PDFN3×3A-8L N MOS

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

V_{DS} (V) = 30V

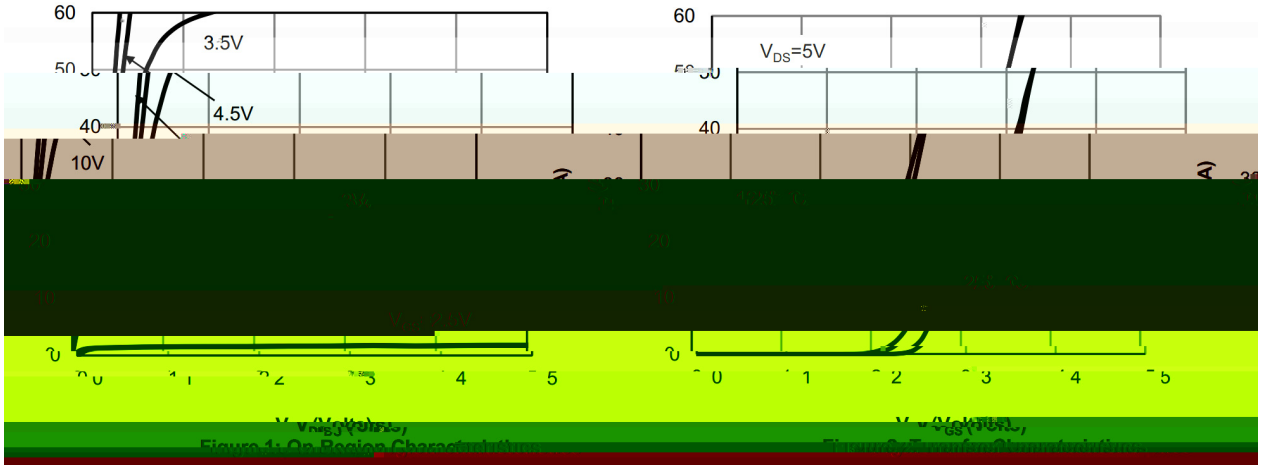
I_D =55 A (V_{GS} = ±20V)

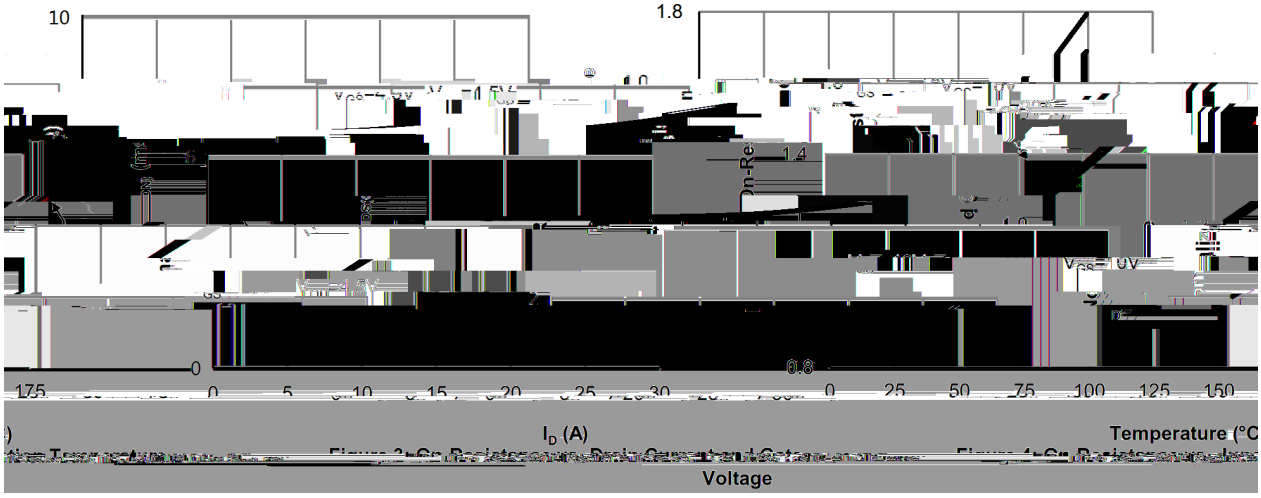
$R_{DS(ON)}$@10V ≤ 5mR(Typ.4.3mR)

