

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°C)	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 θ JA	21	/ W
	Steady-State		53	
Thermal resistance, junction - case	Steady-State	R θ JC	4	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=250\mu A, V_{GS}=0V$	30	32		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	1	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=16A$		6.3	8	m Ω
		$V_{GS}=4.5V, I_D=8A$		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		Ω
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	$t_{D(on)}$	$V_{GS}=10V, V_{DS}=15V, R_L=0.75\Omega, R_{GEN}=3\Omega$		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		

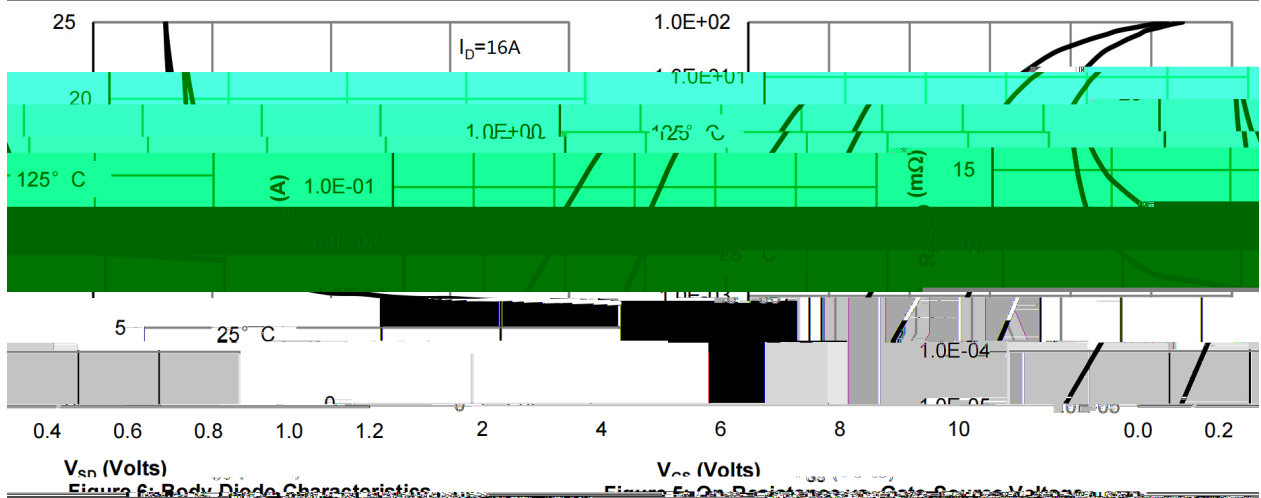
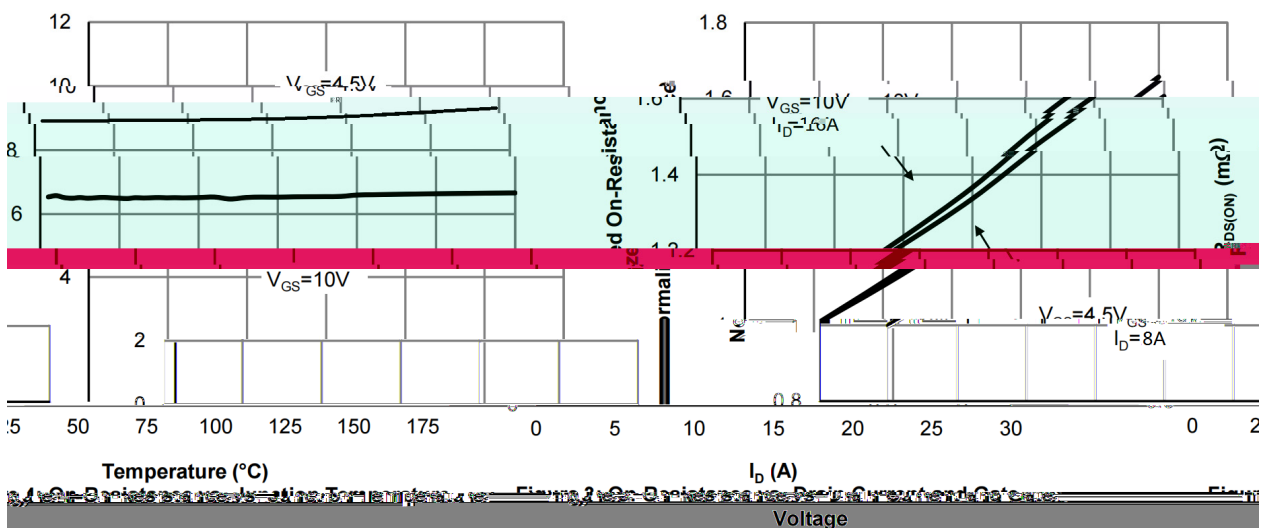
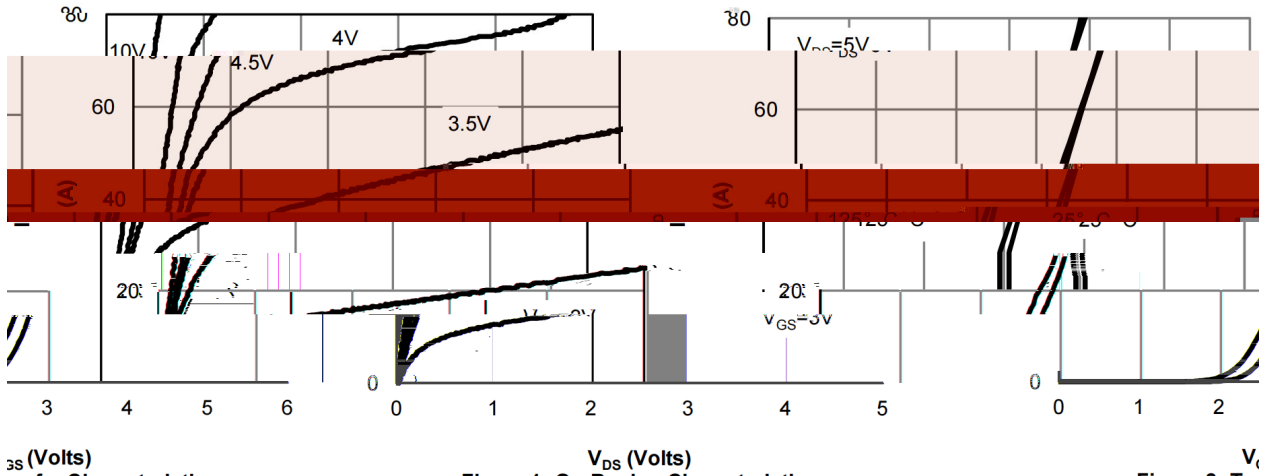


