

/ Descriptions

PDFN5×6 N

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

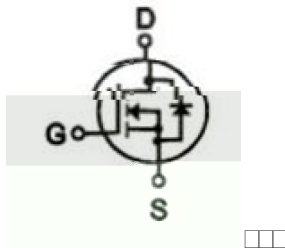
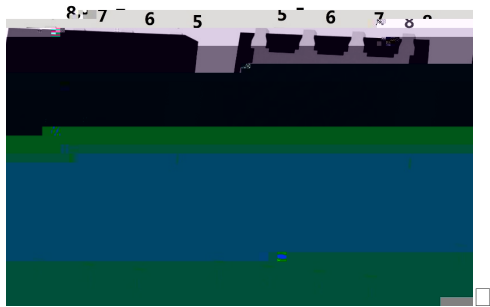
/ Features $V_{DS}(V)=60\text{ V}$ $I_D=158\text{ A}$ $R_{DS(ON)}@10V\leq 2.0\text{ m}\Omega$ (Typ.1.8mR) $R_{DS(ON)}@4.5V\leq 3.0\text{ m}\Omega$ (Typ.2.5mR)AEC-Q101
HF Product.

Qualified to AEC-Q101 Standards for High Reliability,

/ Applications

DC-DC

Secondary Side Synchronous Rectification, DC-DC Converter, Motor Control, Load Switching, Meet the stringent requirements of automotive applications.

/ Equivalent Circuit**/ Pinning**

PIN1 2 3 S PIN4 G PIN5 6 7 8 D

/ Marking

See Marking Instructions.

BRCS020N06SZCQ

Rev.B Dec.-2024



蓝箭电子
BLUE ROCKET ELECTRONICS

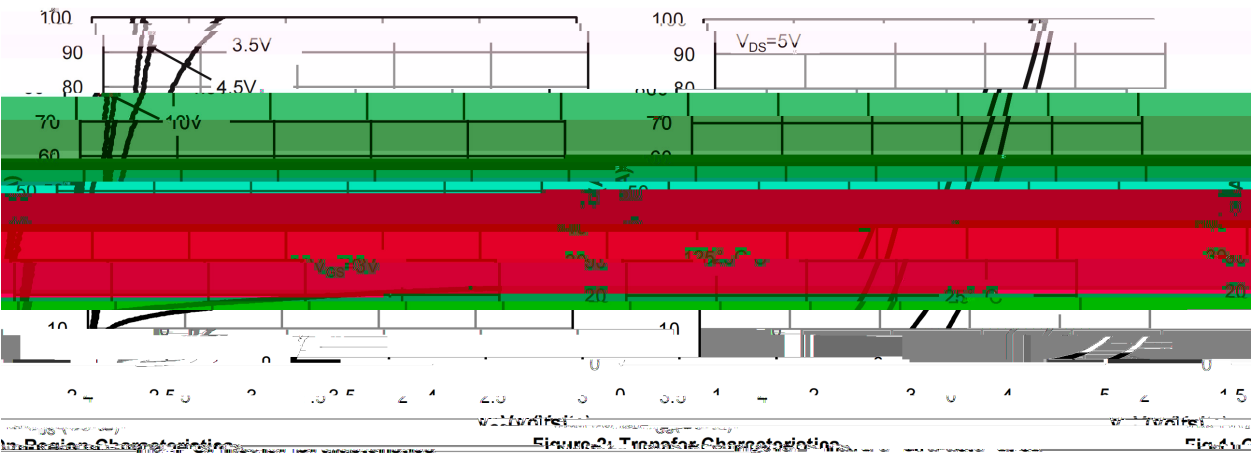
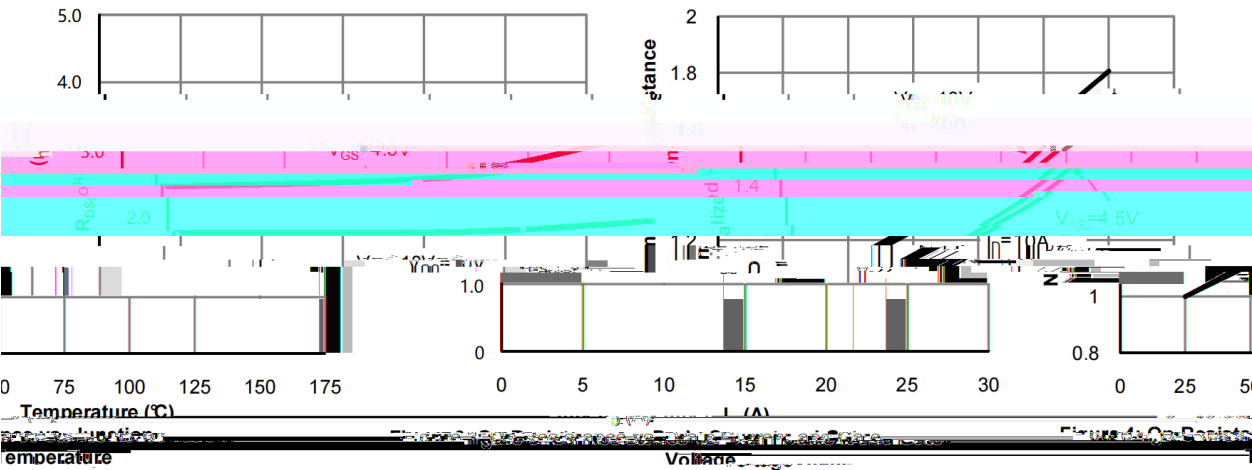
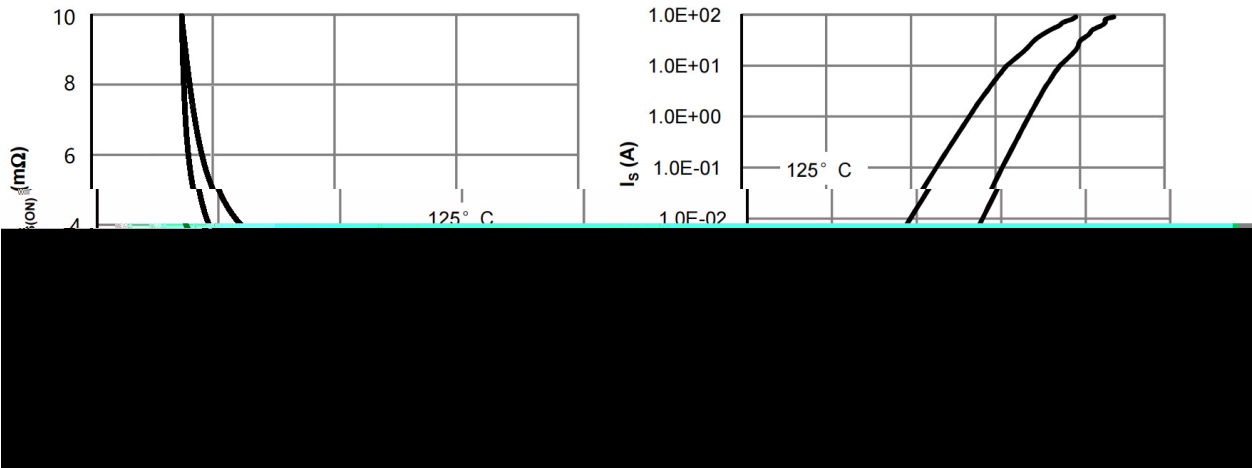
DATA SHEET □

