

BRAD6315DSA

Rev.A Jun.-2019



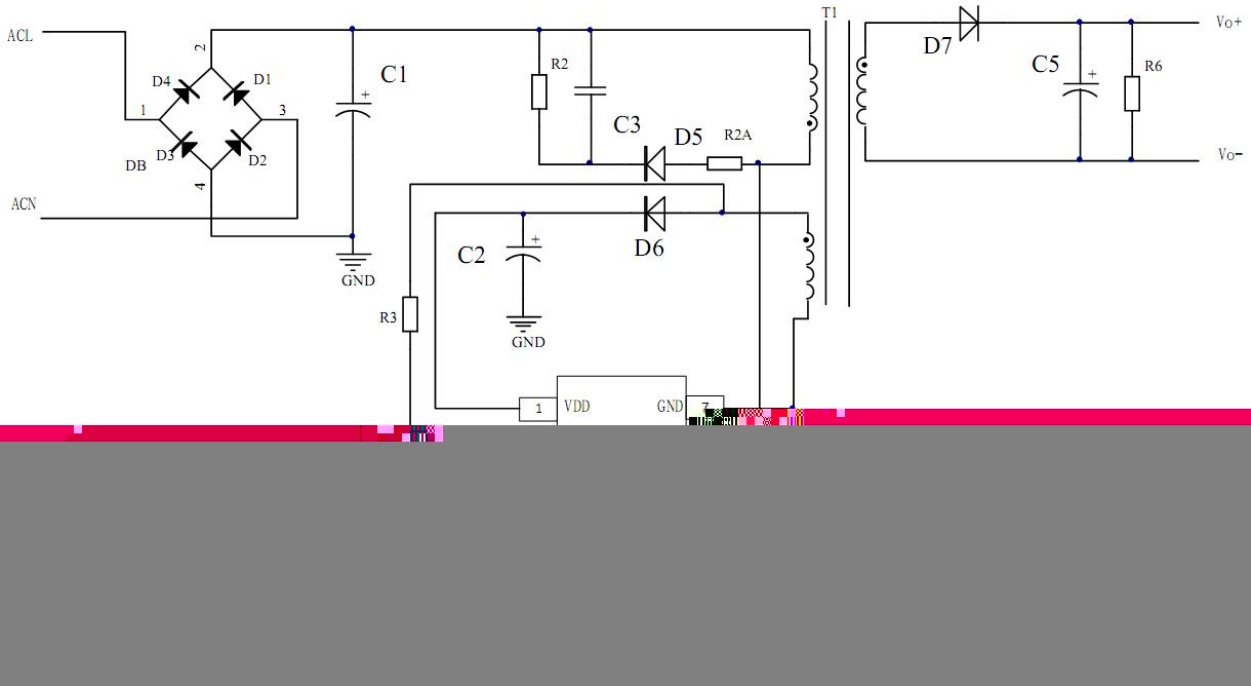
DATA SHEET

/ Revised record

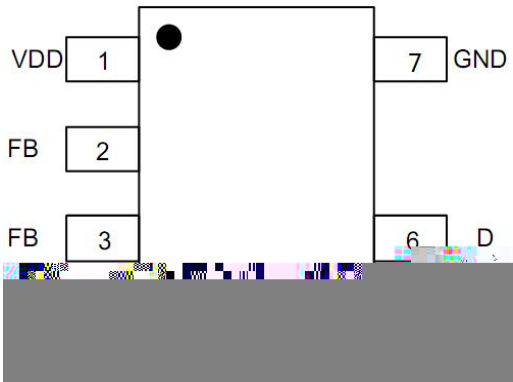
A	6/16	ALL	YC-RM3354S BRAD6315DSA		

BRAD6315DSA

/ Typical Application Circuit



/ Pinning & Description



Pin Number	Pin Name	Description
1	VDD	
2 -3	FB	
4	CS	
5-6	D	MOS
7	GND	

/ Block Diagram



/ Absolute Maximum Ratings(Ta=25)

