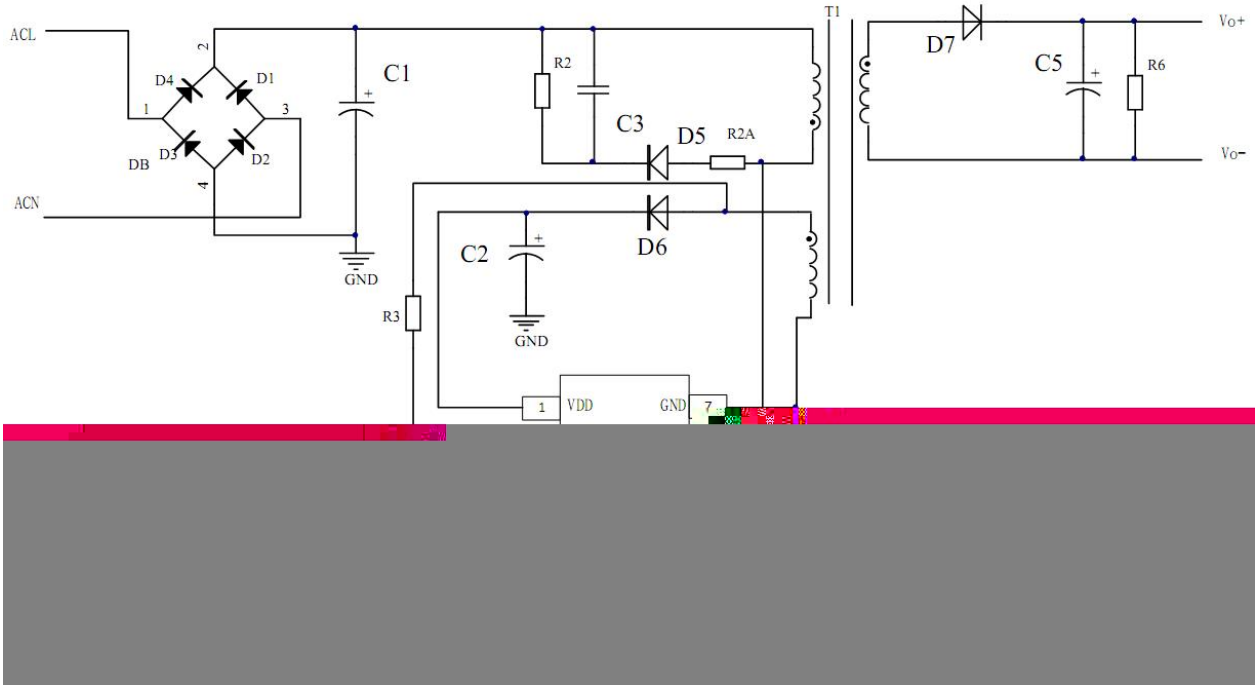
/ Revised record

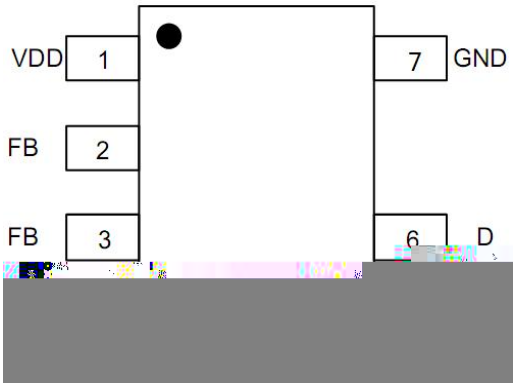
A	6/16	ALL	YC-RM3354S BRAD6315DSA		

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	℃/W
Maximum Junction Temperature	150	℃
Operating Temperature Range	0 to +125	℃
Storage Temperature Range	-65 to+150	℃
Lead Temperature (Soldering,10sec.)	260	℃
ESD Capability,HBM(Human Body Model)	3000	V
ESD Capability,MM(Machine Model)	250	V

1

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.

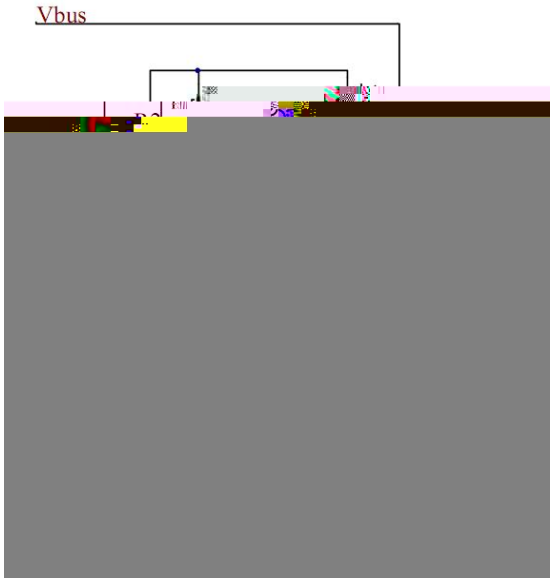
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage Section(V_{DD} Pin)						
Start-up current into VDD pin	I_{VDD_st}			2	25	uA
Quiescent current into VDD pin	I_Q			0.5	1	mA
Operation Current	I_{VDD_Op}	V_{FB}=1.1V, VDD=18V	0.3	0.7	0.9	mA

