

BRCs200P016MF

Rev.B Aug.-2025



DATA SHEET

SOT23-6 P MOS

P-CHANNEL MOSFET in a SOT23-6 Plastic Package.

$V_{DS} (V) = -16V$ $I_D = -7.0A$

$R_{DS(ON)} @ -4.5V(Typ.) = 16.7m$

$R_{DS(ON)} @ -2.5V(Typ.) = 22.5m$

$R_{DS(ON)} @ -1.8V(Typ.) = 32.5m$

HF Product.

Power Management in Notebook computer, Portable Equipment and Battery powered systems.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-16	V
Gate-Source Voltage	V_{GSS}	± 12	V
Continuous Drain Current	I_D	-7.0	A
Pulsed Drain Current	I_{DM}	-30	A
Power Dissipation for Single Operation	P_D	1.2	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	R_{JA}	100	/W

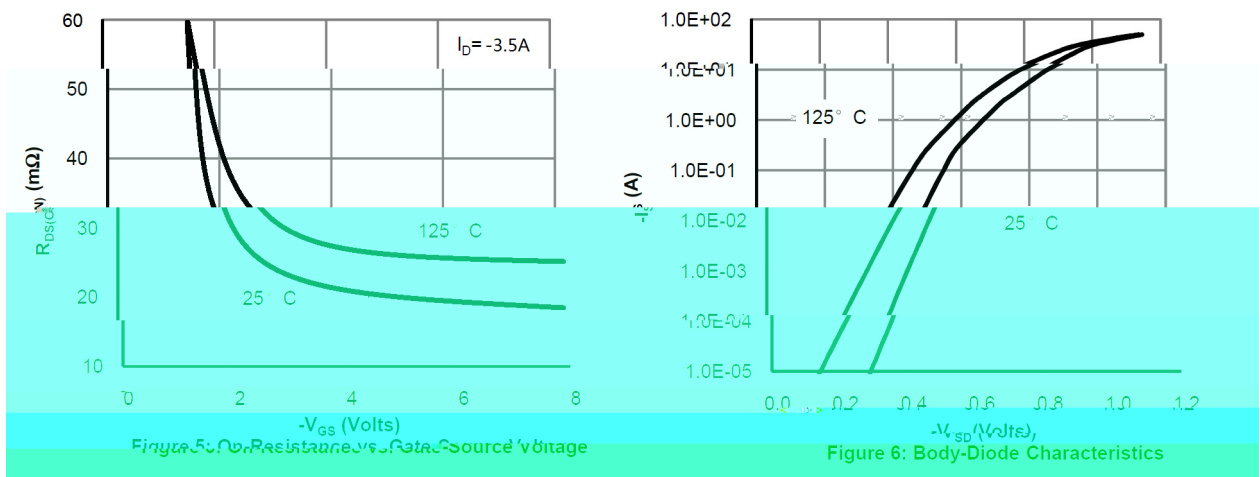
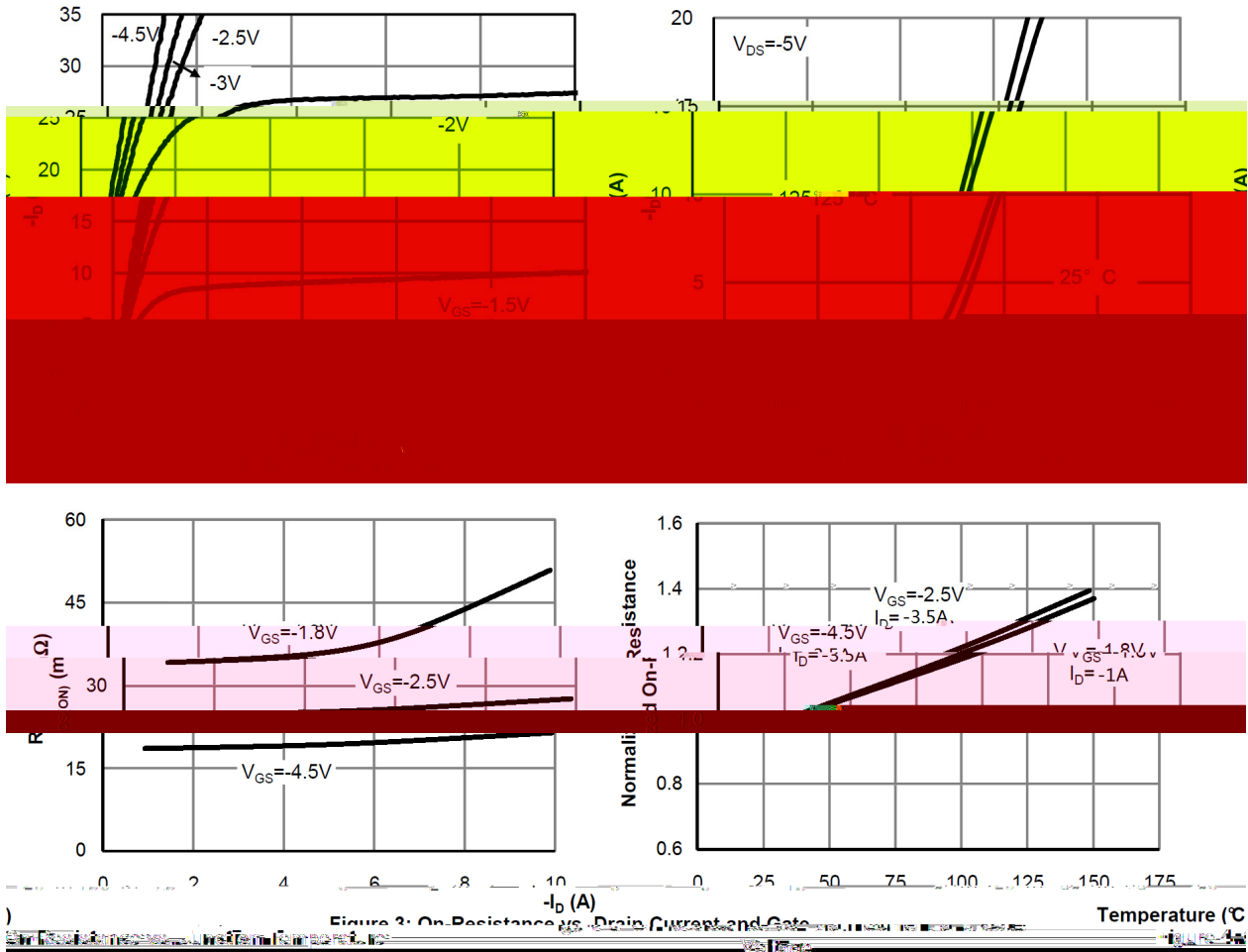
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\text{ A}$ $V_{GS}=0V$	-16	-17		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-12.8V$ $V_{GS}=0V$			-1.0	A
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 12V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\text{ A}$	-0.5	-0.6	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=-4.5V$ $I_D=-3.5A$		16.7	20	m
		$V_{GS}=-2.5V$ $I_D=-3.5A$		22.5	25	
		$V_{GS}=-1.8V$ $I_D=-1A$		32.5	100	
Diode Forward Voltage	V_{SD}	$I_S=-1A$ $V_{GS}=0V$			-1.2	V
Gate resistance	R_g	$V_{GS}=0V,$ $f=1MHz$ $V_{DS}=0V,$		5.8		
Input Capacitance	C_{iss}	$V_{GS}=0V$ $V_{DS}=-5V$ $f=1MHz$		1350		pF
Output Capacitance	C_{oss}			290		
Reverse Transfer Capacitance	C_{rss}			250		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	Q_g	$V_{GS}=-4.5V, V_{DS}=-10V,$ $I_D=-7.0A$		13.2		nC
Gate Source Charge	Q_{gs}			1.5		
Gate Drain Charge	Q_{gd}			3.6		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=-4.5V I_D=-7.0A$ $V_{DS}=-10V R_{GEN}=3$		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		

