Rev.A Dec.-2023

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Drain Current - Continuous		I_D	30	A
Drain Current – Pulsed		I_{DM}	140	A
Gate-Source Voltage		V_{GS}	±20	V
Power Dissipation		$P_D(T_c=25℃)$	31	W
Single Pulse Avalanche Energy(L=0.1mH)		E_{AS}	50	mJ
Avalanche Current(L=0.1mH)		I_{AS}	22.5	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	21	/ W
	Steady-State		53	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	4	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	30	32		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	1	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=16A		6.3	8	mΩ
		V_{GS}=4.5V, I_D=8A		9.2	12	
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		1600		pF
Output Capacitance	C_{oss}			600		
Reverse Transfer Capacitance	C_{rss}			420		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		2.5		
Total Gate Charge	Q_g(10V)	V_{GS}=10V, V_{DS}=15V I_D=20A		20		nC
Total Gate Charge	Q_g(4.5V)			9.5		
Gate Source Charge	Q_{gs}			2.7		
Gate Drain Charge	Q_{gd}			5		
Turn-On Delay Time	$t_{D(on)}$	V_{GS}=10V, V_{DS}=15V, R_L=0.75 , R_{GEN}=3		6.5		ns
Turn-On Rise Time	t_r			2		
Turn-Off Delay Time	$t_{D(off)}$			17		
Turn-Off Fall Time	t_f			3.5		

