

/ Descriptions

PDFN5×6-Clip P

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

/ Features

$V_{DS}(V)=-40V$ $I_D=-150A$

$R_{DS(ON)}@-10V<3m\Omega$ (TYP. $2.5m\Omega$)

$R_{DS(ON)}@-4.5V<4.5m\Omega$ (TYP. $3.6m\Omega$)

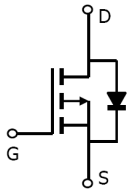
HF Product.

/ Applications

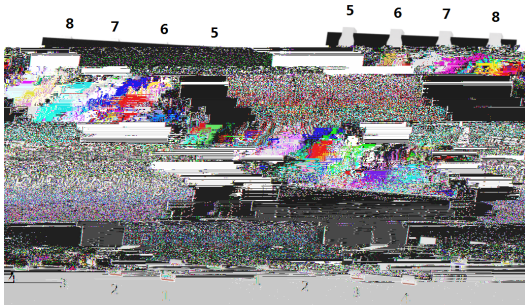
DC - DC

Motor drivers, DC - DC Converter.

/ Equivalent Circuit



/ Pinning



PIN1 2 3 S PIN4 G PIN5 6 7 8 D

/ Marking

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-40	V
Drain Current – Continuous	$I_D(T_c=25\text{ }^{\circ}\text{C})$	-150	A
	$I_D(T_c=100\text{ }^{\circ}\text{C})$	-94	A

Drain Cu

BRCS030P04SXC

Rev.B Aug.-2025

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=-10V, \quad V_{DS}=-20V,$ $I_D=-20A$		249		nC
Gate Source Charge	Q_{gs}			53		
Gate Drain Charge	Q_{gd}			26		
Turn-On Delay Time	$t_{d(on)}$	$V_{GEN}=-10V \quad V_{DS}=-20V$ $R_L=0.66\Omega \quad R_G=3.9\Omega$ $I_{DS}=-20A$		15		ns
Turn-On Rise Time	t_r			75		
Turn-Off Delay Time	$t_{d(off)}$			324		
Turn-Off Fall Time	t_f			98		

