

# BRCS20P03IP

Rev.A Sep.-2018

TO-251          P          MOS          P-CHANNEL MOSFET in a TO-251 Plastic Package.

$R_{DS(on)}$            $C_{rss}$

Low  $R_{DS(on)}$

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Rev.A Sep.-2018

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DSS}$	-30	V
Drain Current	$I_D(T_C=25^\circ\text{C})$	-20	A
Drain Current - Pulsed	$I_{DM}$	-50	A
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Single Pulsed Avalanche Energy	$E_{AS}$	50	mJ
Power Dissipation	$P_D(T_C=25^\circ\text{C})$	30	W
Junction Temperature Range	$T_j$	150	
Storage Temperature Range	$T_{stg}$	-55 150	

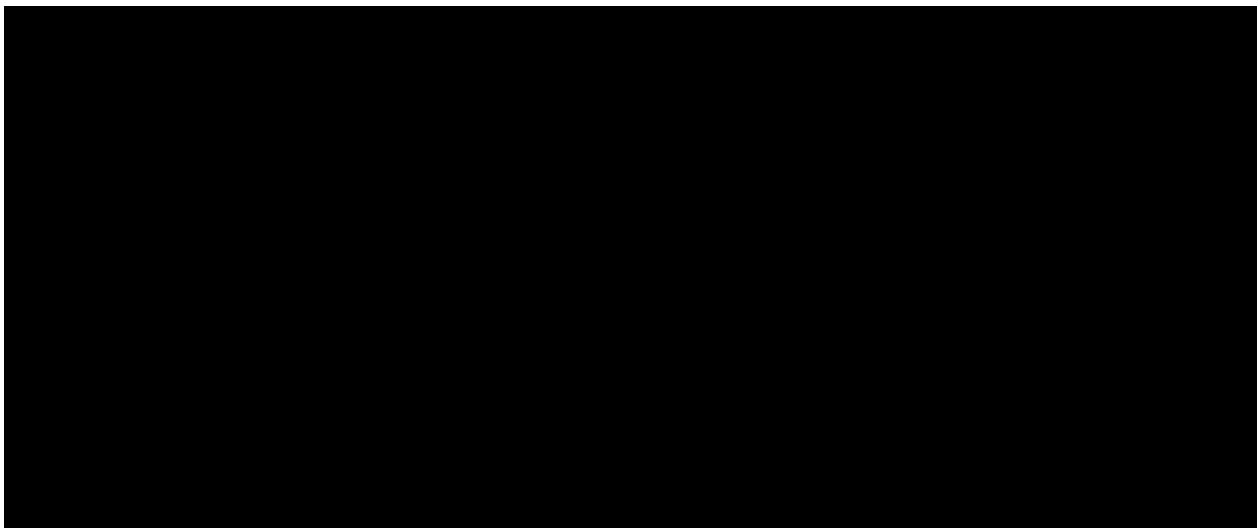
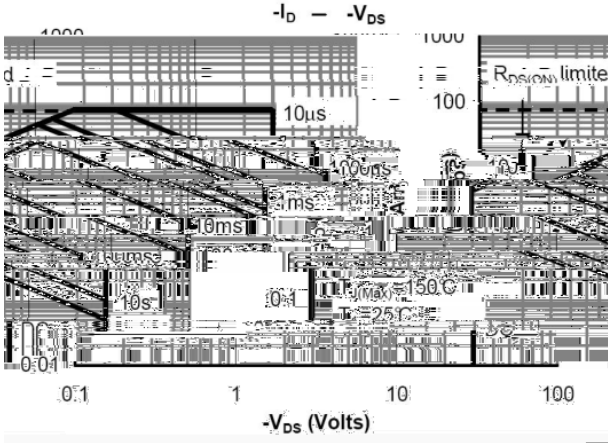
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V$ $I_D=-250\mu A$	-30			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=-30V$ $V_{GS}=0V$			1.0	$\mu A$
Gate-Body Leakage Current Forward	$I_{GSS}$	$V_{GS}=\pm 20V$ $V_{DS}=0V$			$\pm 0.1$	$\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu A$	-1		-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)1}$	$V_{GS}=-10V$ $I_D=-8.8A$		18	23	m
	$R_{DS(on)2}$	$V_{GS}=-4.5V$ $I_D=-6.7A$		27	35	m
Drain-Source Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V$ $I_S=-2.1A$		-0.73	-1.2	V
Input Capacitance	$C_{iss}$	$V_{DS}=-15V$ $V_{GS}=0V$ $f=1.0MHz$		1604		pF
Output Capacitance	$C_{oss}$			408		
Reverse Transfer Capacitance	$C_{rss}$			202		
Total Gate Charge	$Q_g$	$V_{DS}=-15V$ $I_D=-8.8A$ $V_{GS}=-5V$		17ref386.yR337.9.47998		