Figure 4: On-Resistance vs. Gate Voltage

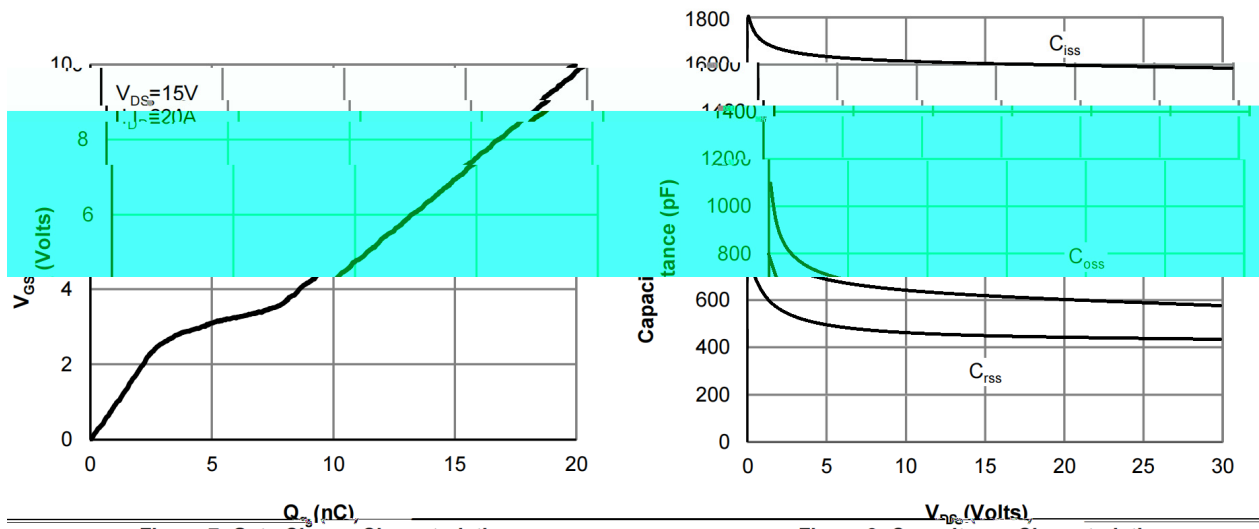
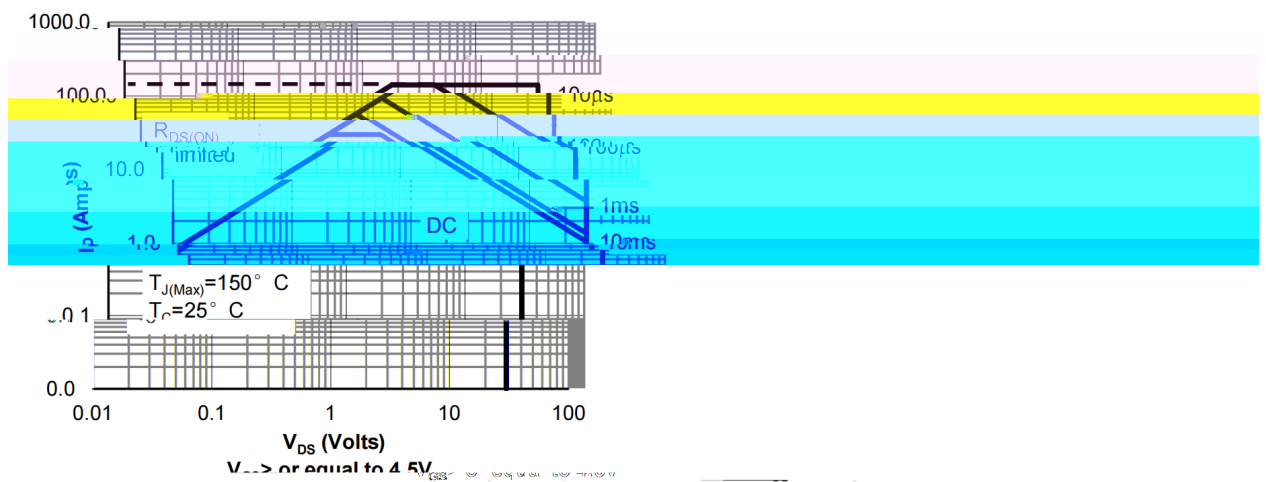