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	60	V
Continuous Drain Current		$I_D(T_c=25^\circ\text{C})$	158	A
Pulsed Drain Current		I_{DM}	316	A
Gate-Source Voltage		V_{GS}	± 20	V
Power Dissipation		$P_D(T_c=25^\circ\text{C})$	90	W
Avalanche energy(L=0.5mH)		E_{AS}	380	mJ
Avalanche Current(L=0.5mH)		I_{AS}	30.8	A
Junction and Storage Temperature Range		T_j, T_{stg}	-55 to 150	
Maximum Junction-to-Ambient	$t \leq 10s$	$R_{\theta JA}$	20	/ W

/ Electrical Characteristics(Ta=25

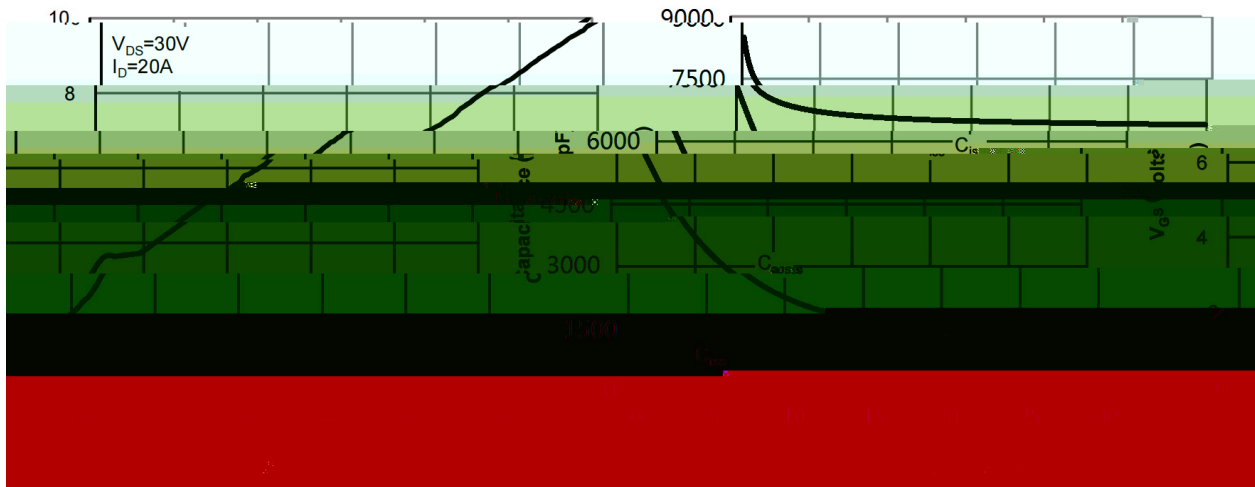
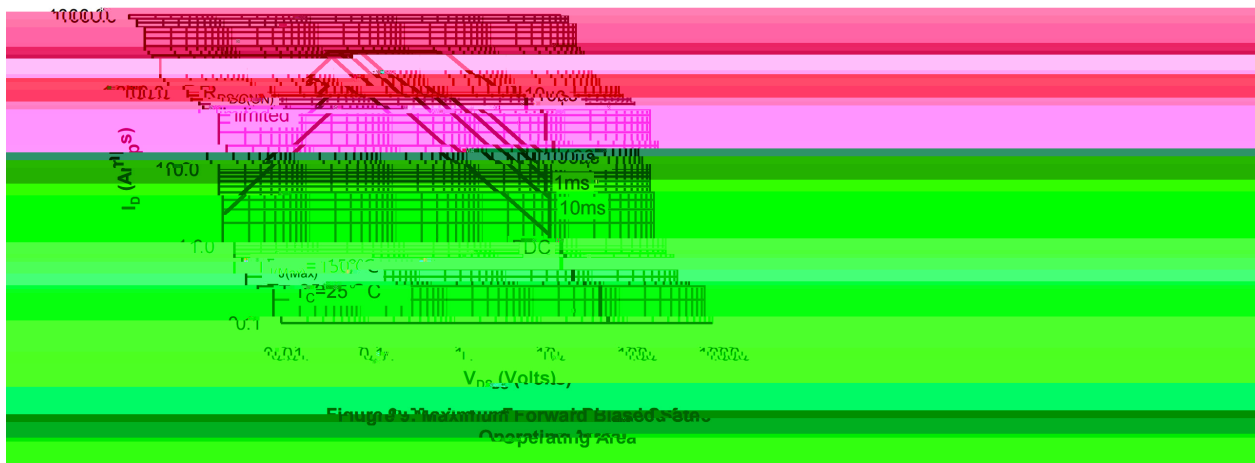
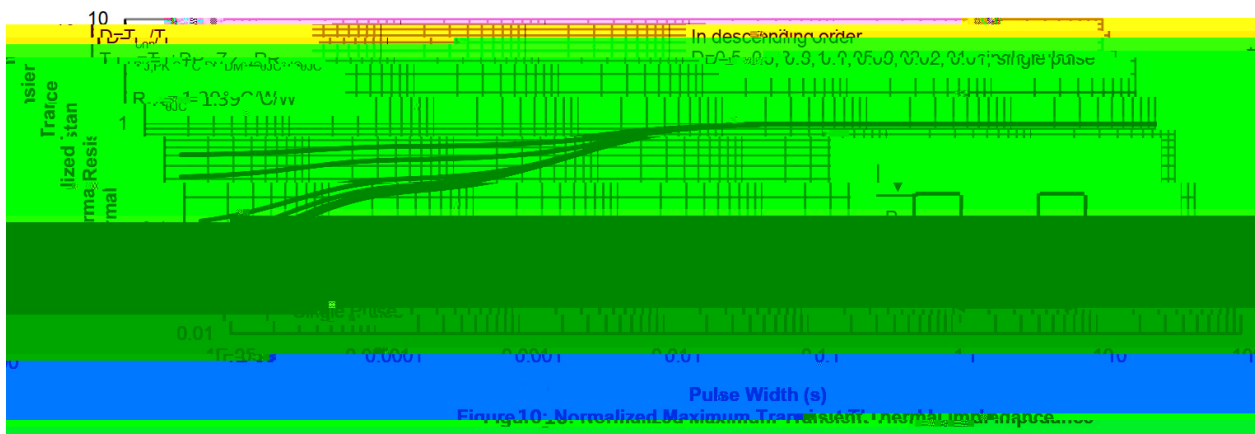
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	t _{d(on)}	V _{GS} =10V V _{DS} =20V R _L =1Ω R _{GEN} =3Ω		13		ns
Turn-On Rise Time	t _r			4		
Turn-Off Delay Time	t _{d(off)}			47		
Turn-Off Fall Time	t _f			6.5		

