PDFN5×6 P

P-Channel MOSFET in a PDFN5×6 Plastic Package.

V_{DS}(V)=-30V I_D=-65A

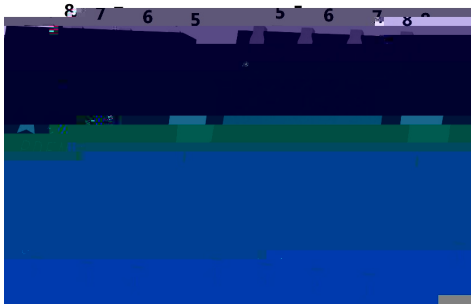
$R_{DS(ON)}$@-10V<8mΩ(TYP. 7mΩ)

$R_{DS(ON)}$@-4.5V<15mΩ(TYP. 9mΩ)

HF Product.

/

Notebook AC-in Load Switch,Battery Protection Charge/Discharge.



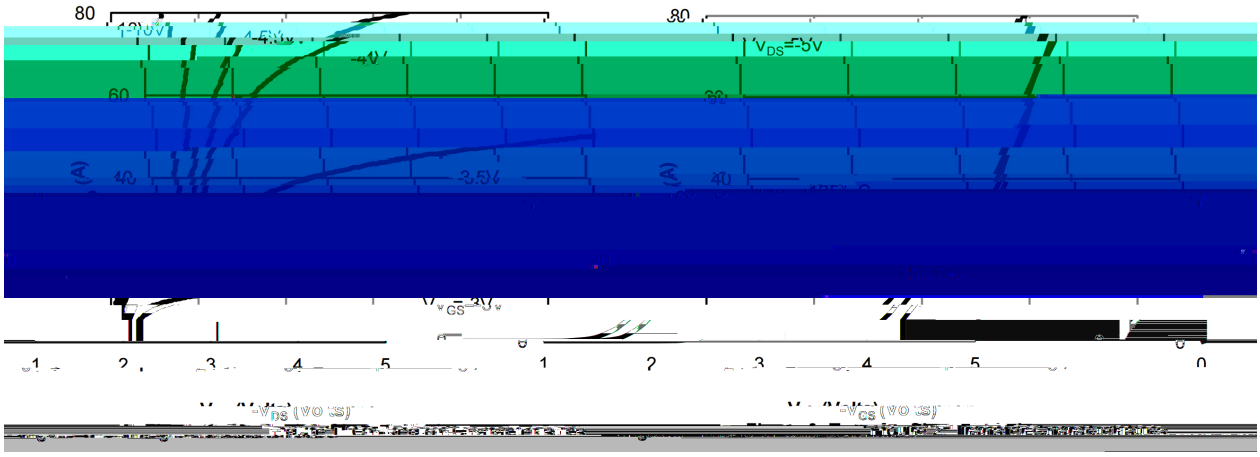
PIN1 2 3 S PIN4 G PIN5 6 7 8 D

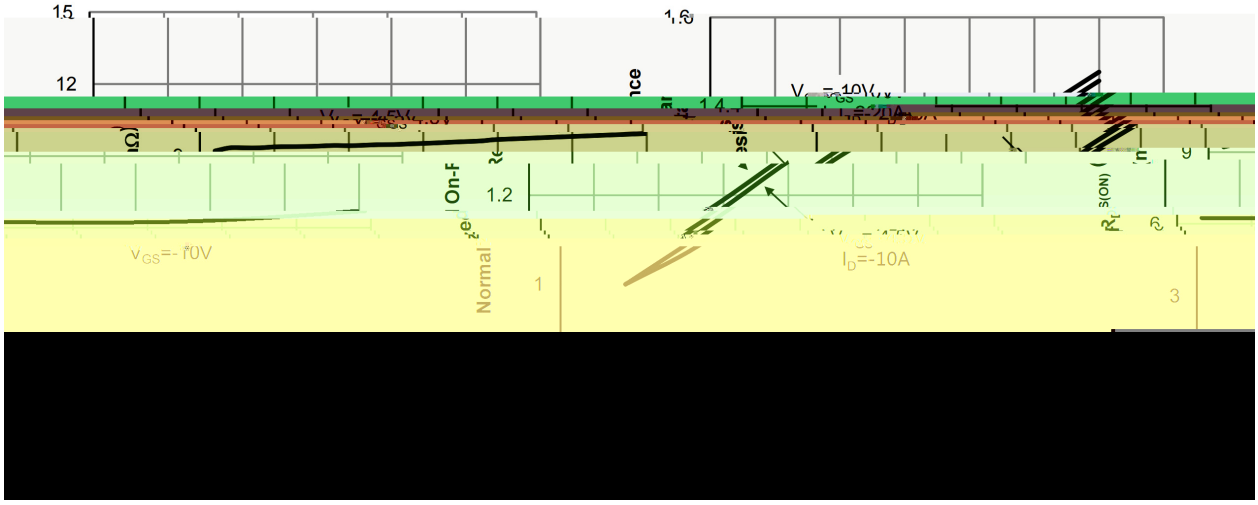
See Marking Instructions.