/ Functional Description

BRAD6315DSA DCM

BRAD6315DSA 2uA IC
VDD
16.3V BRAD6315DSA 1mA VDD

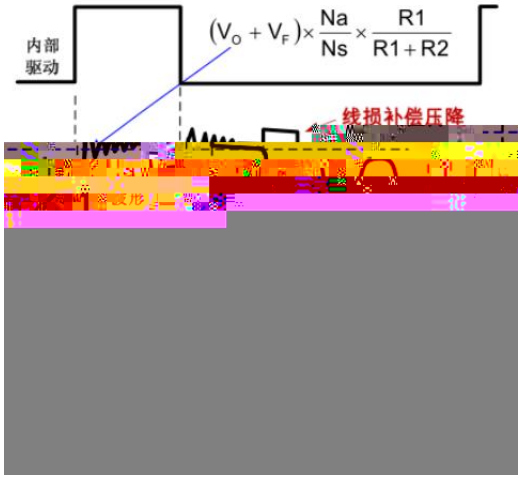
BRAD6315DSA 0.5mA



PSR-CVM

. 2 BRAD6315DSA CV
VF

2V



/ Functional Description

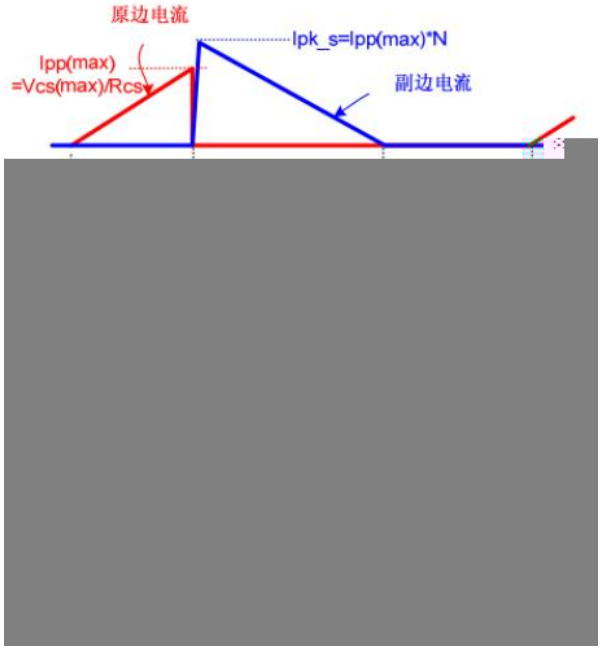
BRAD6315DSA FB 2
FB 2 FB

$$V_{FB} = (V_O + V_F) \times \frac{Na}{Ns} \times \frac{R1}{R1+R2}$$

Vo VF R1 R2 FB
Ns Na
FB 2V

PSR-CCM

FB CS 3



3 Tdem Tsw
3

VDD BRAD6315DSA
Tdem Tsw 1/2

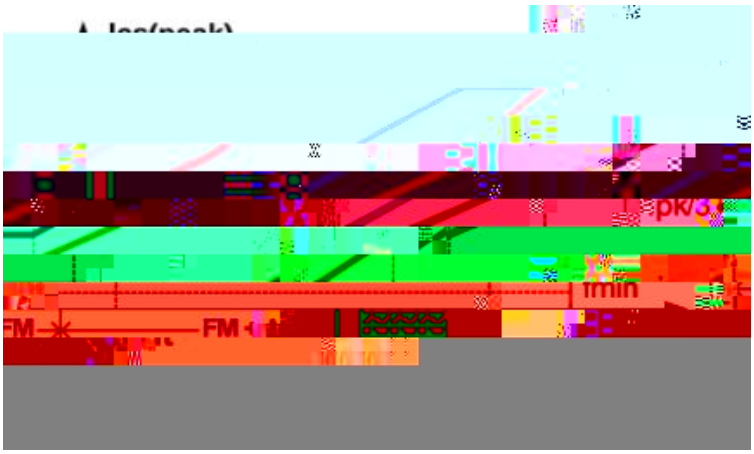
$$I_{CC_OUT}(mA) \cong \frac{1}{4} \times N \times \frac{500mV}{Rcs(\Omega)}$$