/ Electrical Characteristic Curve

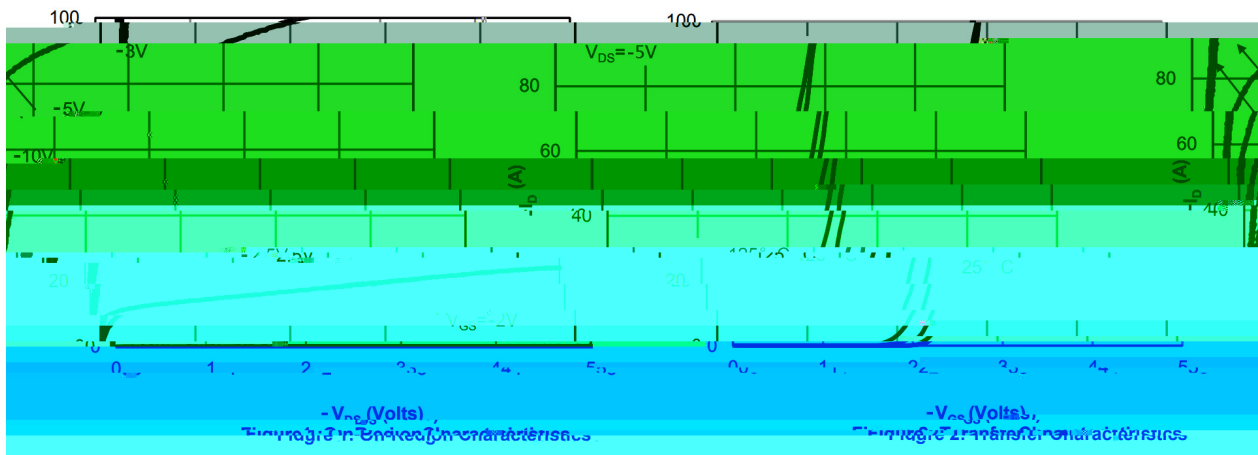
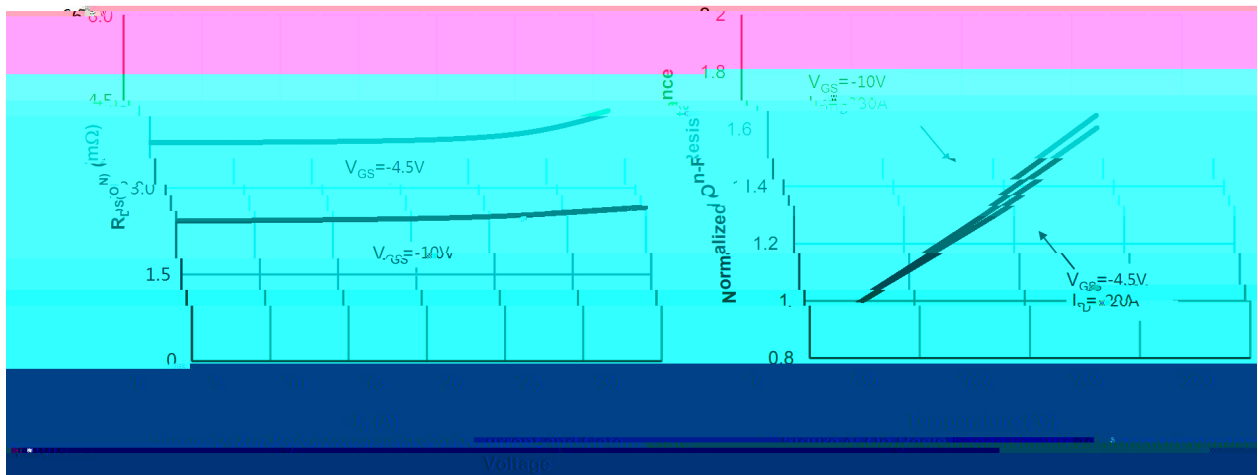
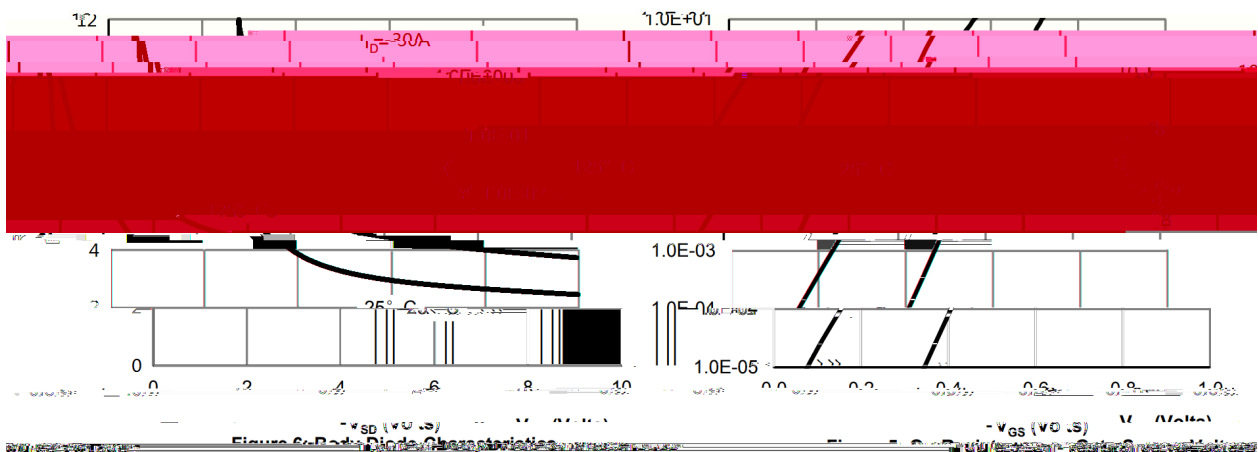