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-30	V
Drain Current - Continuous		I_D(T_c=25)	-65	A
Drain Current – Pulsed		I_{DM}	-188	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		P_D(T_c=25)	50	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	360	mJ
Avalanche Current(L=0.5mH)		I_{AS}	-30	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	25	/ W
	Steady-State		55	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	2.5	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=-250μA V_{GS}=0V	-30	-33		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-30V V_{GS}=0V			-1	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=VGS I_D=-250μA	-1.4	-1.5	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=-10V, I_D=-20A		7	8	mΩ
		V_{GS}=-4.5V, I_D=-10A		9	15	
Diode Forward Voltage	V_{SD}	I_S=-1A, V_{GS}=0V			-1.2	V
Input Capacitance	C_{iss}	V_{DS}=-25V V_{GS}=0V f=1.0MHz		3260		pF
Output Capacitance	C_{oss}			335		
Reverse Transfer Capacitance	C_{rss}			330		
Gate resistance	R_g	V_{GS}=0V V_{DS}=0V f=1MHz		5.6		Ω

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=-10V, V_{DS}=-15V, I_D=-20A		51		nC
Total Gate Charge	$Q_{g(4.5V)}$			32		
Gate Source Charge	Q_{gs}			11		
Gate Drain Charge	Q_{gd}			13		
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=-10V V_{DS}=-15V R_L=0.75Ω R_{GEN}=3Ω		12.5		T1376 0 TD0 T 51