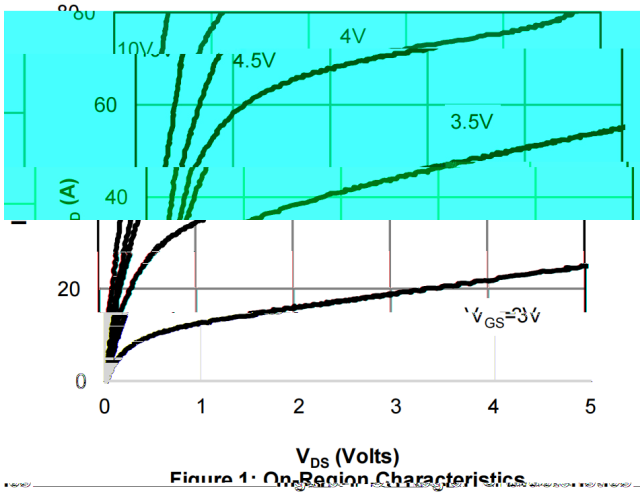


Figure 1: On-Region Characteristics

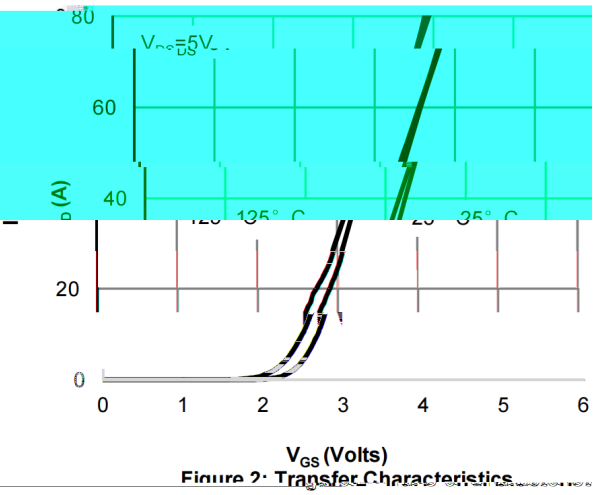


Figure 2: Transfer Characteristics

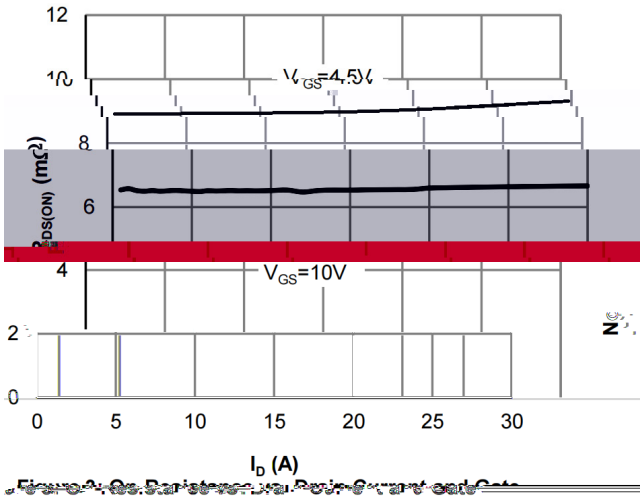


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

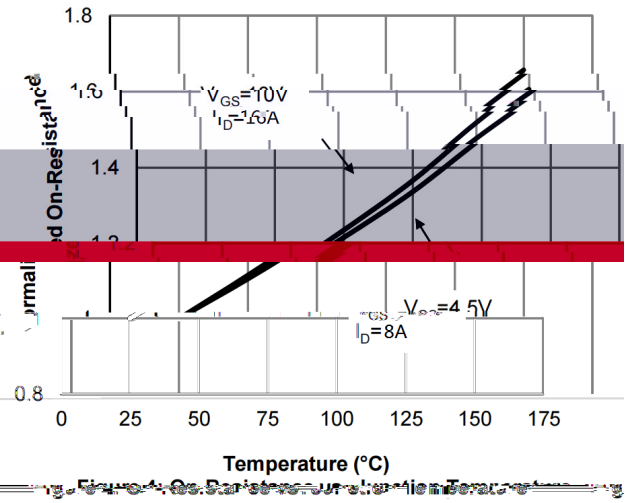


Figure 4: On-Resistance vs. Junction Temperature

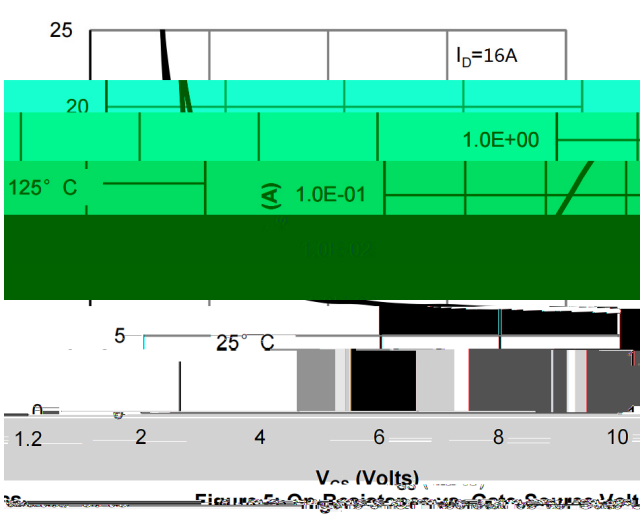


Figure 5: On-Resistance vs. Gate-Source Voltage

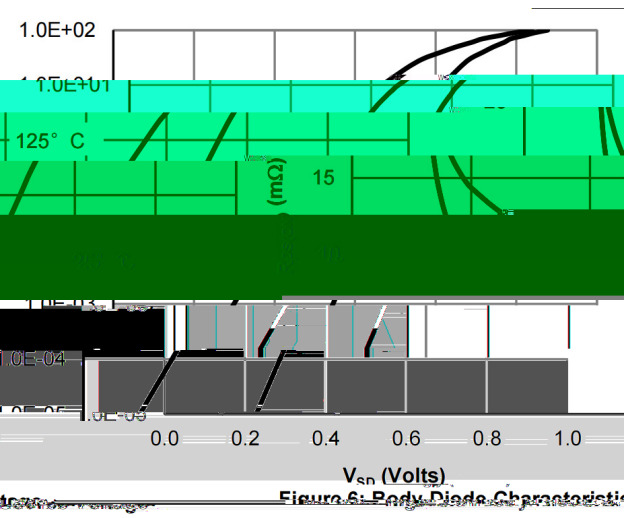


Figure 6: Body Diode Characteristics

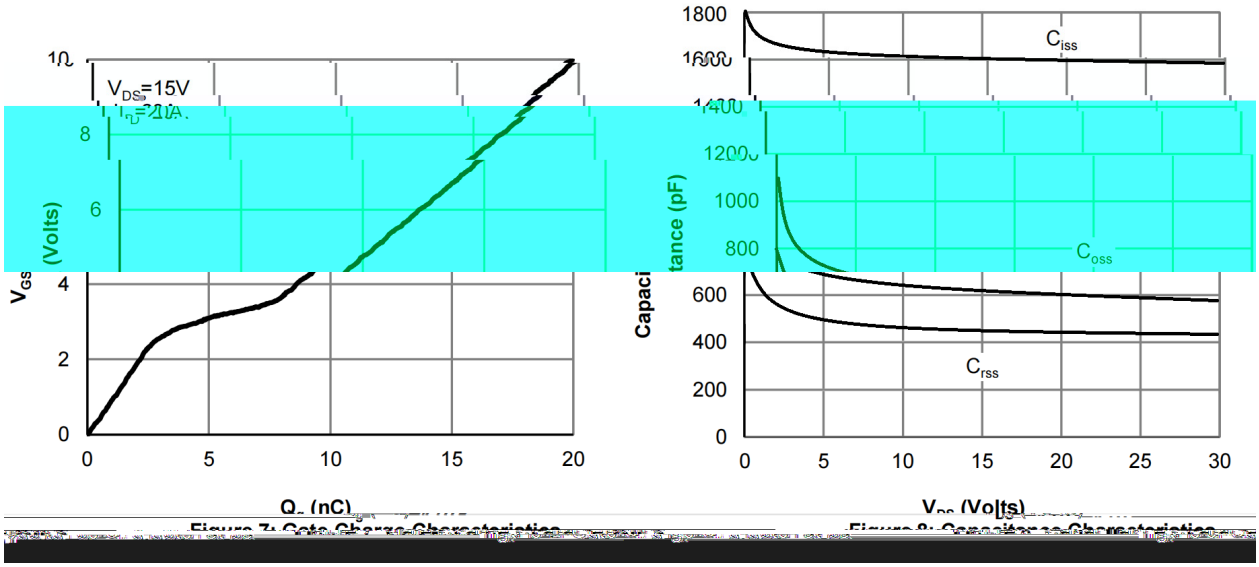


Figure 7: Gate Charge Characteristics Figure 8: Capacitance Characteristics