Parameter	Value	Unit
D Pin Voltage Range	-0.3 to 650	V
V _{DD} DC Clamping Current	10	mA
V _{DD} DC Supply Voltage	-0.3 to 34.5	V
CS Voltage Range	-0.3 to 7	V
FB Voltage Range	-0.7 to 7	V
Package Thermal Resistance	80	°C/W
Maximum Junction Temperature	150	°C
Operating Temperature Range	0 to +125	°C
Storage Temperature Range	-65 to +150	°C
Lead Temperature (Soldering,10sec.)	260	°C
ESD Capability,HBM(Human Body Model)	3000	V
ESD Capability,MM(Machine Model)	250	V

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Note 1: If the device operating conditions over the maximum rating of the above-mentioned conditions, may cause permanent damage to the device. The above parameters is only part of the operating conditions the maximum, we do not recommend the device running outside the scope of this specification. If the device to work long hours under the condition of absolute maximum limit, its stability may be affected.



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage Section(V_{DD} Pin)						
Start-up current into VDD pin	I _{VDD_st}			2	25	uA
Quiescent current into VDD pin	I _Q			0.5	1	mA
Operation Current	I _{VDD_Op}	V _{FB} =1.1V, VDD=18V	0.3	0.7	0.9	mA



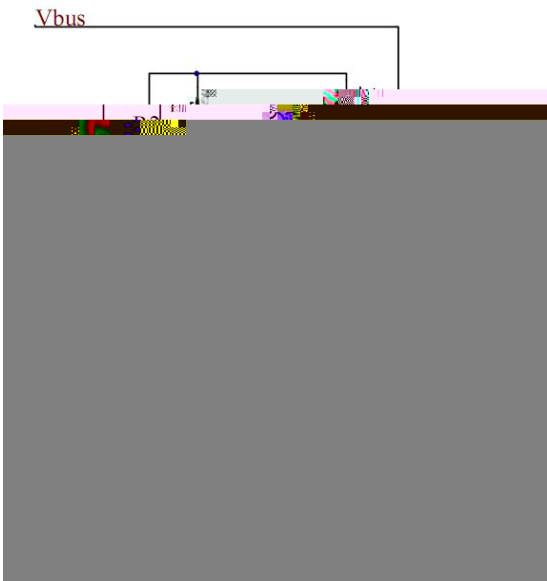
Functional Description

BRAD6315DSA DCM

BRAD6315DSA 2uA IC

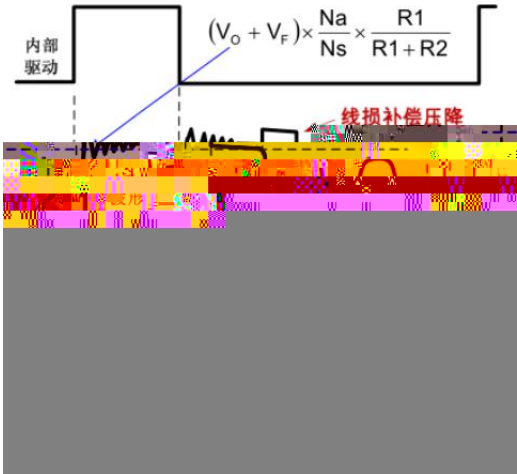
16.3V BRAD6315DSA 1mA VDD VDD

BRAD6315DSA 0.5mA



PSR-CVM

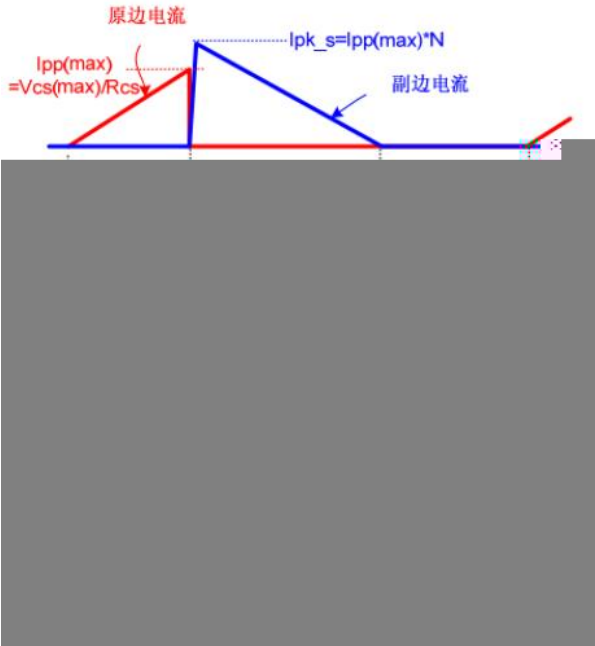
2 BRAD6315DSA CV
VF



2V

/ Functional Description

	BRAD6315DSA	FB	2
FB	2	FB	
$V_{FB} = (V_O + V_F) \times \frac{N_a}{N_s} \times \frac{R1}{R1+R2}$			
V _O V _F		R1 R2	FB
N _s N _a			
FB	2V		
PSR-CCM			
FB	CS		3



3		Tdem	3	Tsw
VDD		BRAD6315DSA		
Tdem	Tsw	1/2		
$I_{CC_OUT}(mA) \cong \frac{1}{4} \times N \times \frac{500mV}{Rcs(\Omega)}$				
N----				
Rcs---	MOS	GND		

/ Functional Description

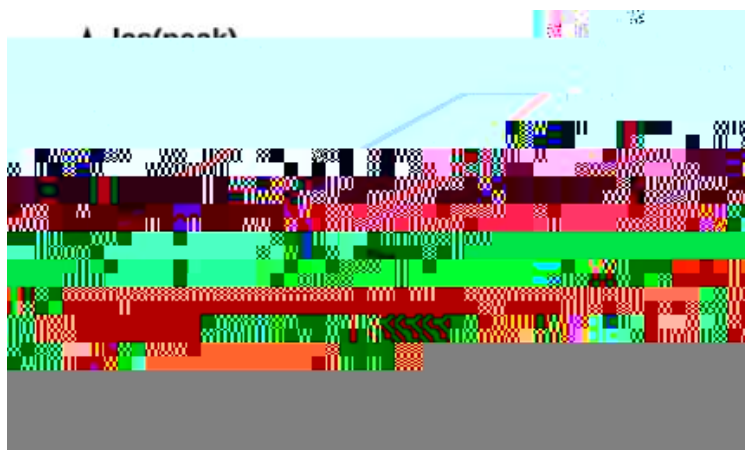
4

FM

BRAD6315DSA

AM

70mW



CDC

5

BRAD6315DSA

FB

FB

R1 R2

$$\frac{\Delta V(\text{cable})}{V_{\text{out}}} \approx \frac{I_{\text{cable_max}} \times (R1/R2)}{V_{\text{FB_REF}}} \times 100\%$$

R1=3KΩ R2=18KΩ

$$\frac{\Delta V(\text{cable})}{V_{\text{out}}} = \frac{36\mu\text{A} \times (3\text{K}/18\text{K})}{2\text{V}} \times 100\% = 4.6\%$$