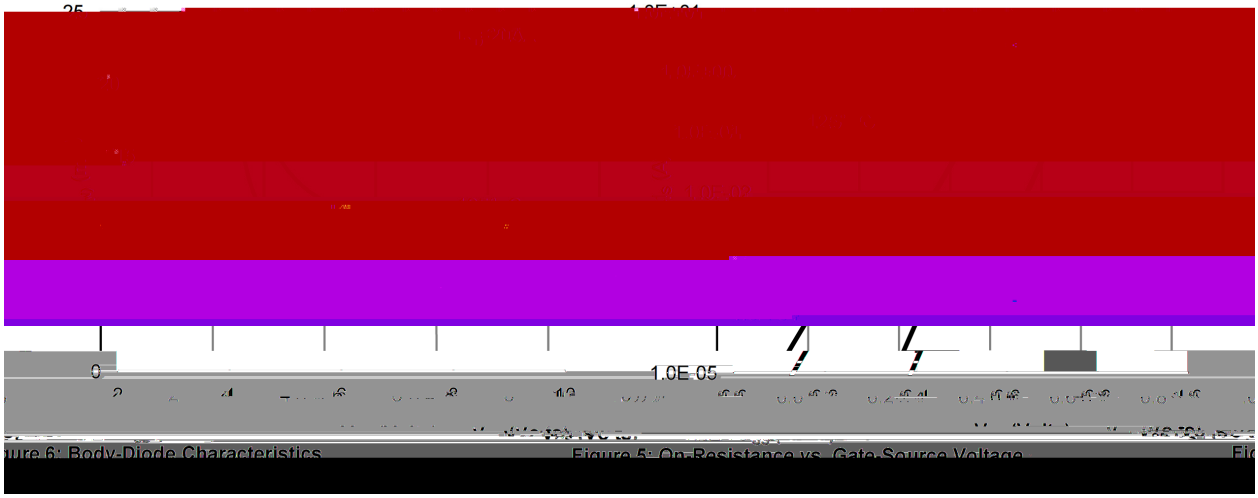
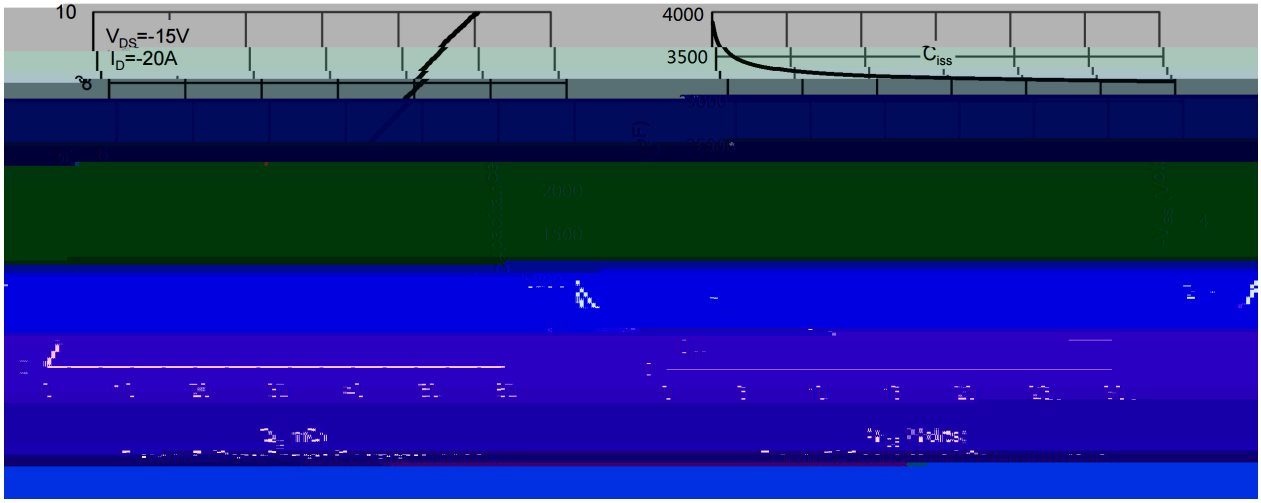