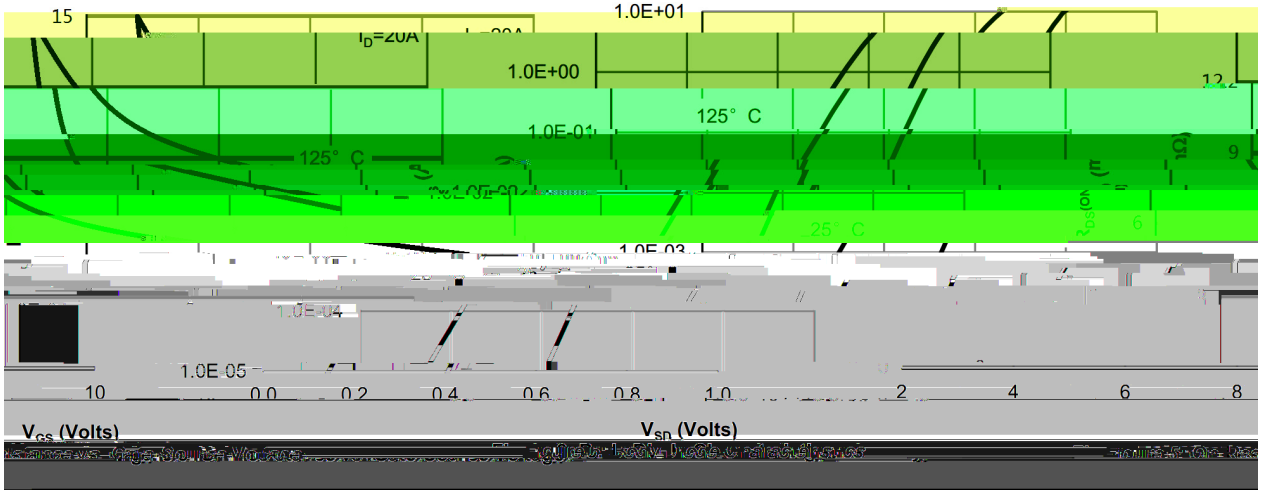
AEC-Q101 Qualified to AEC-Q101 Standards for High Reliability, HF Product.

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	tg	

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 f=1.0MHz	V_{GS}=0V		2030		pF
Output Capacitance	C_{oss}				168		
Reverse Transfer Capacitance	C_{rss}				163		
Gate resistance	R_g	V_{GS}					