/ Electrical Characteristic Curve



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□

/ Electrical Characteristic Curve

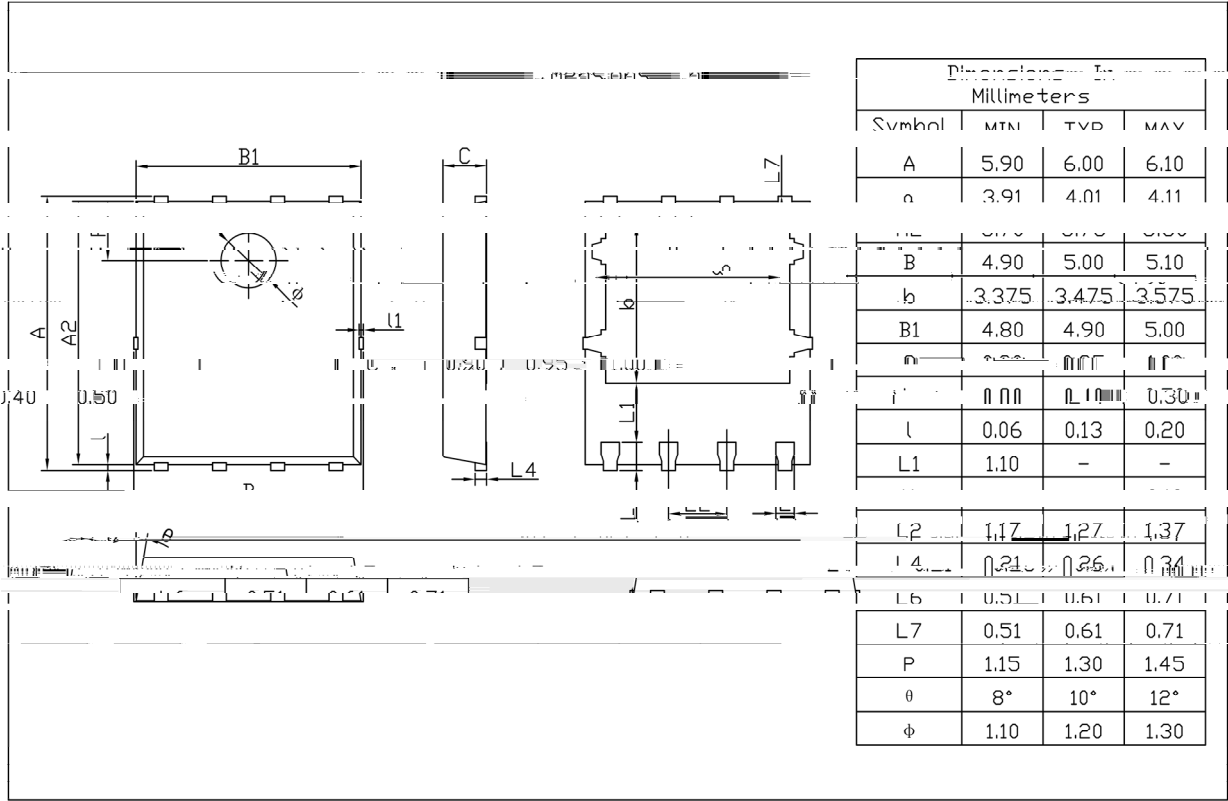


Package Dimensions

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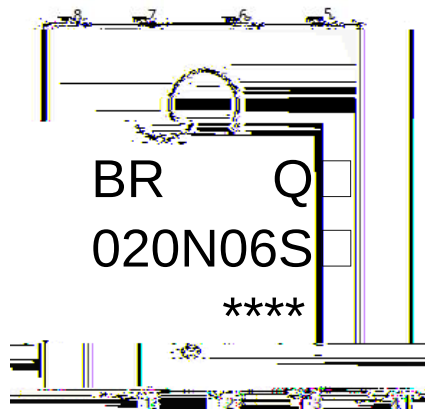
PDFN5 X6

Unit:mm



Rev.01 202209

/ Marking Instructions



BR	
Q	
020N06S	

Note	
BR	Company Code
Q:	Automobile halogen-free product Code
020N06S	Product Type Code
****:	Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

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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.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