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics



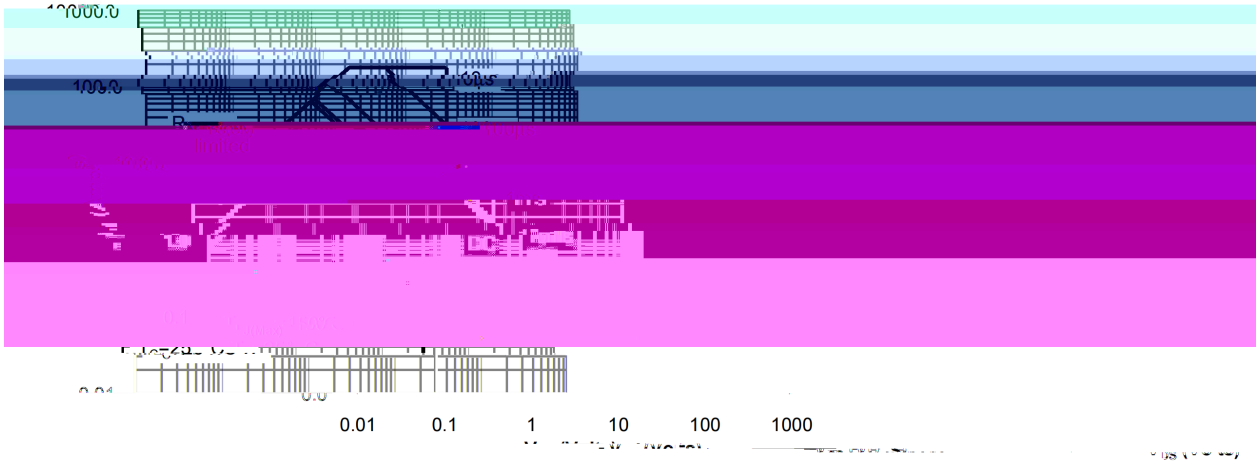


Figure 9: Maximum Forward Biased Safe Operating Area

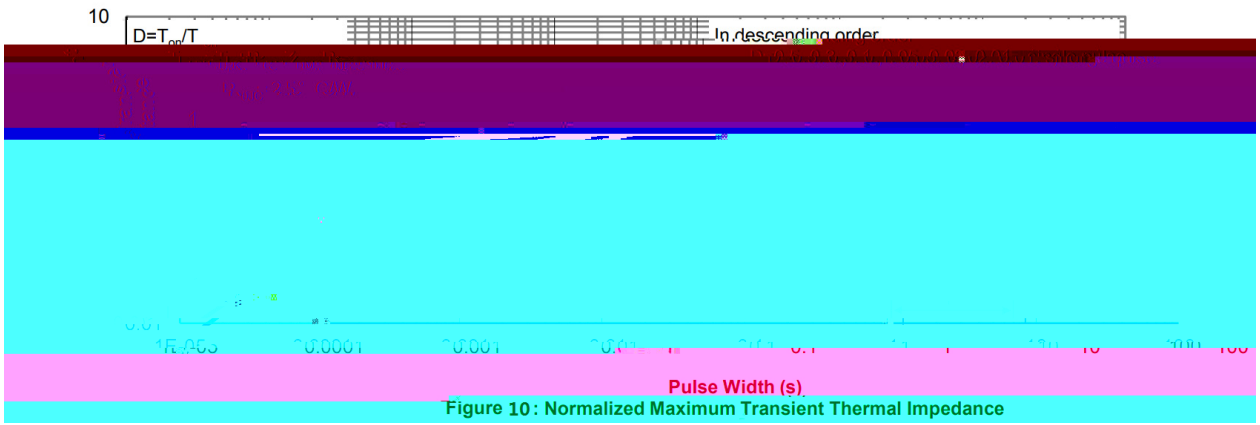
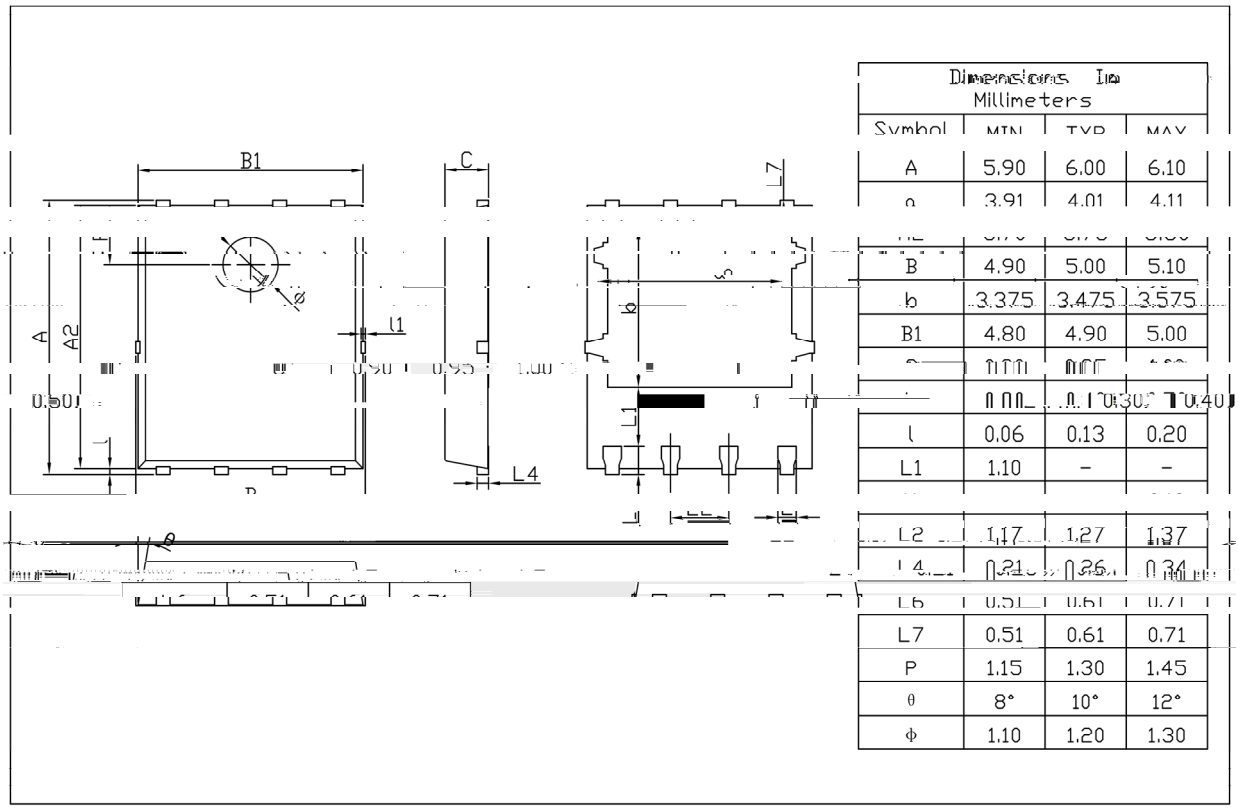


