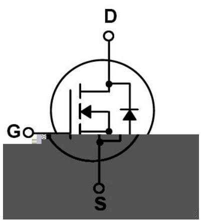
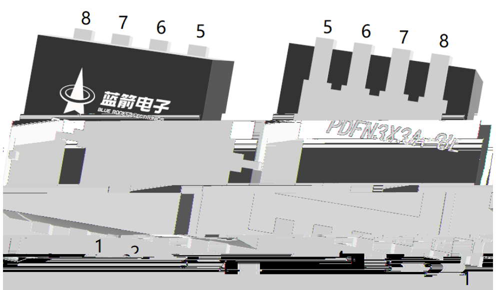
PDFN3×3A-8L N MOS
N-Channel Enhancement Mode Field Effect Transistor in a PDFN3×3A-8L Plastic Package.

V_{DS} (V) = 30V
I_D =55 A (V_{GS} = ± 20V)
$R_{DS(ON)}$@10V ≤ 5mR(Typ.4.3mR)
AEC-Q101 Qualified to AEC-Q101 Standards for High Reliability,
HF Product.

Load Switch Applications,Battery Power Management, Meet the stringent requirements of automotive applications.





出脚	定义
Pin1	S
Pin2	S
Pin3	S
Pin4	G
Pin5	D
Pin6	D
Pin7	D
Pin8	D

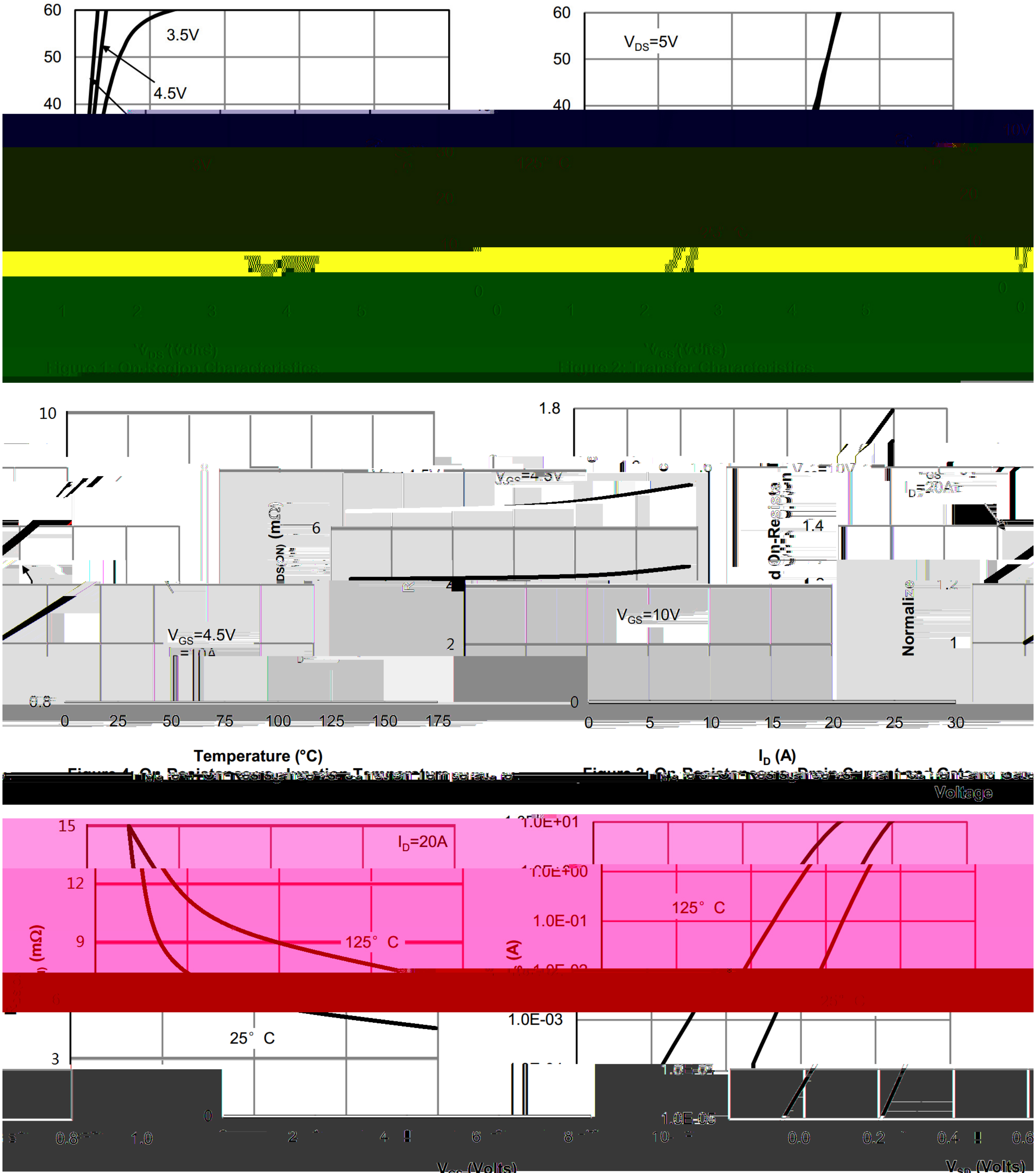
See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	30	V
Drain Current		I_D(Tc=25)	55	A
Drain Current - Pulsed		I_{DM}	145	A
Gate-Source Voltage		V_{GSS}	±20	V
Single Pulsed Avalanche Energy		E_{AS}	220.9	mJ
Avalanche Current		I_{AS}	23.5	A
Power Dissipation		P_D(Tc=25)	30	W
Operating and Storage Temperature Range		T_J,T_{stg}	-55 to 150	
Junction-to-Ambient	t ≤ 10	$R_{θJA}$	40	/W
Junction-to-Ambient	Steady-State		75	
Junction-to-Case	Steady-State	$R_{θJC}$	4	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	30	35		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V V_{DS}=0V			±0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} I_D=250μA	1.0	1.8	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V I_D=20A		4.3	5	mΩ
		V_{GS}=4.5V I_D=10A		6.7	8	mΩ
Drain-Source Diode Forward Voltage	V_{SD}	V_{GS}=0V I_S=1A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		2030		pF
Output Capacitance	C_{oss}			168		
Reverse Transfer Capacitance	C_{rss}			163		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		3.1		Ω
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V V_{DS}=15V I_D=20A		40		nC
Total Gate Charge	$Q_{g(4.5V)}$			22		
Gate Source Charge	Q_{gs}			11		
Gate Drain Charge	Q_{gd}			5		
Turn-On Delay Time	$t_{d(on)}$			11		

