

BRCS200P016YN

Rev.B Aug.-2025

描述 / Descriptions

DFN2×2C-6L 塑封封装 P+P 沟道 MOS 场效应管。
Double P+P-CHANNEL MOSFET in a DFN2×2C-6L Plastic Package.

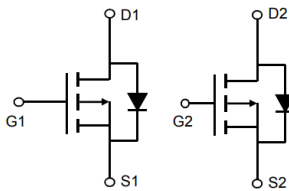
特征 / Features

$V_{DS(V)} = -16V$ $I_D = -7.8A$
 $R_{DS(ON)@-4.5V(Typ.)} = 16.7m\Omega$
 $R_{DS(ON)@-2.5V(Typ.)} = 22.5m\Omega$
 $R_{DS(ON)@-1.8V(Typ.)} = 32.5m\Omega$
 无卤产品。 HF Product.

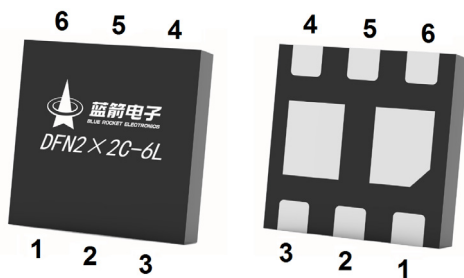
用途 / Applications

负载开关、便携式设备电池开关、高速线路驱动器。
Load Switch, Battery Switch for Portable Devices, High-Speed Line Driver.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



出脚	定义
PIN 1	S1
PIN 2	G1
PIN 3	D2
PIN 4	S2
PIN 5	G2
PIN 6	D1

印章代码 / Marking

见印章说明。
See Marking Instructions.

极限参数 / Absolute Maximum Ratings($T_a=25^{\circ}\text{C}$)

参数 Parameter	符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage	V_{DSS}	-16	V
Gate-Source Voltage	V_{GSS}	± 12	V
Continuous Drain Current	I_D	-7.8	A
Pulsed Drain Current	I_{DM}	-30.5	A
Power Dissipation	P_D	1.7	W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Maximum Junction-to-Ambient	$R_{\theta JA}$	73.5	$^{\circ}\text{C/W}$

电性能参数 / Electrical Characteristics($T_a=25^{\circ}\text{C}$)

参数 Parameter	符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\mu\text{A}$ $V_{GS}=0\text{V}$	-16	-17		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-12.8\text{V}$ $V_{GS}=0\text{V}$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}$ $V_{GS}=\pm 12\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu\text{A}$	-0.5	-0.6	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-4.5\text{V}$ $I_D=-3.5\text{A}$		16.7	20	m Ω
		$V_{GS}=-2.5\text{V}$ $I_D=-3.5\text{A}$		22.5	25	
		$V_{GS}=-1.8\text{V}$ $I_D=-1\text{A}$		32.5	100	
Diode Forward Voltage	V_{SD}	$I_S=-1\text{A}$ $V_{GS}=0\text{V}$			-1.2	V
Gate resistance	R_g	$V_{GS}=0\text{V}$, $f=1\text{MHz}$ $V_{DS}=0\text{V}$,		5.8		Ω
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$ $V_{DS}=-5\text{V}$ $f=1\text{MHz}$		1350		pF
Output Capacitance	C_{oss}			290		
Reverse Transfer Capacitance	C_{rss}			250		
Total Gate Charge	Q_g	$V_{GS}=-4.5\text{V}$, $I_D=-7.0\text{A}$ $V_{DS}=-10\text{V}$,		13.2		nC
Gate Source Charge	Q_{gs}			1.5		
Gate Drain Charge	Q_{gd}			3.6		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-4.5\text{V}$ $I_D=-7.0\text{A}$ $V_{DS}=-10\text{V}$ $R_{GEN}=3\Omega$		13.7		ns
Turn-On Rise Time	t_r			47.6		
Turn-Off Delay Time	$t_{d(off)}$			43.1		
Turn-Off Fall Time	t_f			29.5		