Figure 10: Normalized Maximum Transient Thermal Impedance

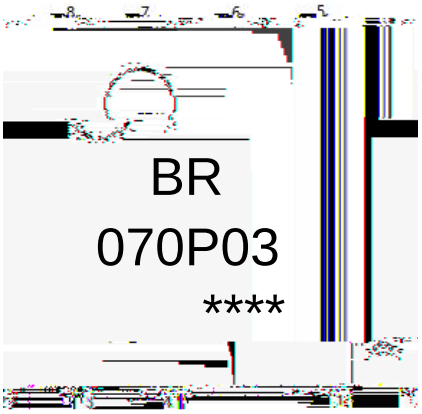
PDFN5×6

Unit:mm



Dimensions In Millimeters			
Symbol	MIN	TYP	MAX
A	5.90	6.00	6.10
D	3.91	4.01	4.11
E2	3.70	3.80	3.90
B	4.90	5.00	5.10
b	3.375	3.475	3.575
B1	4.80	4.90	5.00
e	0.90	0.95	1.00
k	0.20	0.30	0.40
l	0.06	0.13	0.20
L1	1.10	–	–
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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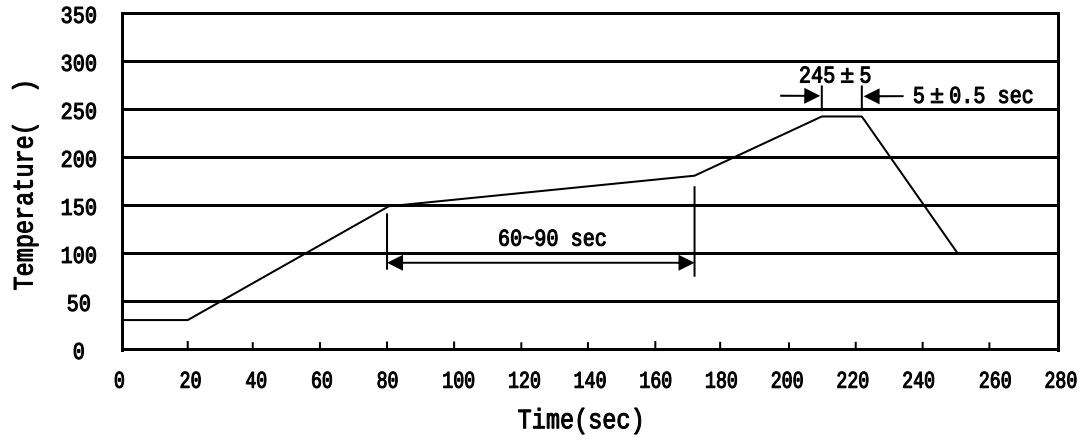
070P03

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Note

BR	Company Code
070P03	Product Type Code
****:	Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)



Note:

1 150 180 60 90sec;

2 245±5 5±0.5sec;

3 2 10 /sec.

1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245±5 , Duration:5±0.5sec.

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
PDFN5×6	5,000	2	10,000	6	60,000	13''×12	360×360×50	380×335×366