N----
Rcs--- MOS GND

/ Functional Description

4 BRAD6315DSA AM FM

70mW



CDC

,

5 BRAD6315DSA FB

, FB R1 R2

$$\frac{\Delta V(cable)}{Vout} \approx \frac{Icable_max \times (R1//R2)}{V_{FB_REF}} \times 100\%$$

R1=3KΩ R2=18KΩ

$$\frac{\Delta V(cable)}{Vout} = \frac{36uA \times (3K//18K)}{2V} \times 100\% = 4.6\%$$

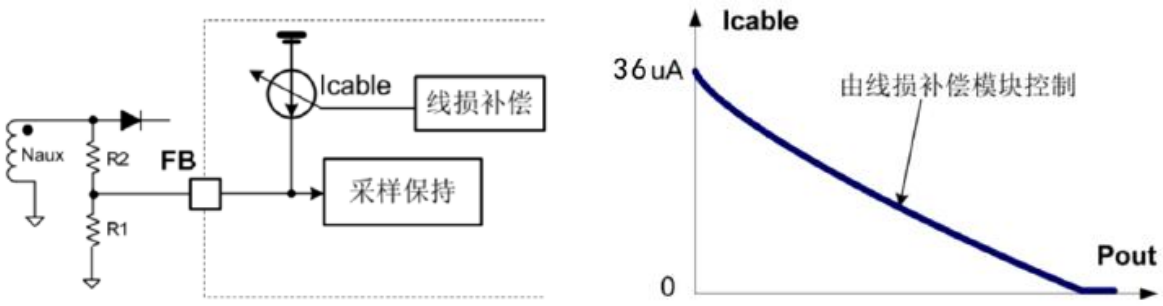
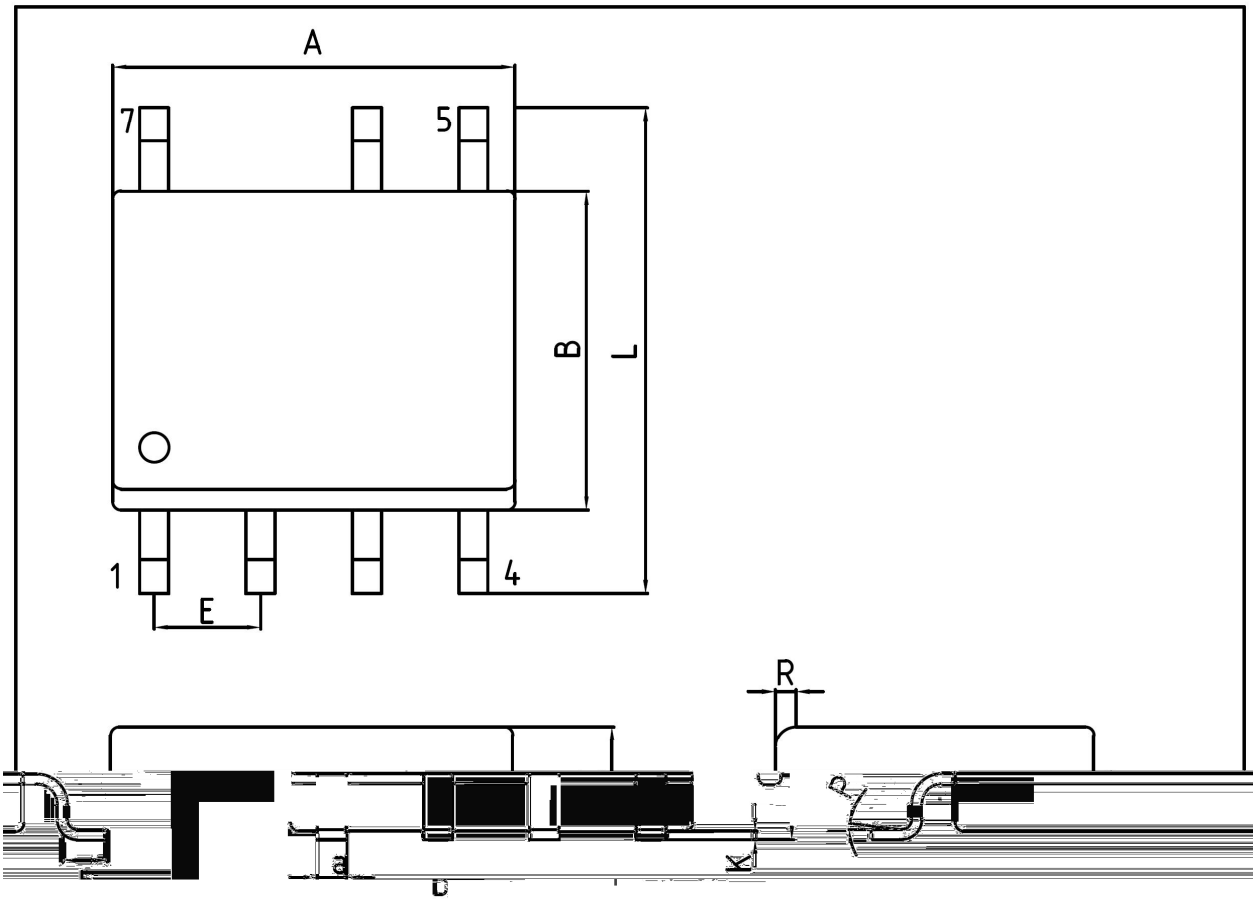