/ Electrical Characteristic Curve

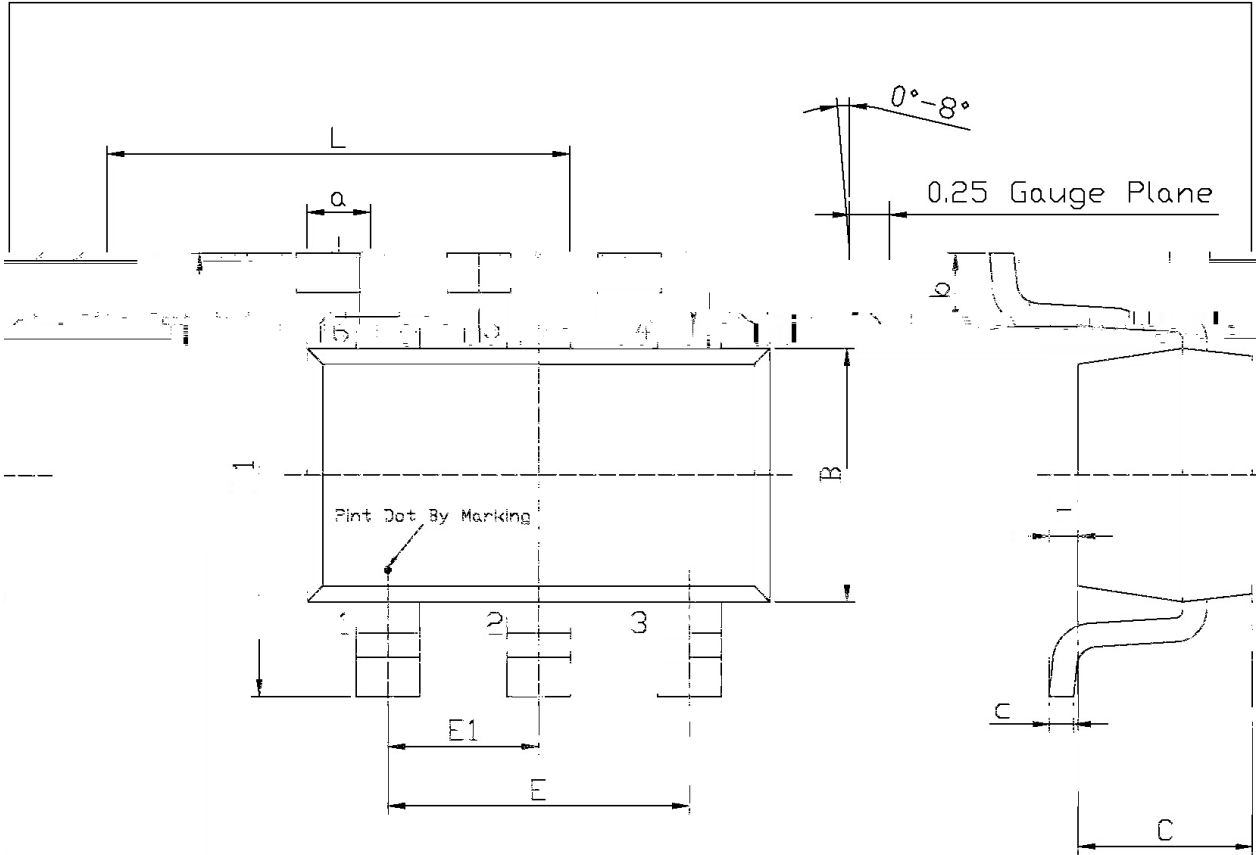


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/ Package Dimensions

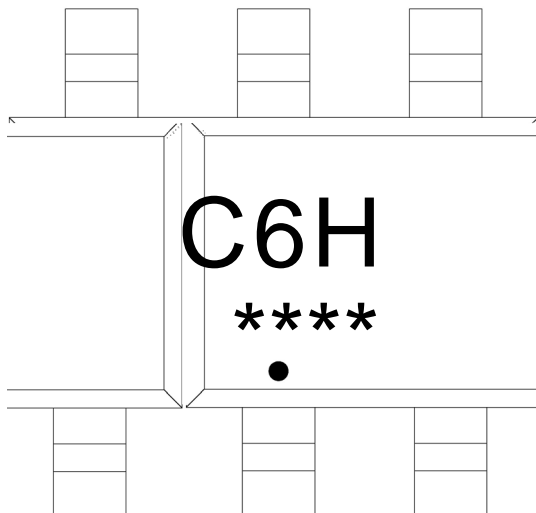


Unit: mm

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
L	2.82	3.32	E1	0.85	1.05
B	1.50	1.70	a	0.35	0.50
C	0.90	1.30	c	0.10	0.20
L1	2.60	3.00	b	0.35	0.55
E	1.80	2.00	F	0	0.15

SOT23-6

/ Marking Instructions



C6

H

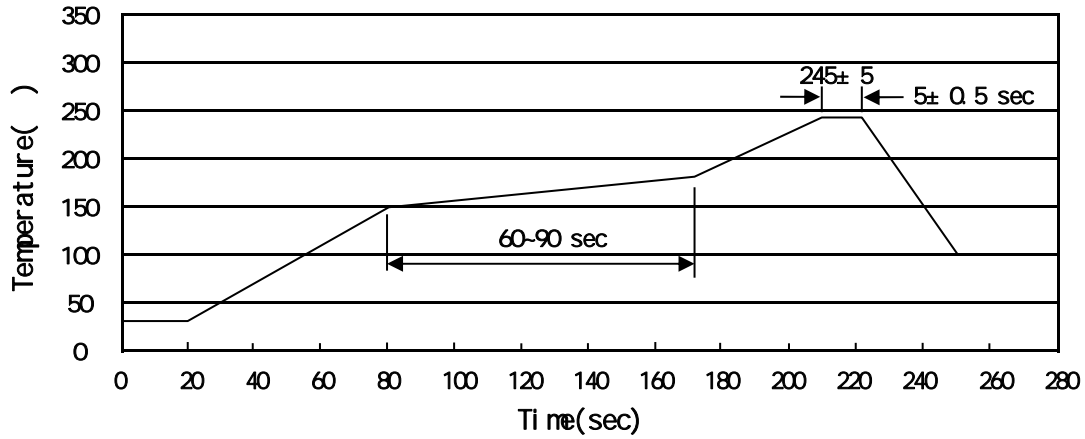
Note:

C6: Product Type Code

H: Company Code

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

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Note:

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|---|-------|-----|----|-----------|---|
| 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

/ 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
SOT23-5/6	3,000	10	30,000	4	120,000	7 x8	210x205x205	445x435x230

/ Notices

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