60
3.5V
4.5V
40
10V
60
V_{DS}=5V
40


10
1.8
1.4
0.8
0
I_D (A)
Temperature (°C
Voltage


15
I_D=20A
1.0E+01
1.0E+00
125° C
1.0E-01
125° C
25° C
1.0E-05
V_{GS} (Volts)
V_{SD} (Volts)

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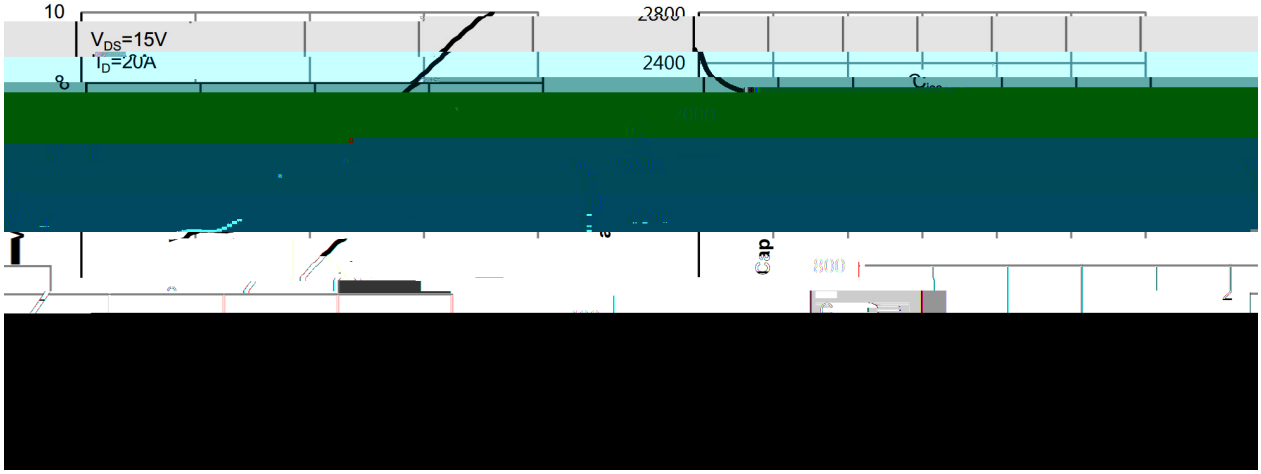
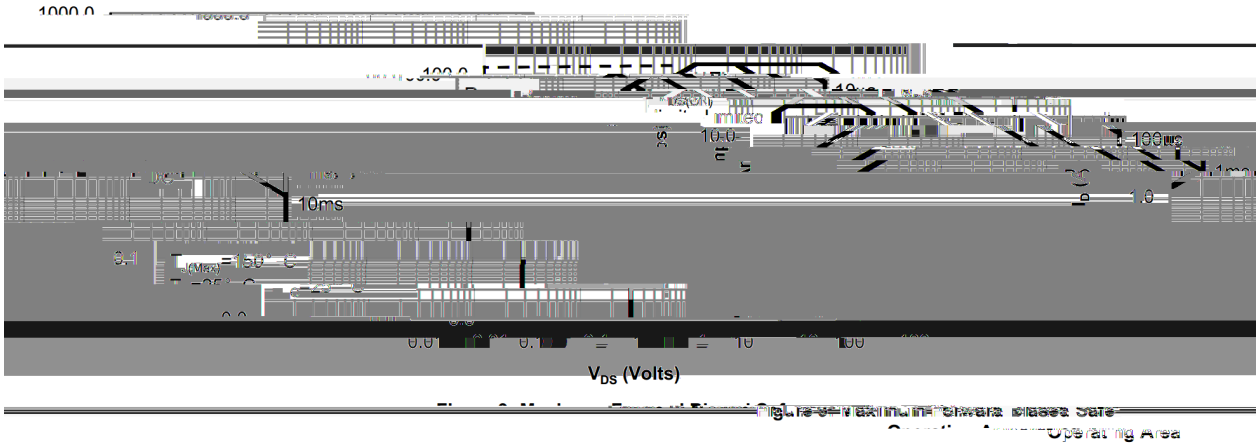
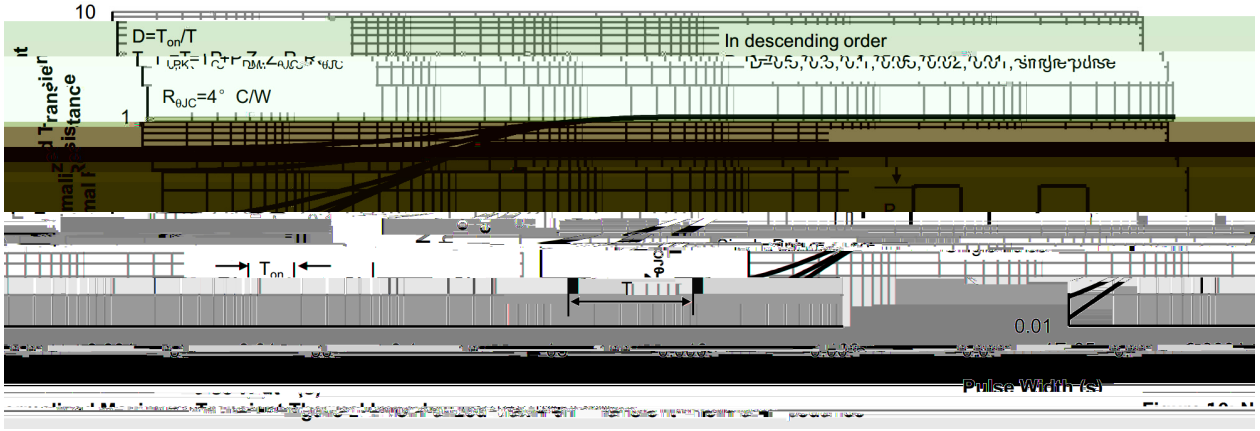
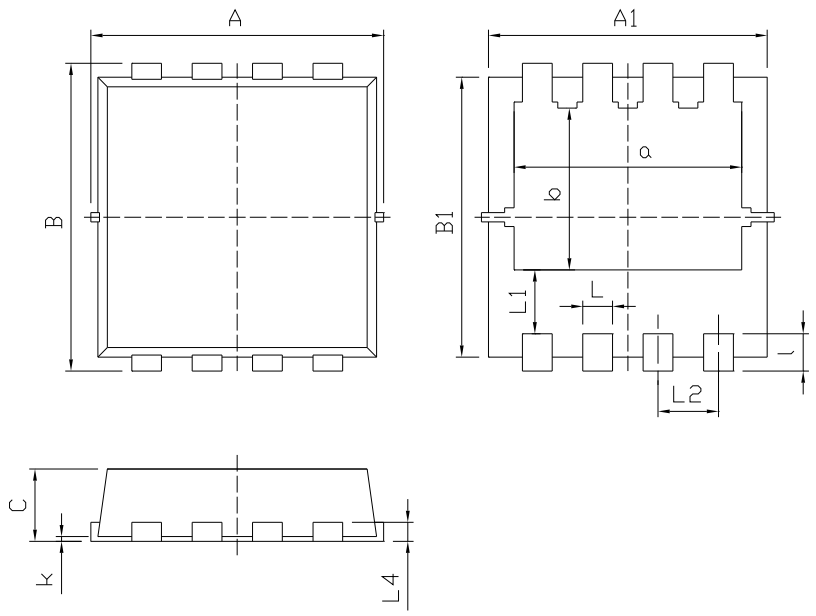