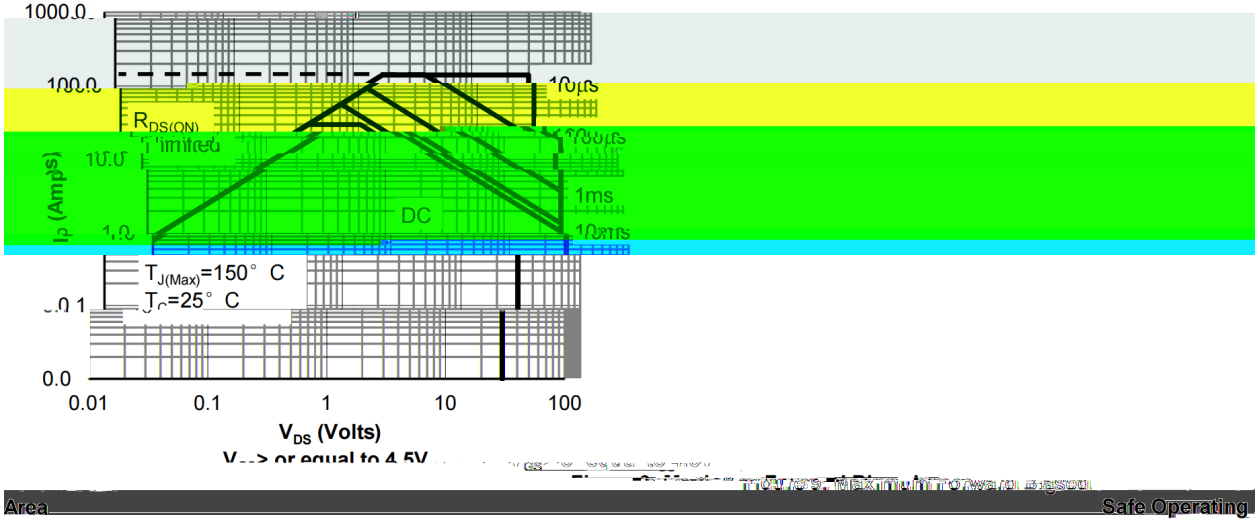


Figure 9: Maximum Forward Biased Safe Operating Area

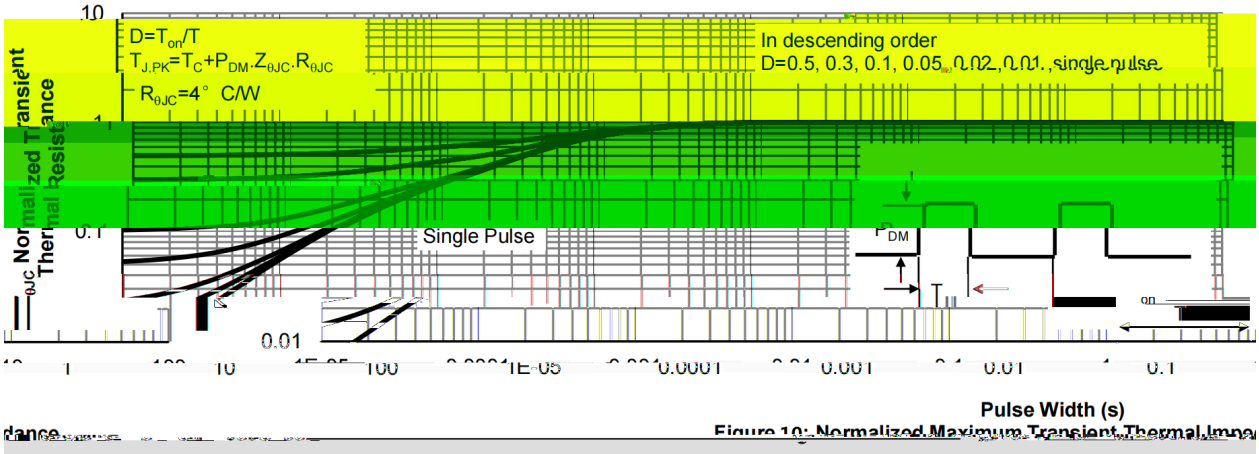
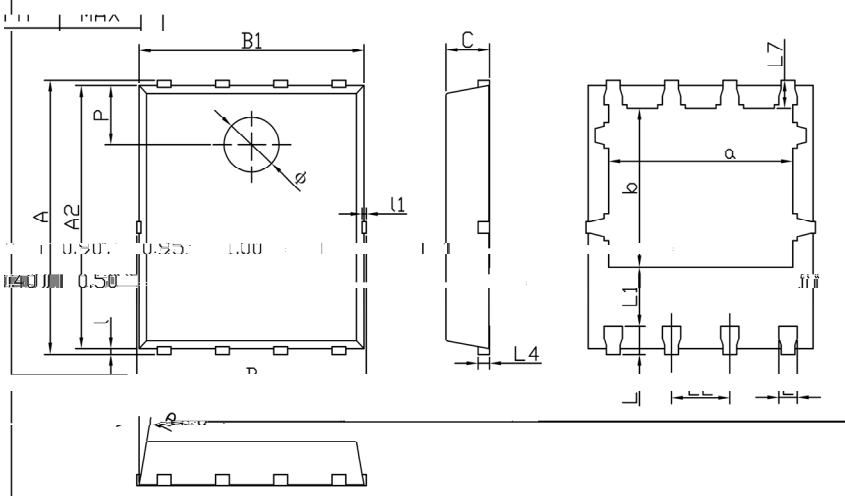


Figure 10: Normalized Maximum Transient Thermal Impedance

PDFN5×6

Unit:mm



Dimensions In Millimeters			
Symbol	MIN	TYP.	MAX
A	5.90	6.00	6.10
a	3.91	4.01	4.11
A2	5.70	5.75	5.80
B	4.90	5.00	5.10
b	3.375	3.475	3.575
B1	4.80	4.90	5.00
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	0.30
l	0.06	0.13	0.20
L1	1.10	–	–
[illegible]	[illegible]	[illegible]	[illegible]
L2	1.17	1.27	1.37
L4	0.21	0.26	0.34
L6	0.51	0.61	0.71
L7	0.51	0.61	0.71
P	1.15	1.30	1.45
θ	8°	10°	12°