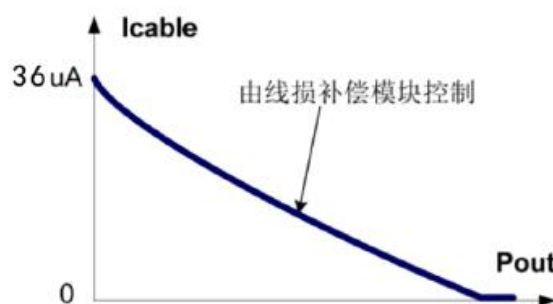
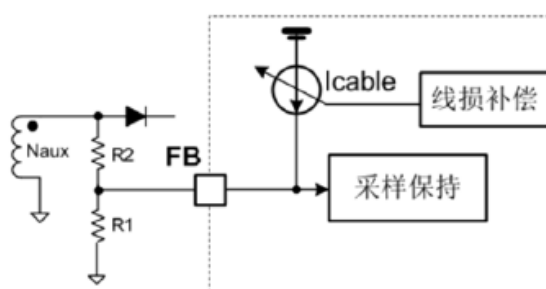
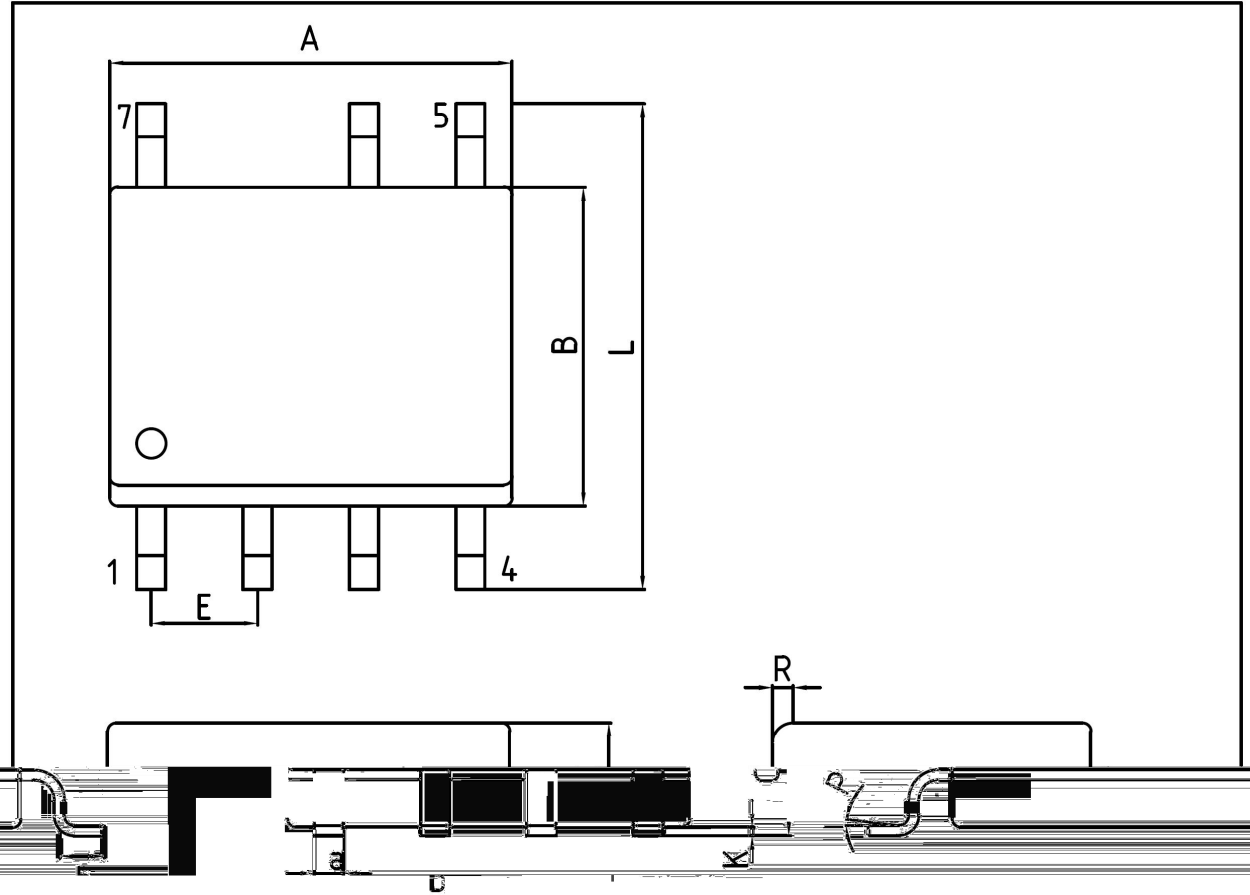