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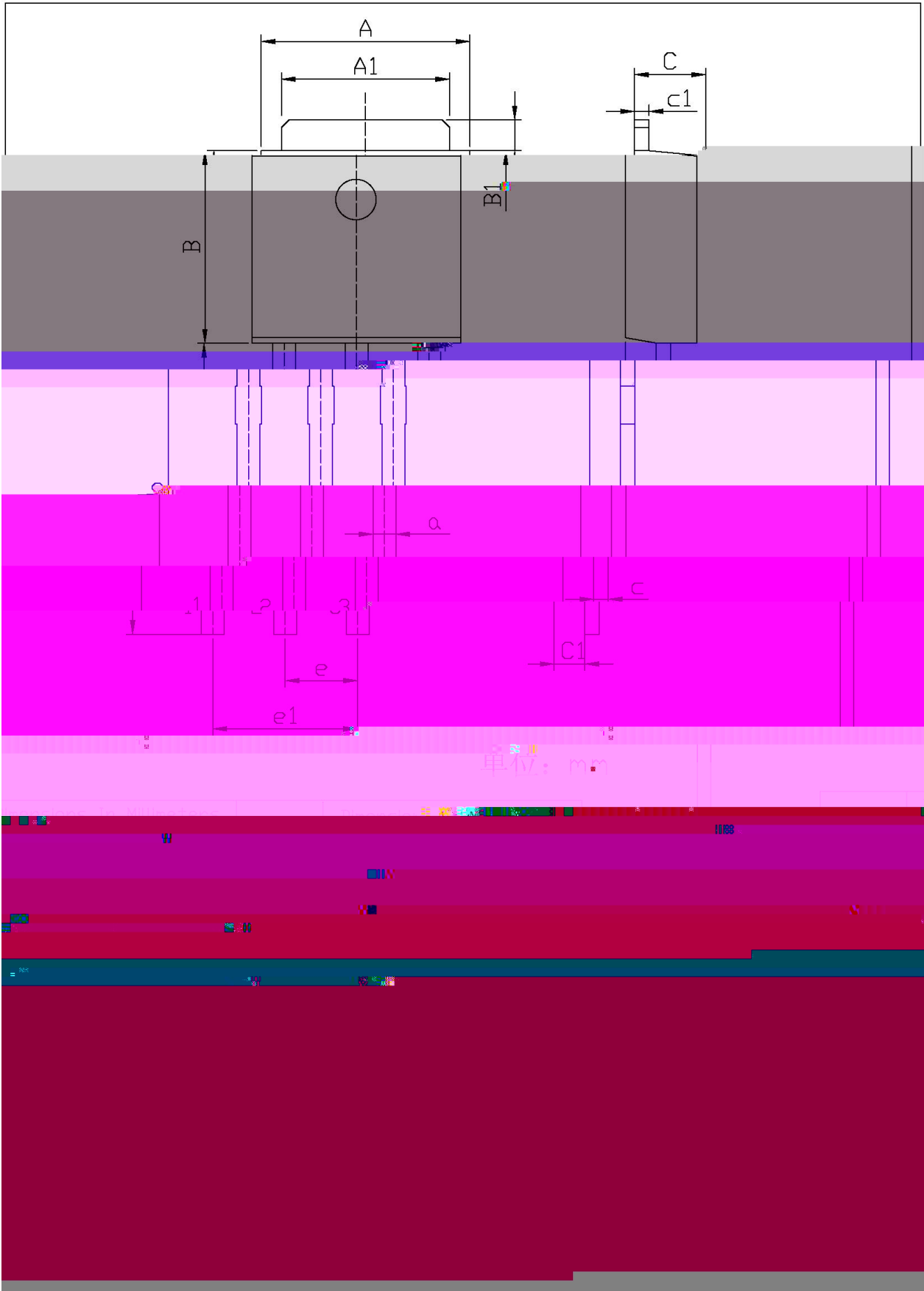
Rev.A Sep.-2018

