

BRCS150N12SRA

Rev.A Feb.-2022



A	2022.1.11	All	AOS-AOT412		
			c	e	

/ Descriptions

TO-220 N

N-CHANNEL MOSFET in a TO-220 Plastic Package.

/ Features

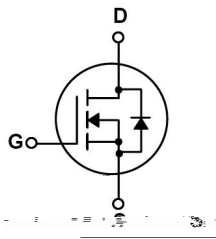
Ultra Low On-Resistance,fast switching.

/ Applications

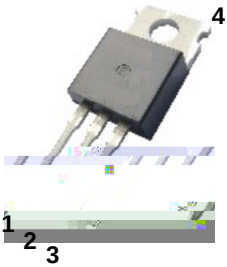
PFC

These devices are well suited for high efficient switched mode power supplies, Active power factor correction, electronic lamp ballast based on half bridge topology.

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 4 D

PIN 3 S

/ Marking

See Marking Instructions.

参数 Parameter		符号 Symbol	数值 Rating	单位 Unit
Drain-Source Voltage		V _{DS}	120	V
Continuous Drain Current		I _D	46	A
Pulsed Drain Current		I _{DM}	184	A
Gate-Source Voltage		V _{GS}	±20	V
Power Dissipation		P _D (T _c =25℃)	150	W
Avalanche energy(L=0.5mH)		E _{AS}	24.5	mJ
Avalanche Current(L=0.5mH)		I _{AS}	7.0	A
Junction and Storage Temperature Range		T _j , T _{stg}	-55 to 150	
Maximum Junction-to-Ambient	t ≤ 10s	R _{θJA}	18	℃/ W
	Steady-State		48	
Maximum Junction-to-Case	Steady-State	R _{θJC}	1	

参数
Parameter

符号
Symbol

测试条件
Test Conditions

最小值 典型值
Min

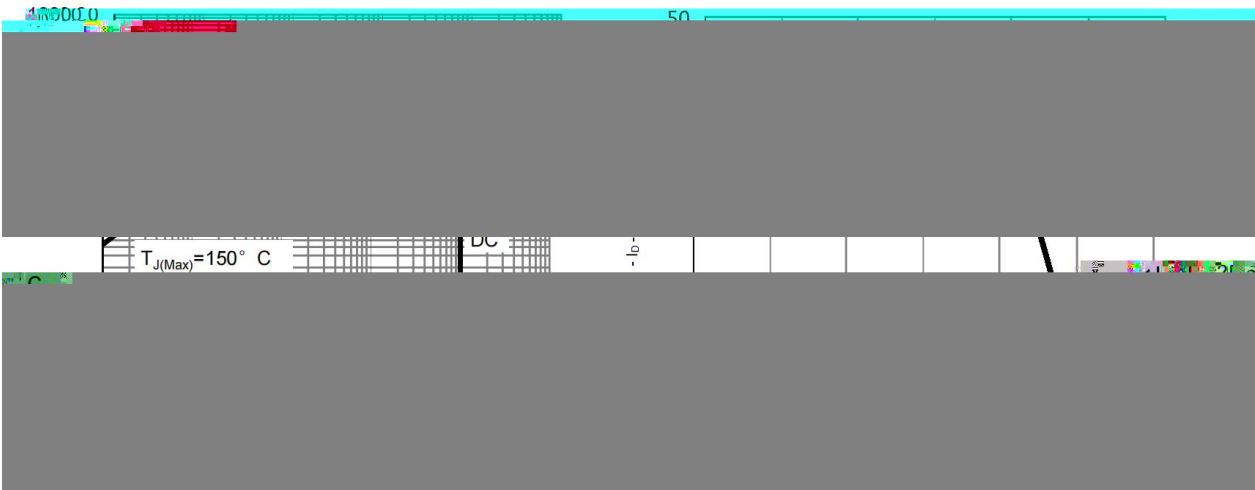
/ Electrical Characteristics(Ta=25)

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
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=2.5\ \Omega$ $R_{GEN}=3\ \Omega$		7		ns
Turn-On Rise Time	t_r			3		
Turn-Off Delay Time	$t_{d(off)}$			27		
Turn-Off Fall Time	t_f			4		

