PDFN5Ö6 Ṃ Ŀ N ǰ ʃ ɷ̃ Ẕ ˥

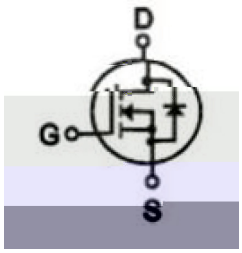
N-Channel MOSFET in a PDFN5Ö6 Plastic Package .

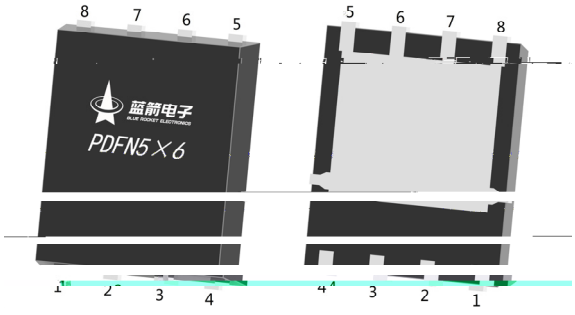
Ḥ ɔ ڳ ˡ ɷ ᶻ ʂ ᴗ Ḥ Ṁ ɔ ̈Ω ǎ ı Ḥ ‖ ɔ U ı ˡ ẖ ʌ ȍ ʰ ̈Ω ı Ḥ ♬ ڳ ı ˥ ᵀ AEC-Q101 ‰ ́ ᴊ ˡ ˎ ớ ʅ ∂ ı ṇ̀ ɾ ᵝ

Low $R_{DS(ON)}$ to minimize conductive loss, low Gate Charge for fast switching, Low Thermal resistance, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

ɔ – ˥ ת ı MB/NB/UMPC/VGA ᴊ ʅ ق ɔ ᵖ ᵃ ℓ Buck ᴪ ̈Ω ʰ ı ǐ ˩ ́ ‖ ́ ‖ ɔ ᵀ ˧ ˩ ı ق U Ȁ ʉ ı ▸ ʼ ∩ ج Ẕ ᵀ ⌧ Ɛ ʅ ∂

Battery Management, High Frequency Point-of-Load Synchronous Buck Conventer for MB/NB/UMPC/VGA, Networking DC-DC Power System, Load Switch, Meet the stringent requirements of automotive applications.





PIN1 2 3 S PIN4 G PIN5 6 7 8 D

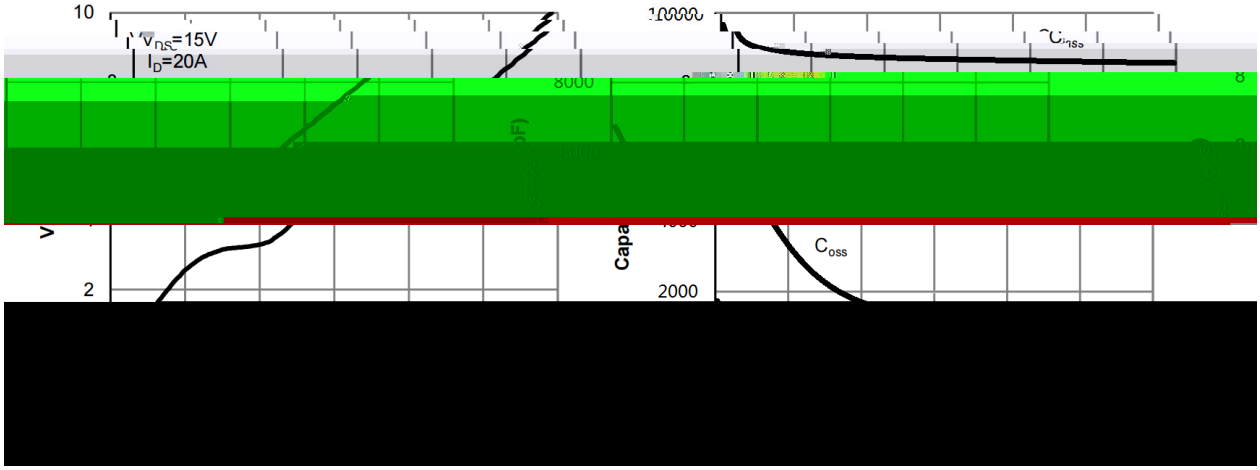
Pin	极性
1	S
2	S
3	S
4	G
5	D
6	D
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