电参数曲线图 / Electrical Characteristic Curve

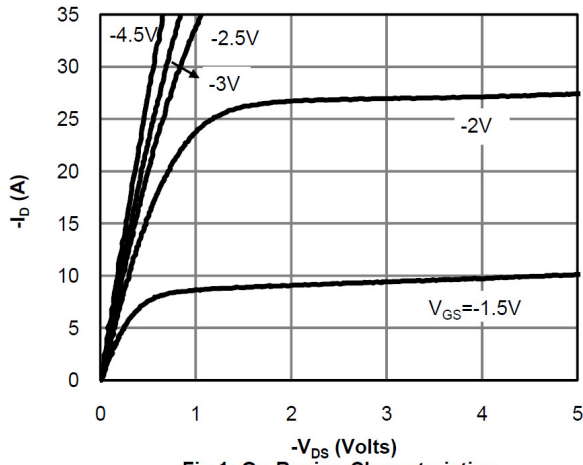


Fig 1: On-Region Characteristics

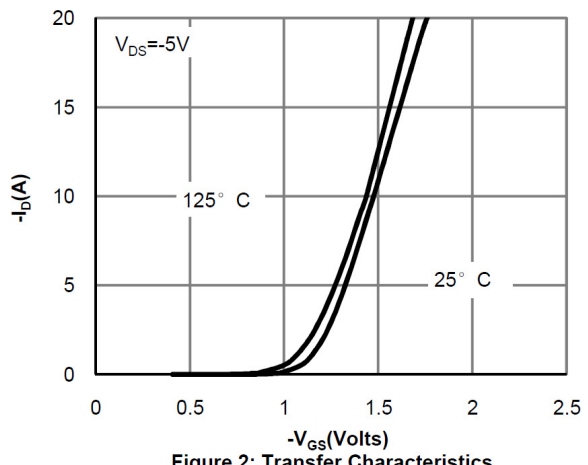


Figure 2: Transfer Characteristics

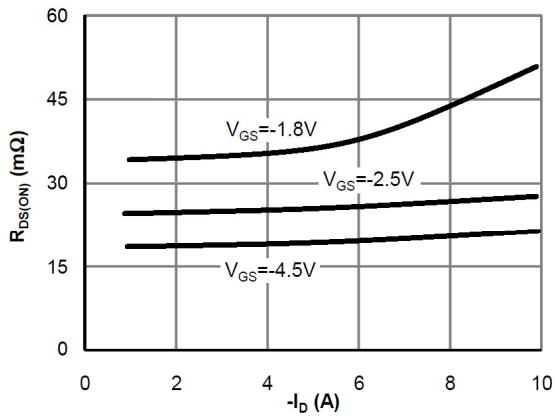


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

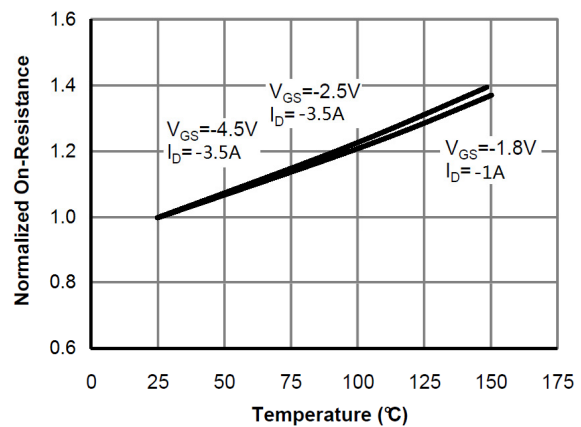


Figure 4: On-Resistance vs. Junction Temperature

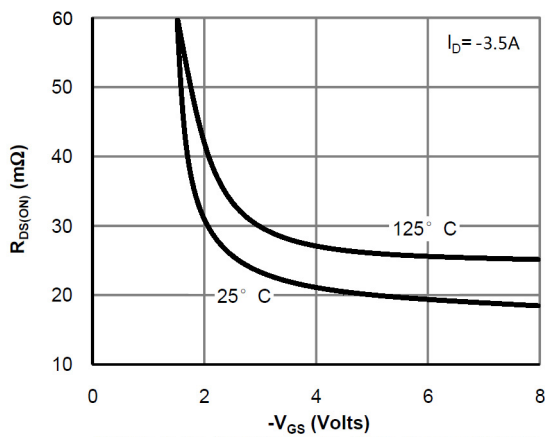


Figure 5: On-Resistance vs. Gate-Source Voltage

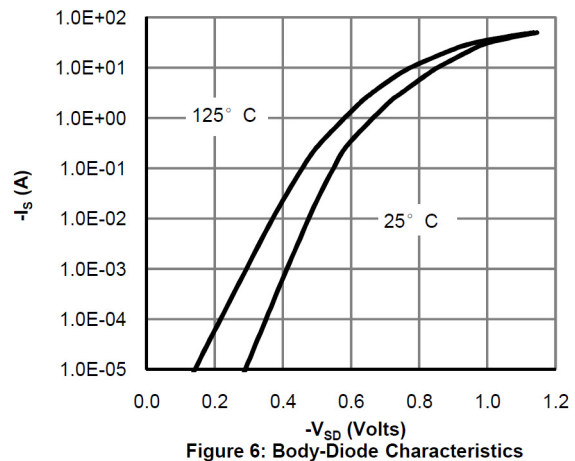


Figure 6: Body-Diode Characteristics

