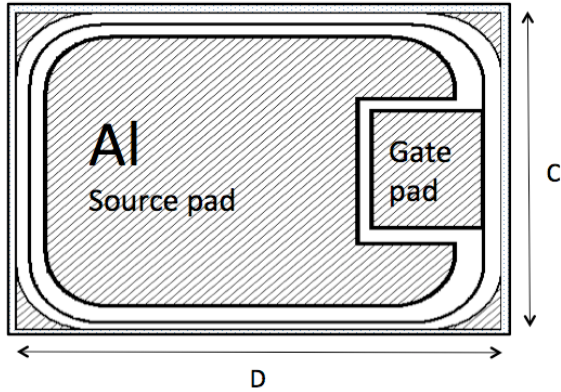
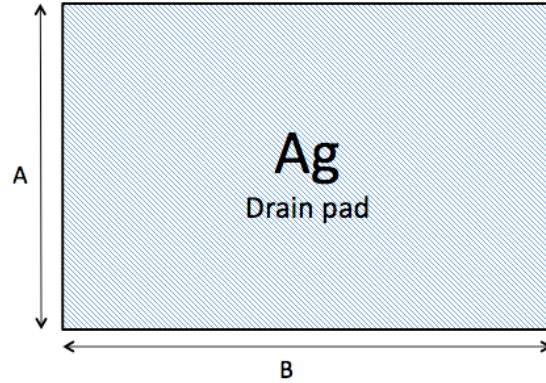


### Chip Features

#### Front side



#### Back side



Chip Size (um)	Thickness (um)	Pad Size-Gate (um)	Pad Size-Source (um)
3,180 * 2,720	350	420 * 520	900 * 1900

### Referenced PKG Electrical Ratings TC = 25°C unless otherwise noted

#### Absolute Maximum Ratings

Symbol	Parameter	Value	Units
$V_{DSS}$	Drain to Source Voltage	600	V
$V_{GS}$	Gate to Source Voltage	±30	V
$I_D$	Continuous Drain Current(@ $T_C = 25\text{ °C}$ )	4.5	A
	Continuous Drain Current(@ $T_C = 100\text{ °C}$ )	2.6	A
$I_{DM}$	Drain Current Pulsed	18	A
$E_{AS}$	Single Pulsed Avalanche Energy	210	mJ
$E_{AR}$	Repetitive Avalanche Energy	10	mJ
dv/dt	Peak Diode Recovery dv/dt	4.5	V/ns
$T_L$	Maximum Temperature for Soldering @ Lead at 0.125 in(0.318mm) from case for 10 seconds	300	°C
$T_{PKG}$	Maximum Temperature for Soldering @ Package Body for 10 seconds	260	°C
$P_D$	Total Power Dissipation(@ $T_C = 25\text{ °C}$ )	33	W
	Derating Factor above 25 °C	0.26	W/°C
$T_{STG}$	Operating Junction Temperature	-55 ~ 150	°C
$T_J$	Storage Temperature	150	°C



**HV MOSFET DIE SPECIFICATION**  
**Product Name: BW-MS4N60C**

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

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
<b>Static Characteristics</b>						
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS} = 0\text{ V}$ , $I_D = 250\text{ }\mu\text{A}$	600	-	-	V
$\Delta BV_{DSS}/\Delta T_J$	Breakdown Voltage Temperature coefficient	$I_D = 250\text{ }\mu\text{A}$ , referenced to $25\text{ }^\circ\text{C}$	-	0.60	-	V/ $^\circ\text{C}$
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}$ , $I_D = 250\text{ }\mu\text{A}$	2.0	-	4.0	V
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS} = 600\text{ V}$ , $V_{GS} = 0\text{ V}$	-	-	1	$\mu\text{A}$
		$V_{DS} = 480\text{ V}$ , $T_C = 125\text{ }^\circ\text{C}$	-	-	10	nA
$I_{GSS}$	Gate-Source Leakage, Forward	$V_{GS} = \pm 30$	-	-	100	nA
$R_{DS(ON)}$	Static Drain-Source On-state Resistance	$V_{GS} = 10\text{ V}$ , $I_D = 2.25\text{ A}$	-	2.0	2.5	$\Omega$
<b>Dynamic Characteristics</b>						
$Q_g$	Total Gate Charge	$V_{DS} = 480\text{ V}$ , $V_{GS} = 10\text{ V}$ , $I_D = 4.5\text{ A}$	-	16	-	nC
$Q_{gs}$	Gate-Source Charge		-	2.5	-	
$Q_{gd}$	Gate-Drain Charge(Miller Charge)		-	6.5	-	
$t_{d(on)}$	Turn-on Delay Time	$V_{DD} = 300\text{ V}$ , $I_D = 4.5\text{ A}$ , $V_{GS} = 10\text{ V}$ , $R_G = 25\text{ }\Omega$ , $R_D = 75\text{ }\Omega$	-	10	-	ns
$t_r$	Rise Time		-	40	-	
$t_{d(off)}$	Turn-off Delay Time		-	40	-	
$t_f$	Fall Time		-	50	-	
$C_{iss}$	Input Capacitance	$V_{GS} = 0\text{ V}$ , $V_{DS} = 25\text{ V}$ , $f = 1\text{ MHz}$	-	560	-	pF
$C_{oss}$	Output Capacitance		-	55	-	
$C_{rss}$	Reverse Transfer Capacitance		-	7	-	