图 5

/ Package Dimensions

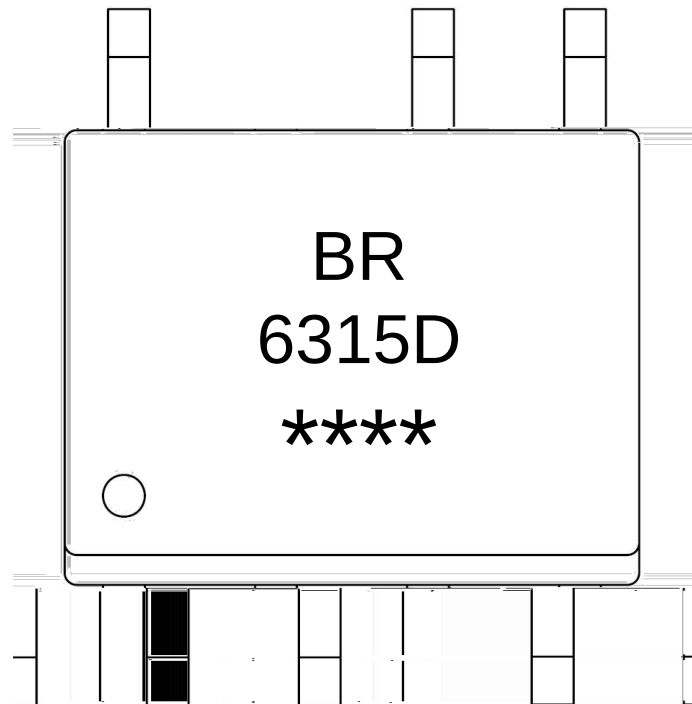
SOP-7

単位: mm



Dimensions in Millimeters			Dimensions in Millimeters		
Max	Symbol	Min	Max	Symbol	Min
1.75	A	4.80	5.00	L	1.35
0.25	B	0.20	0.25	C	0.50
0.25	D	0.20	0.25	E	0.25
0.12	K	0.22	0.40	P	125
1.27BSC			0°		

/ Marking Instructions



BR

6315D

Note

BR

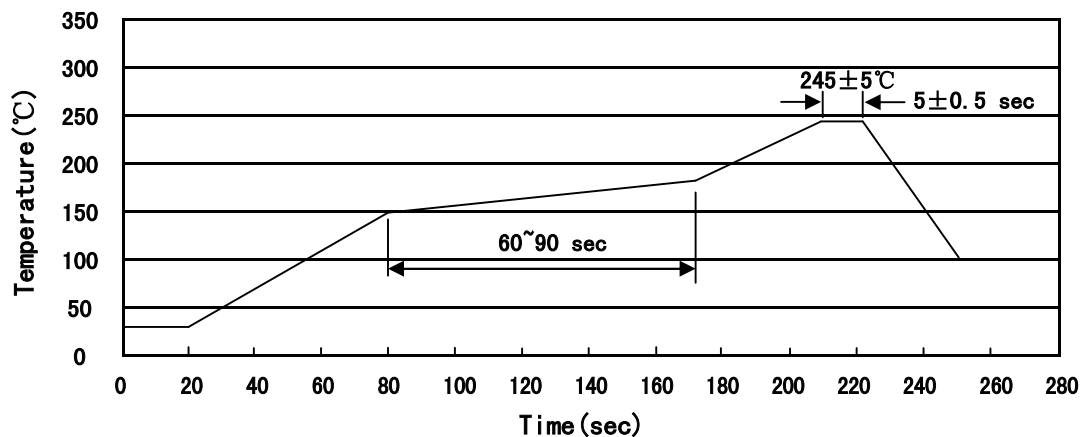
Company Code

6315D

Product Typ

Lot No.Code,code change with Lot No

() / 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.

/ Resistance to Soldering Heat Test Conditions

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

/ Packaging SPEC.

卷盘包装 / REEL

Package Type	Units					Dimension (unit mm)		
	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	Outer Box
SOP-7	4,000	2	8,000	6	48,000	13" ×12	360×360×50	380×335×366

/ Notices