10
V_{DS}=15V
I_D=20A
2800
2400
Cap


10ms
100µs
1.0
10.0
V_{DS} (Volts)


10
D=T_{on}/T
$R_{\theta JC}$=4° C/W
In descending order
T_{on}
T
0.01

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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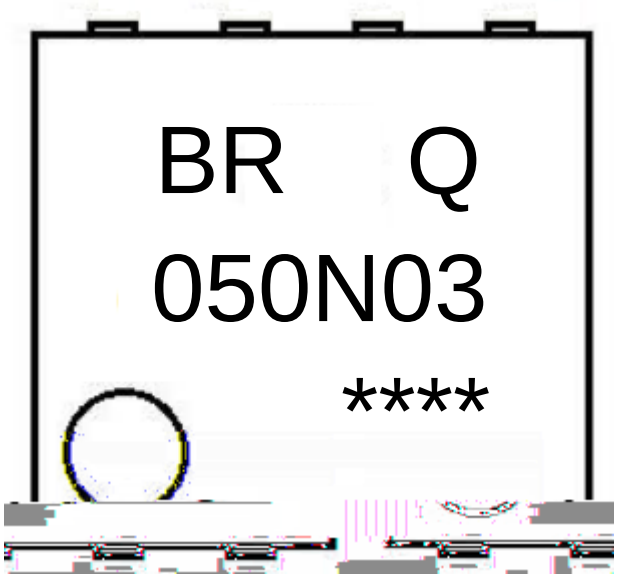


BR

Q

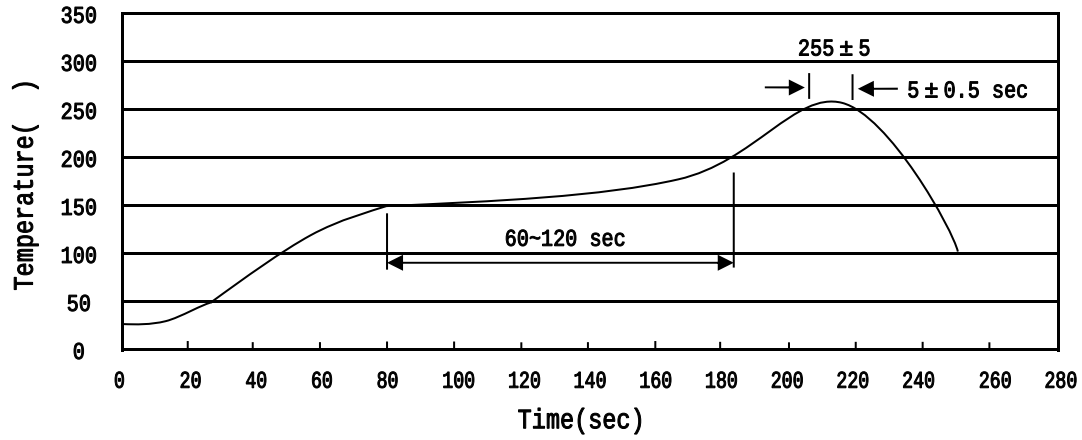
050N03

****

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