{GS}=0V$, $T_J=55^\circ\text{C}$	---	---	5	
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 12V$, $V_{DS}=0V$	---	---	± 10	uA
g_{fs}	Forward Transconductance	$V_{DS}=5V$, $I_D=5.5A$	---	38	---	S
Q_g	Total Gate Charge (4.5V)	$V_{DS}=16V$, $V_{GS}=4.5V$, $I_D=10A$	---	23	---	nC
Q_{gs}	Gate-Source Charge		---	3.5	---	
Q_{gd}	Gate-Drain Charge		---	8.4	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=16V$, $V_{GS}=4.5V$, $R_G=6\Omega$ $I_D=5.5A$	---	10.2	---	ns
T_r	Rise Time		---	41	---	
$T_{d(off)}$	Turn-Off Delay Time		---	67	---	
T_f	Fall Time		---	31	---	
C_{iss}	Input Capacitance	$V_{DS}=10V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	1767	---	pF
C_{oss}	Output Capacitance		---	184	---	
C_{rss}	Reverse Transfer Capacitance		---	155	---	
I_S	Continuous Source Current ¹	$V_G=V_D=0V$, Force Current	---	---	11	A
I_{SM}	Pulsed Source Current ²		---	---	70	A
V_{SD}	Diode Forward Voltage ²	$V_{GS}=0V$, $I_S=11A$, $T_J=25^\circ\text{C}$	---	---	1.2	V

Note :

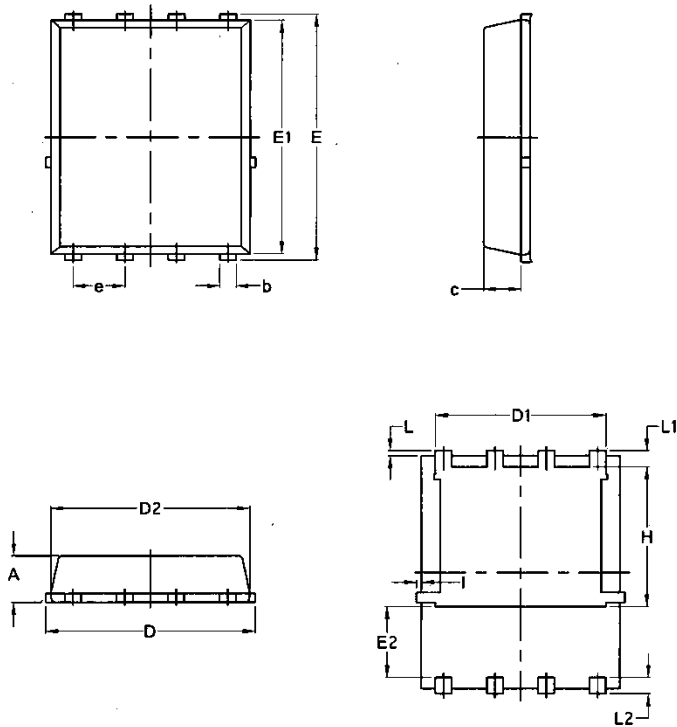
1 .The data tested by surface mounted on a 1 inch² FR-4 board with 2OZ copper, $t \leq 10s$.2.The data tested by pulsed , pulse width $\leq 10\mu s$, duty cycle $\leq 1\%$

Typical Characteristics





Package Mechanical Data-DFN5*6-8L-JQ Single



Symbol	Common			
	mm		Inch	
	Mim	Max	Min	Max
A	1.03	1.17	0.0406	0.0461
b	0.34	0.48	0.0134	0.0189
c	0.824	0.0970	0.0324	0.082
D	4.80	5.40	0.1890	0.2126
D1	4.11	4.31	0.1618	0.1697
D2	4.80	5.00	0.1890	0.1969
E	5.95	6.15	0.2343	0.2421
E1	5.65	5.85	0.2224	0.2303
E2	1.60	/	0.0630	/
e	1.27 BSC		0.05 BSC	
L	0.05	0.25	0.0020	0.0098
L1	0.38	0.50	0.0150	0.0197
L2	0.38	0.50	0.0150	0.0197
H	3.30	3.50	0.1299	0.1378
I	/	0.18	/	0.0070