电参数曲线图 / Electrical Characteristic Curve

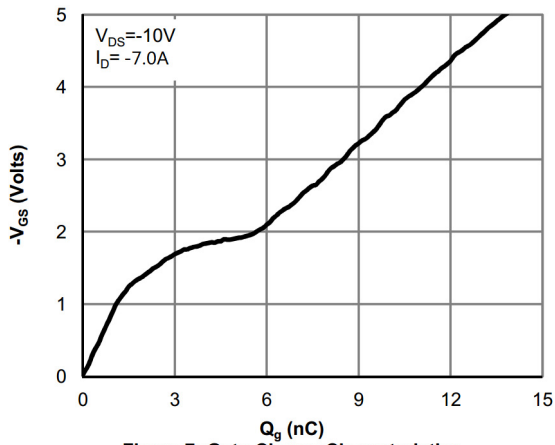


Figure 7: Gate-Charge Characteristics

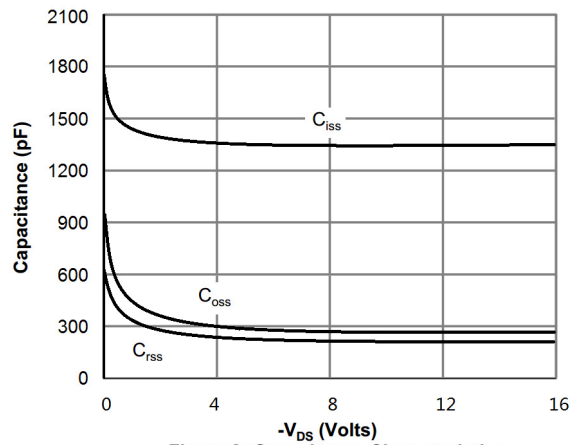


Figure 8: Capacitance Characteristics

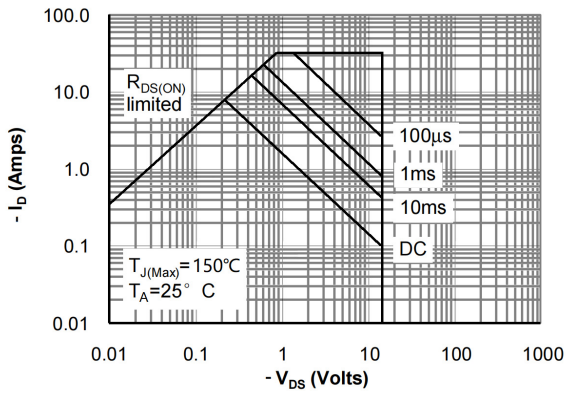


Figure 9: Maximum Forward Biased Safe Operating Area

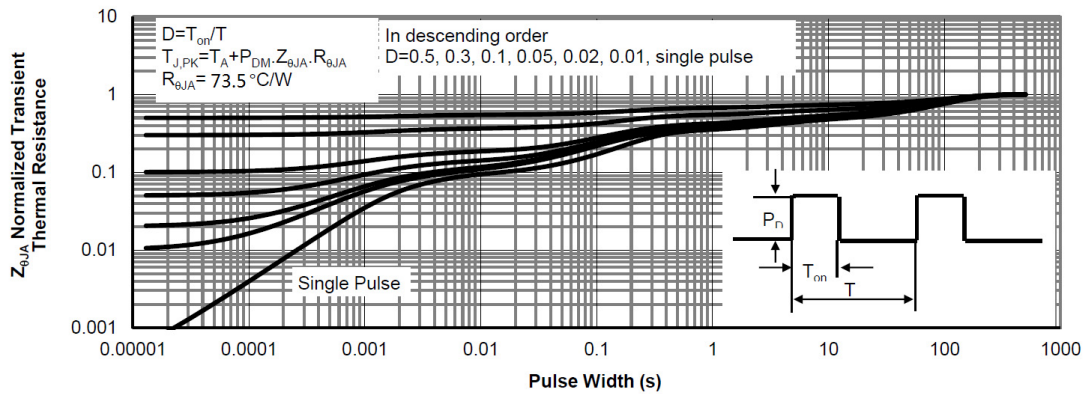
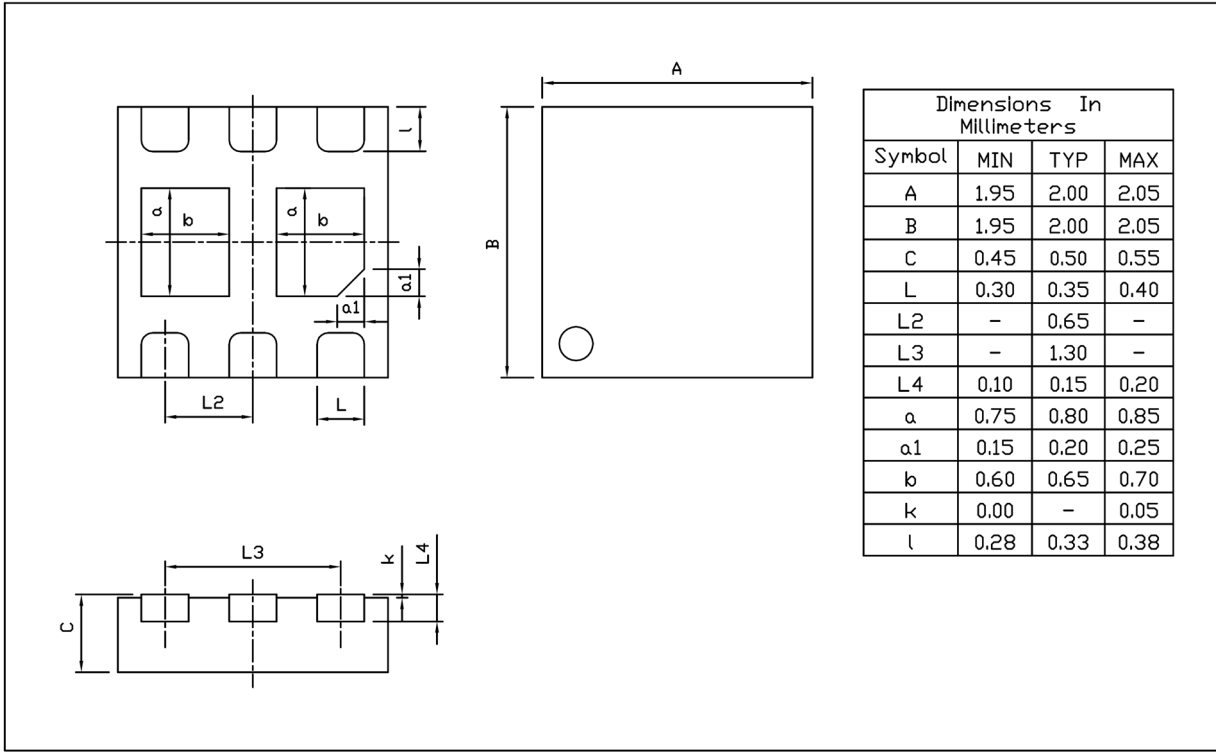


Figure 10: Normalized Maximum Transient Thermal Impedance

外形尺寸图 / Package Dimensions

DFN2 ×2C-6L-0.5

Unit:mm



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印章说明 / Marking Instructions