Turn-On Rise TTTTTurn-On73S4[Tw[T)33.1(u)1.25)12080.7158 V_{GS}=10V V_{DS}=15V

R_L=0.75Ω R_{GEN}=3.0Ω ns

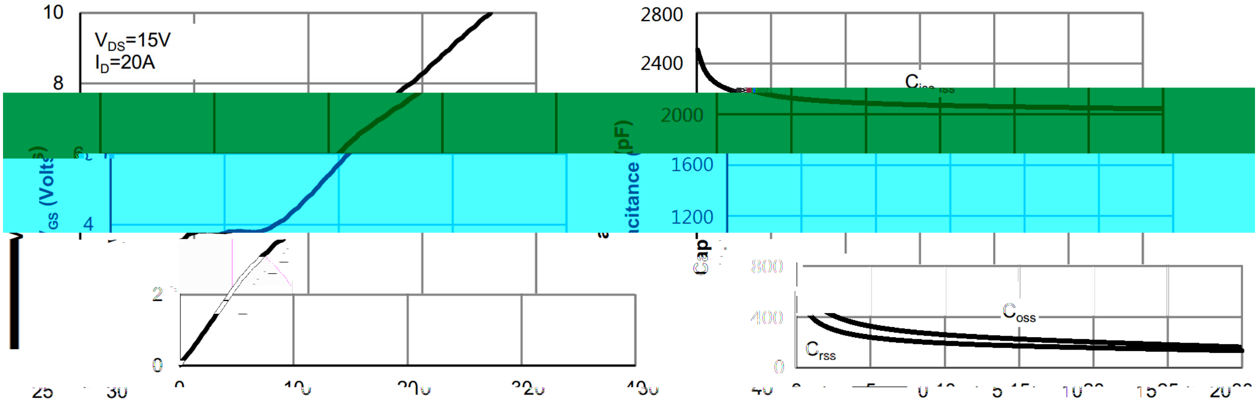


Characteristics

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

Figure 6: Body-Diode C

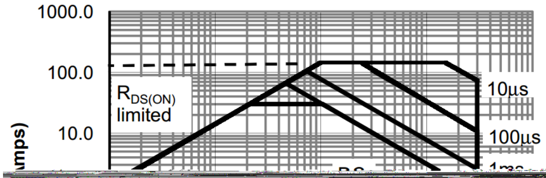
/



eristics

Qg (nC)
Figure 7: Gate-Charge Characteristics

VDS (Volts)
Figure 8: Capacitance Charact



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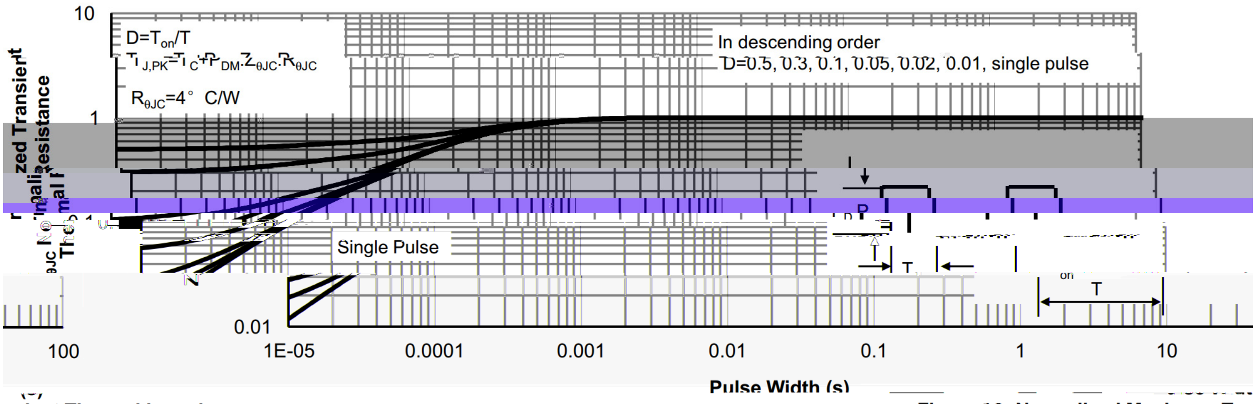
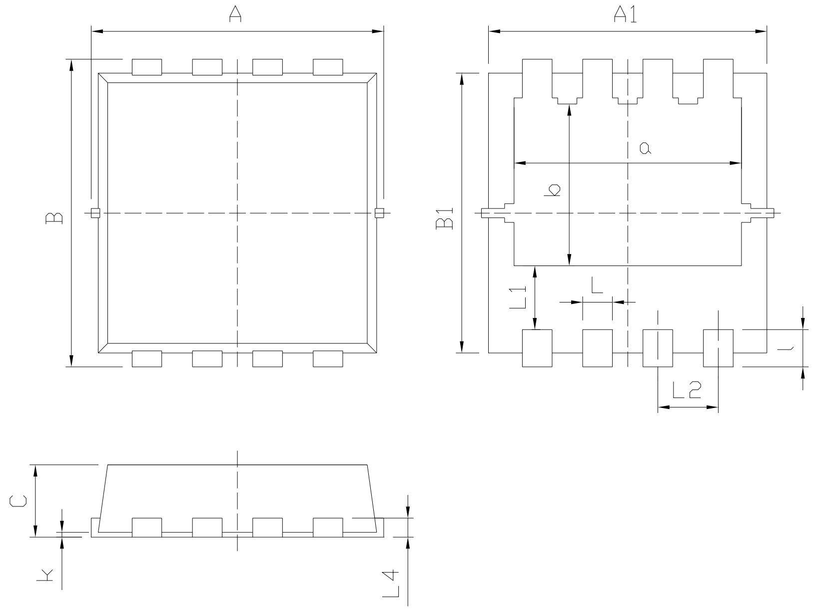