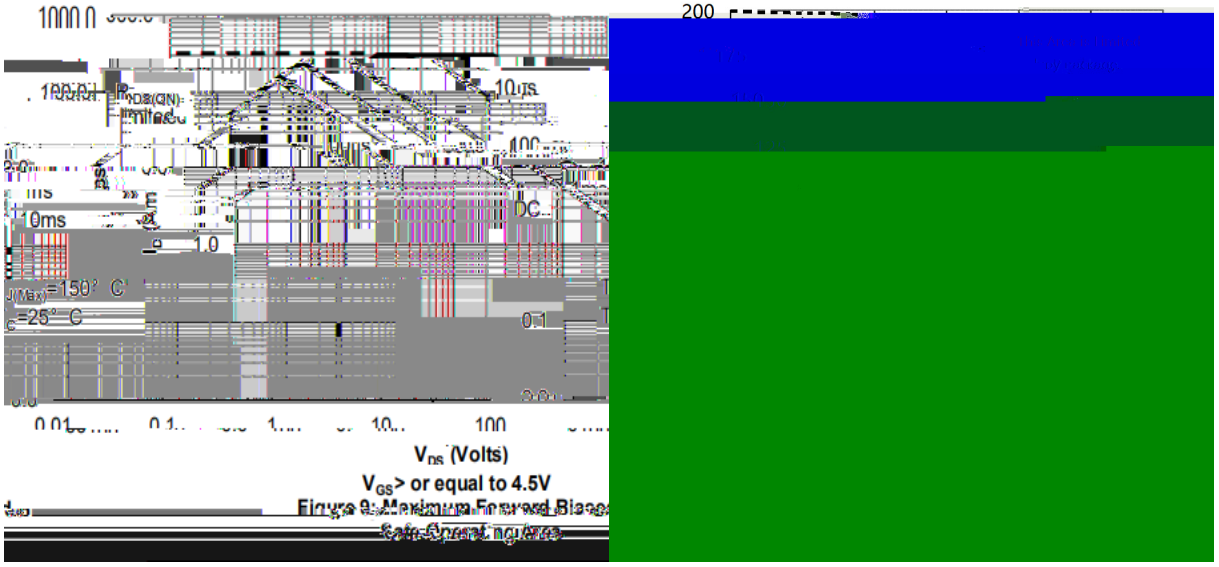
ð ʍ ˥ ب ˝ See Marking Instructions.

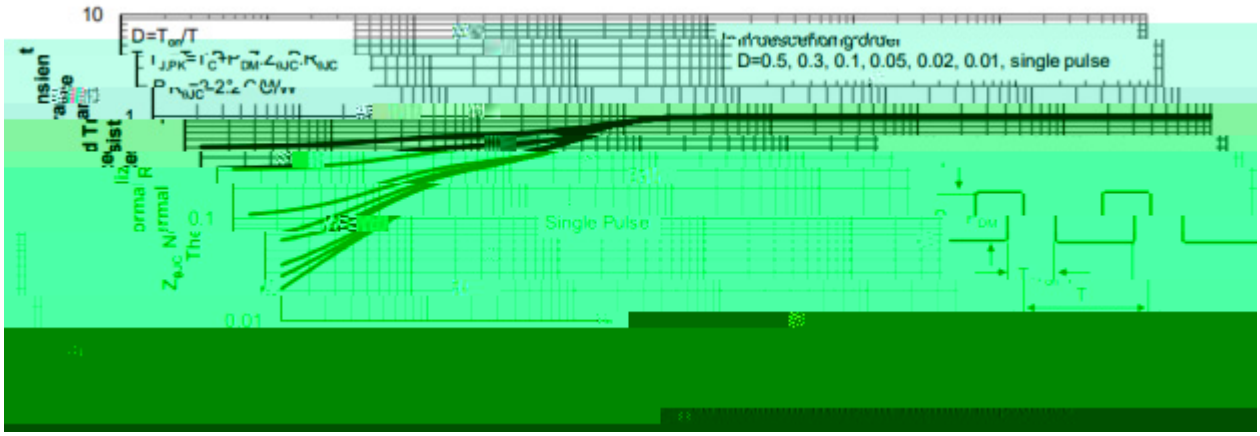
v ̈Ω Parameter		٩ N Symbol	̈Ω Ö Rating	D Ч Unit
Drain-Source Voltage		V_{DS}	30	V
Drain Current - Continuous		I_D	146	A
Drain Current – Pulsed		I_{DM}	300	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		$P_D(T_c=25$)	57	W
Single Pulse Avalanche Energy(L=0.5mH)		E_{AS}	315	mJ
Avalanche Current(L=0.5mH)		I_{AS}	30	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	ł
Thermal resistance, junction - ambient	t ≤ 10s	$R_{\theta JA}$	20	/ W
	Steady-State		50	
Thermal resistance, junction - case	Steady-State	$R_{\theta JC}$	2.2	