说明：

BR： 为公司代码

200P016： 为型号代码

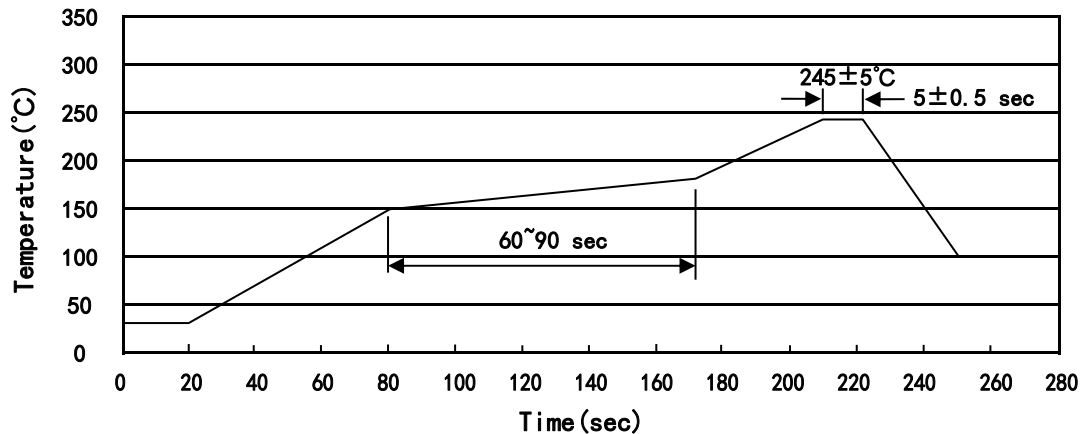
****： 为生产批号代码，随生产批号变化

Note:

BR: Company Code

200P016: Product Type Code

****: Lot No. Code, code change with Lot No.

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)


说明：

- 1、预热温度 150~180°C，时间 60~90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2~10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
DFN2×2C-6L	4,000	10	40,000	4	160,000	7" ×8	210×205×205	445×435×230

使用说明 / Notices

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