nsient Thermal Impedance

Figure 10: Normalized Maximum Tra

PDFN3X3A-8L

Unit:mm



Dimensions In Millimeterer			
Symbol	MIN	TYP	MAX
A	3.20	3.30	3.40
A1	3.10	3.15	3.20
B	3.20	3.30	3.40
B1	2.95	3.00	3.05
C	0.75	0.80	0.85
L	0.25	0.30	0.35
L1	–	–	0.75
L2	0.55	0.65	0.75
L4	0.14	0.15	0.20
a	2.35	2.45	2.55
b	1.635	1.735	1.835
k	0.00	–	0.05
l	0.30	0.40	0.50

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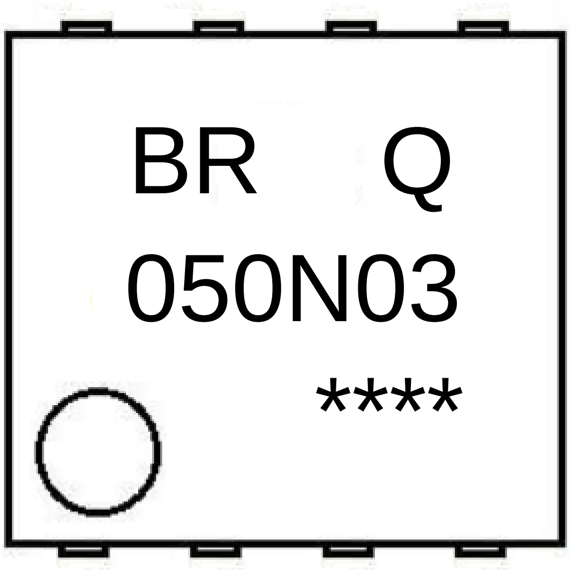


BR

Q

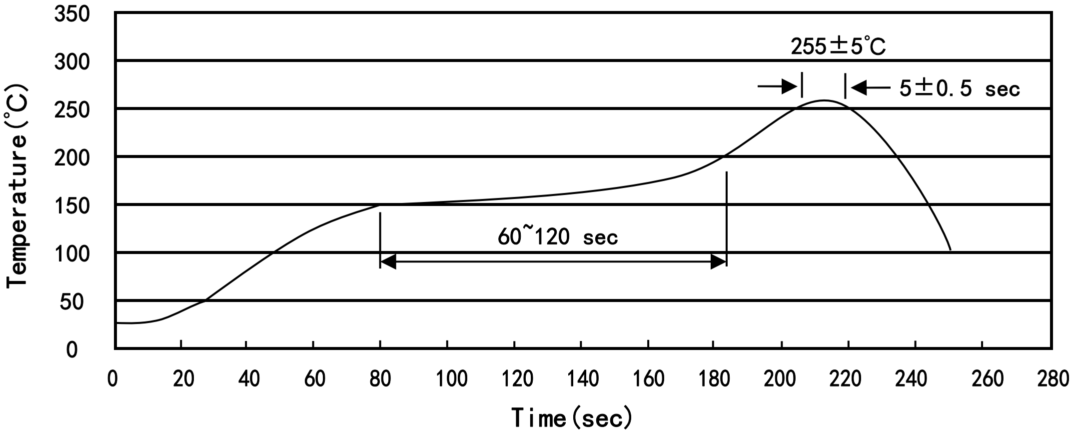
050N03

****

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
050N03:	Product Type Code
****:	Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)



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					Dimension (unit mm³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN3×3A-8L	5,000	2	10,000	6	60,000	13 ×12	360×360×50	380×335×366