Figure 7: Gate Charge Characteristics



Operating Area Safe Op

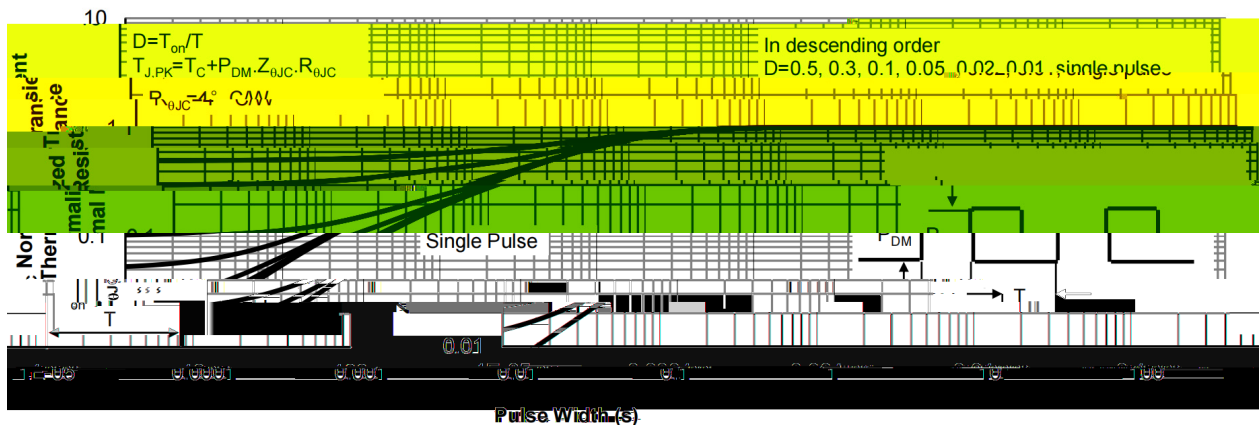
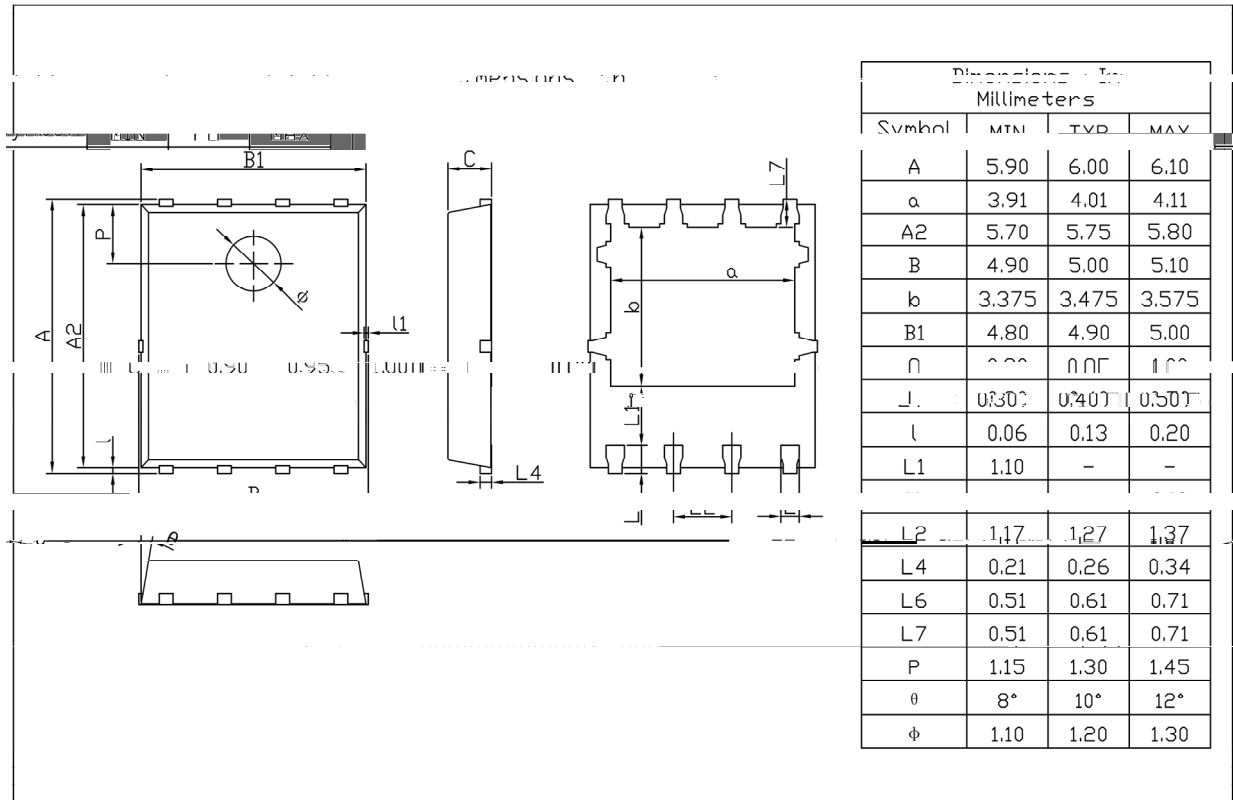


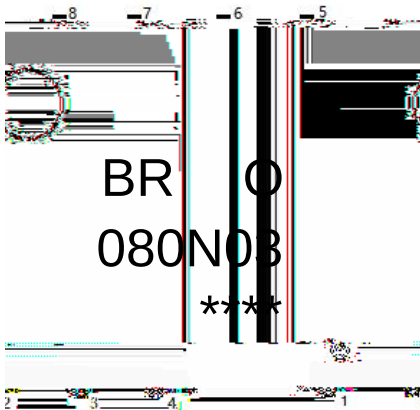
Figure 10: Normalized Maximum Transient Thermal Impedance

PDFN5 X6

Unit:mm



Rev.01 202209



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
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/ REEL

Package Type	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	/	/	/	/	/			
PDFN5×6	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366