**DATA SHEET**

**/ Electrical Characteristic Curve**



**/ Package Dimensions**

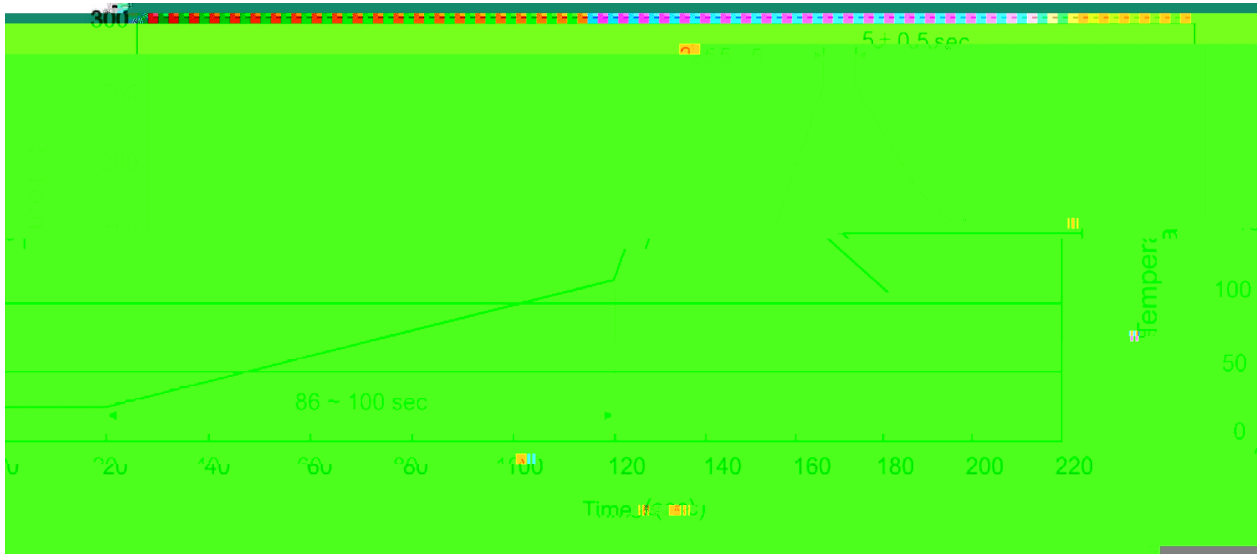


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**DATA SHEET**

( ) / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- |   |       |     |           |        |   |
|---|-------|-----|-----------|--------|---|
| 1 | 25    | 150 | 60        | 90sec; | 1.Preheating:25~150 , Time:60~90sec.    |
| 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

270±5                      10±1 sec.                      Temp.:270±5                      Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units				Dimension (unit mm <sup>3</sup> )		

/ TUBE

Package Type	Units				Dimension (unit mm <sup>3</sup> )		

/ Notices