图 5

/ Package Dimensions

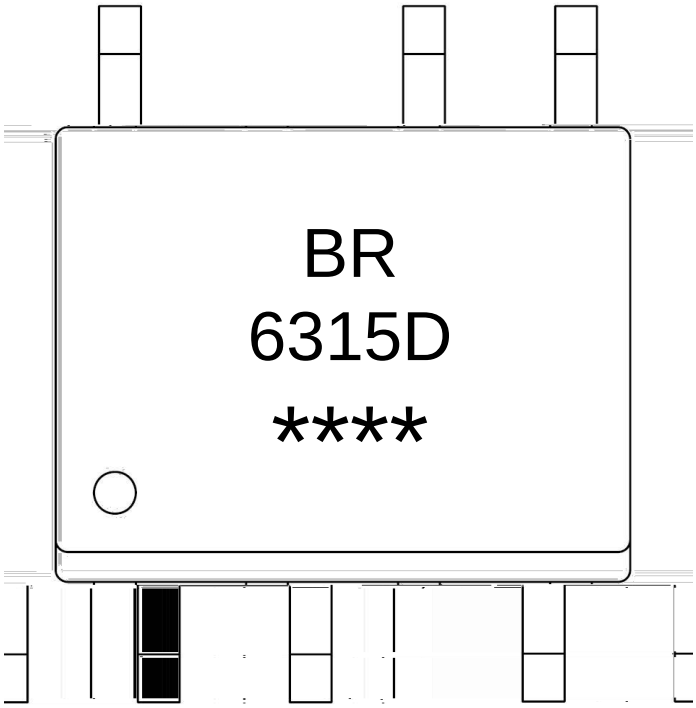
SOP-7

单位: mm



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	4.80	5.00		1.35	1.75
E	1.27BSC		P	0°	7°
K	0.17	0.22	b	0.40	1.25

/ Marking Instructions



BR

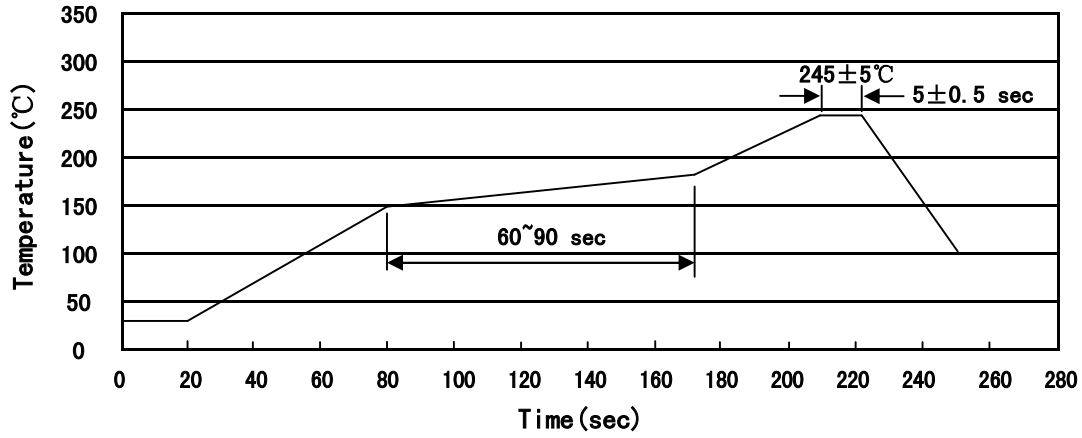
6315D

****:

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℃，时间 60～90sec;

2、峰值温度 245±5℃，时间持续为 5±0.5sec;

3、焊接制程冷却速度为 2～10℃/sec.

Note:

1.Preheating:150~180℃, Time:60~90sec.

2.Peak Temp.:245±5℃, Duration:5±0.5sec.

3. Cooling Speed: 2~10℃/sec.

/ Resistance to Soldering Heat Test Conditions

温度：260±5℃ 时间：10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ Packaging SPEC.

卷盘包装 / REEL

Package Type	Units					Dimension		(unit mm³)
	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