Figure 6-3: Body Diode Characteristics

/ Electrical Characteristic Curve

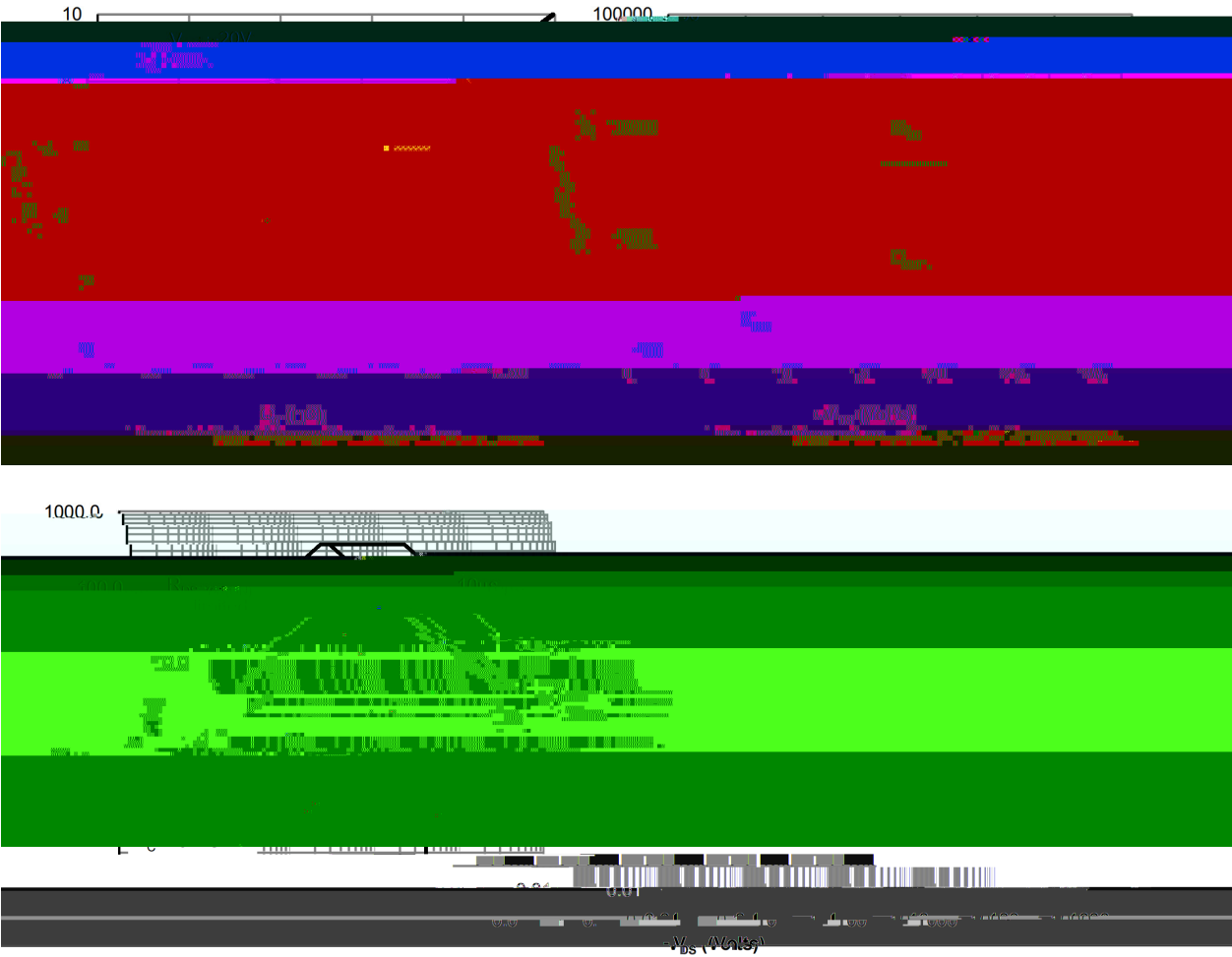
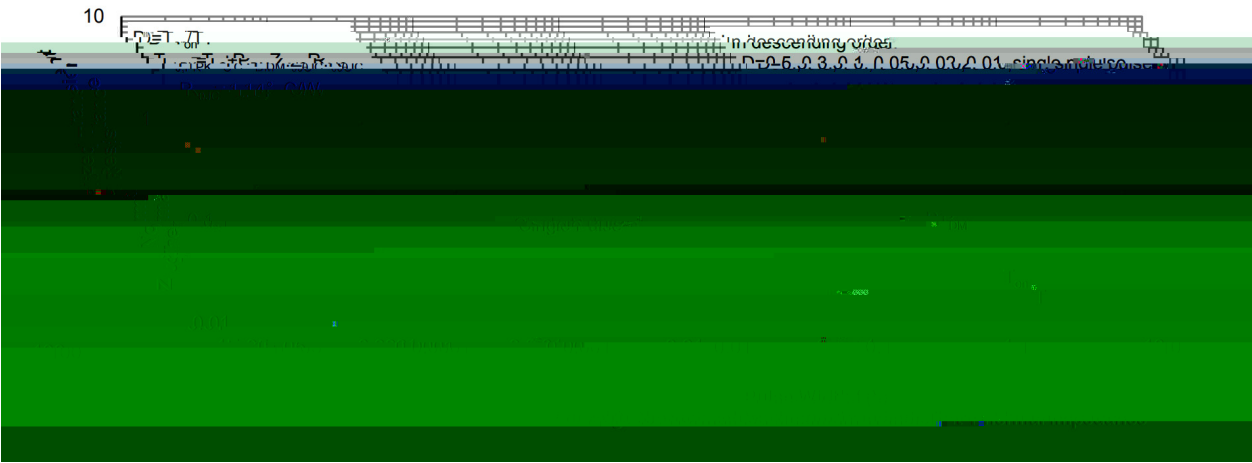
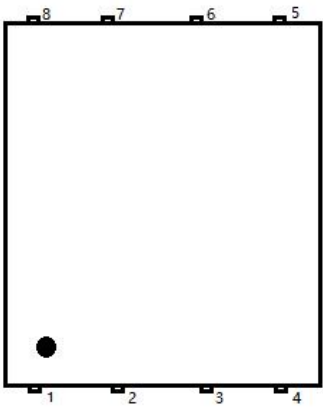


Figure 9. Maximum Forward Biased Safe Operating Area



/ Marking Instructions



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

Note:

- | | | | |
|---|---------|-----------|---|
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180 , Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±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
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/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
PDFN5×6-Clip	5,000	2	10,000	6	60,000	13"×12	360×360×50	380×335×366