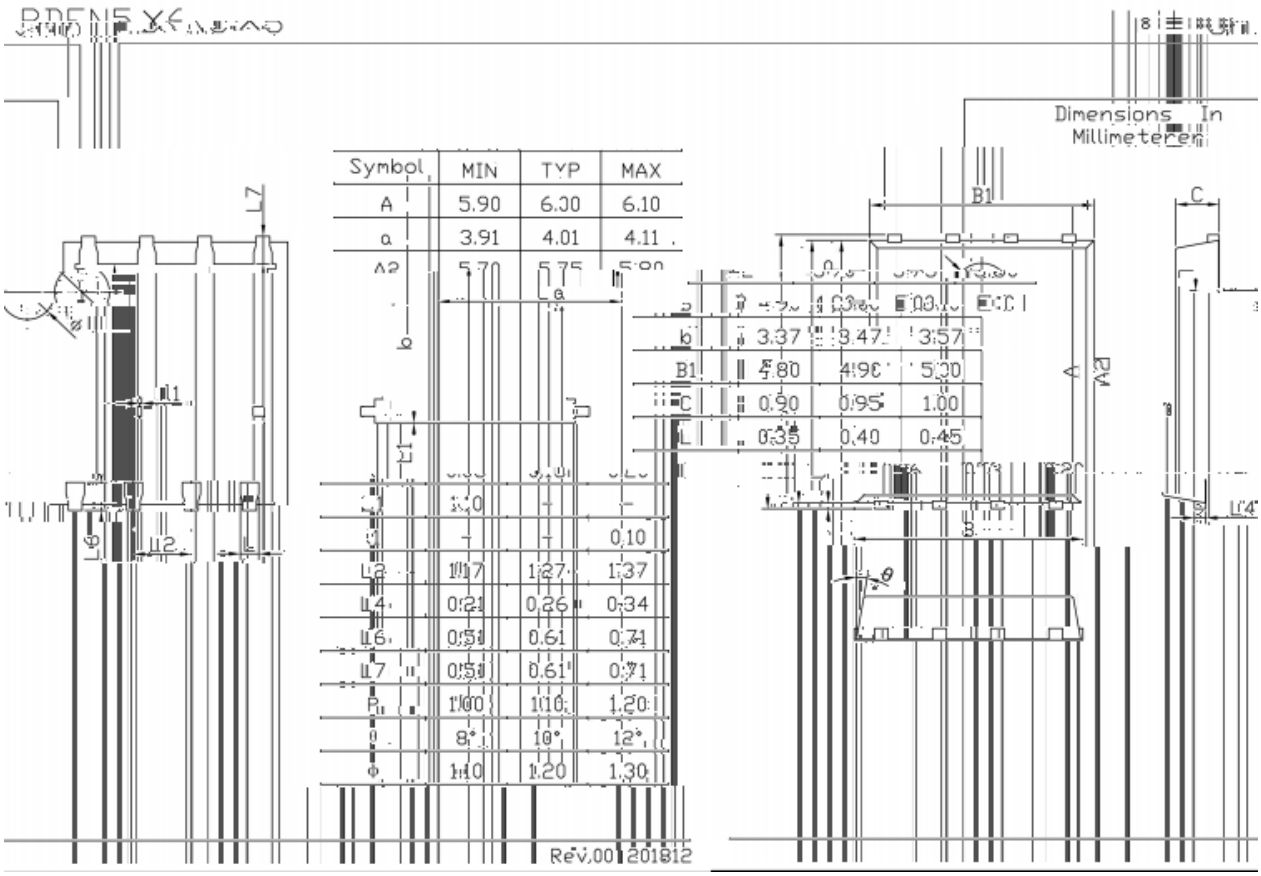
v ̈Ω Parameter	٩ N Symbol	ٗ ː ̇ ţ Test Conditions	ώ ṇ Ö Min	Ɛ ʒ Ö Typ	ώ ᶻ Ö Max	D Ч Unit
Drain-Source Breakdown Voltage	BV_{DSS}	I_D=250uA, V_{GS}=0V	30	35		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V			1.0	uA
Gate-Body leakage current	I_{GSS}	V_{DS}=0V, V_{GS}= ±20V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250uA	1	1.6	3	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=24A		1.5	1.8	mƑ
		V_{GS}=4.5V, I_D=12A		2.0	2.8	
Diode Forward Voltage	V_{SD}	I_S=1A, V_{GS}=0V		0.68	1	V
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS}=0V f=1.0MHz		8500		pF
Output Capacitance	C_{oss}			890		
Reverse Transfer Capacitance	C_{rss}					e
	g	V_{GS}=0V V_{DS}=0V f=1MHz		1.8		q
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, V_{DS}=15V, I_D=20A		60		