Φ	1.10	1.20	1.30

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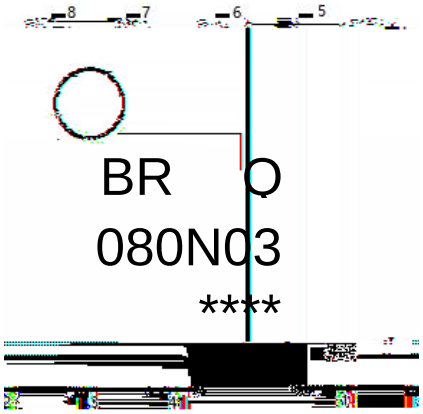

BR

Q

080N03

****

Note

BR	Company Code
Q:	Automobile halogen-free product Code
080N03	Product Type Code
****:	Lot No. Code, code change with Lot No

Note:

1	150	200	60	120sec;	1.Preheating:150~200 , Time:60~120sec.
2	255±5		5±0.5sec;		2.Peak Temp.:255±5 , Duration:5±0.5sec.
3		2	10	/sec.	3. Cooling Speed: 2~10 /sec.

260±5	10±1 sec.	Temp.:260±5	Time:10±1 sec

/ REEL

Package Type	Units 包装数量					Dimension 包装尺寸 (unit：mm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN5×6	5,000	2	10,000	6	60,000	13''×12	360×360×50	380×335×366