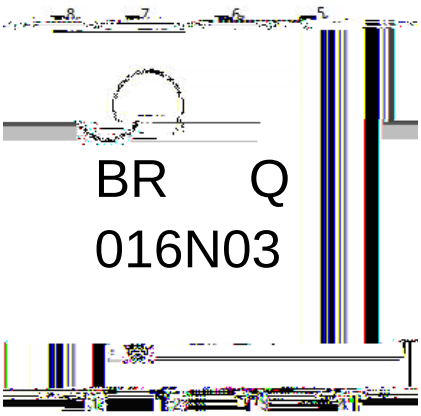
v ̈Ω̣ Parameter	˧ N Symbol	⊥⊥ ;˧ Ţ Test Conditions	ω̣ ṇ Ö Min	Ɛ ʒ Ö Typ	ω̣ ʑ Ö Max	D Ɉ Unit
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V V_{DS}=15V R_L=0.75Ω R_{GEN}=3Ω		12.5		ns
Turn-On Rise Time	t_r			6.0		
Turn-Off Delay Time	$t_{d(off)}$			47		
Turn-Off Fall Time	t_f			10.5		


10
V_{DS}=15V
I_D=20A
8000
6000
2
2000
C_{oss}


1000.0
10µs
100
10ms
1.0
DC
0.1
0.01
100
V_{DS} (Volts)
V_{GS}> or equal to 4.5V
200


10
D=T_{on}/T
D=0.5, 0.3, 0.1, 0.05, 0.02, 0.01, single pulse
Single Pulse
0.1
0.01


Dimensions In Millimeters
Symbol MIN TYP MAX
A 5.90 6.00 6.10
a 3.91 4.01 4.11
b 3.37 3.47 3.57
B1 4.80 4.90 5.00
C 0.90 0.95 1.00
L 0.35 0.40 0.45
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
R1 1.00 1.10 1.20
θ 8° 10° 12°
Φ 1.10 1.20 1.30
Rev.00 201812



ب ˝ χ	
BR χ	⌘ ⅔ ᴵᴵ Ɱ
T χ	⌘ ∩ ⊂ ṇ̀ ƒ ᵝ ‰ ⅄
016N03 χ	⌘ ⅋ ᴺ Ɱ
---- χ	⌘ ⅃ ƒ ŋ̋ ᴺ Ɱ ı ⅊ ⅃ ƒ ŋ̋ ᴺ ψ ק

Note:

BR:	Company Code
Q:	Automobile halogen-free product Code
016N03:	Product Type Code
****:	Lot No. Code, code change with Lot No

Temperature Profile for IR Reflow Soldering(Pb-Free)

ب ˝ χ

1 أ ♬ □ ỷ 150 Ḱ 200 ɬ ı `H ڑ 60 Ḱ 120sec;

2 Š Ö □ ỷ 255 ° 5 ɬ ı `H ڑ ˋY ⺈ ⺾

Note:

1.Preheating:150~200 ɬ , Time:60~120sec.