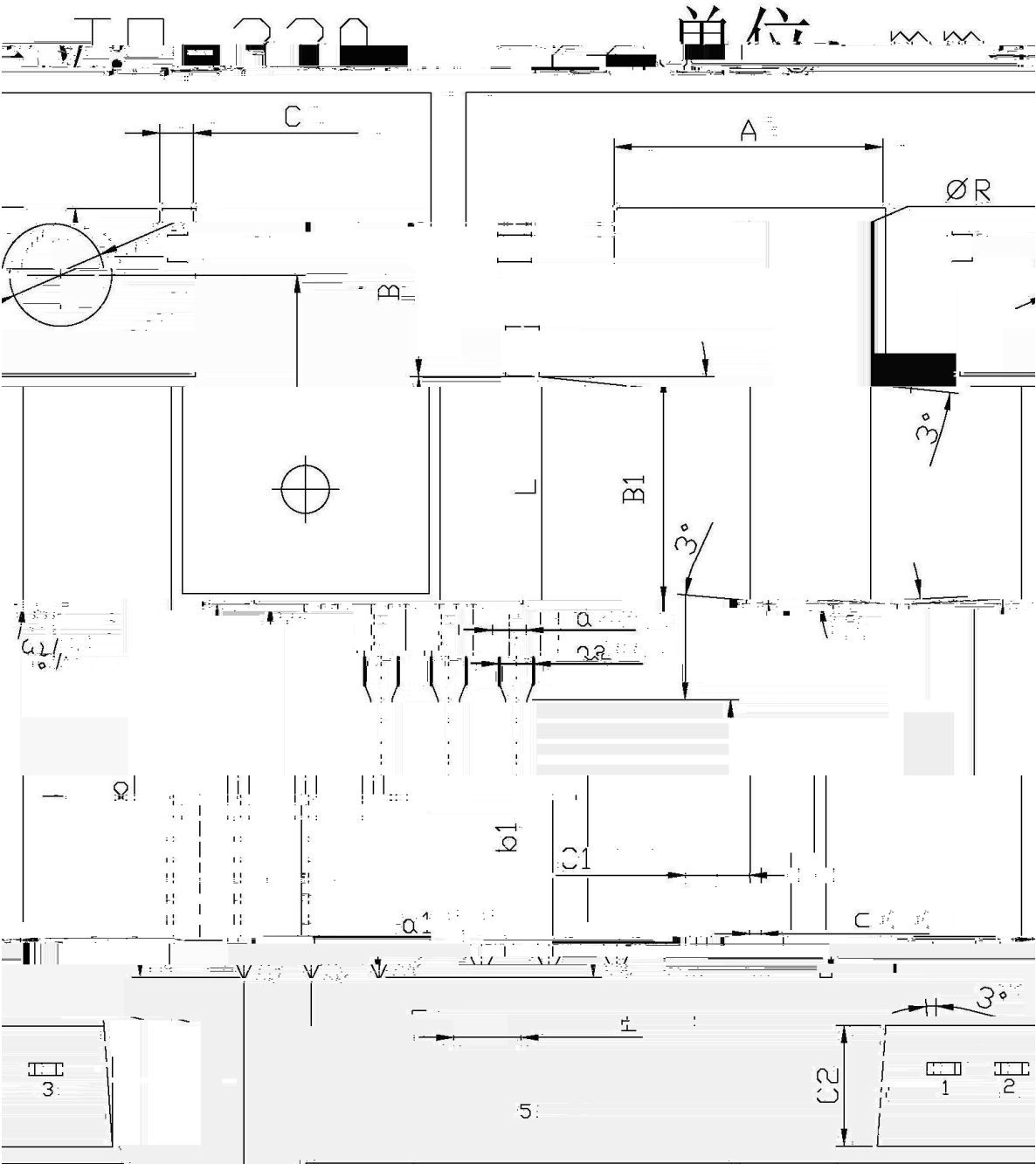
/ **Electrical Characteristic Curve**



/ Electrical Characteristic Curve

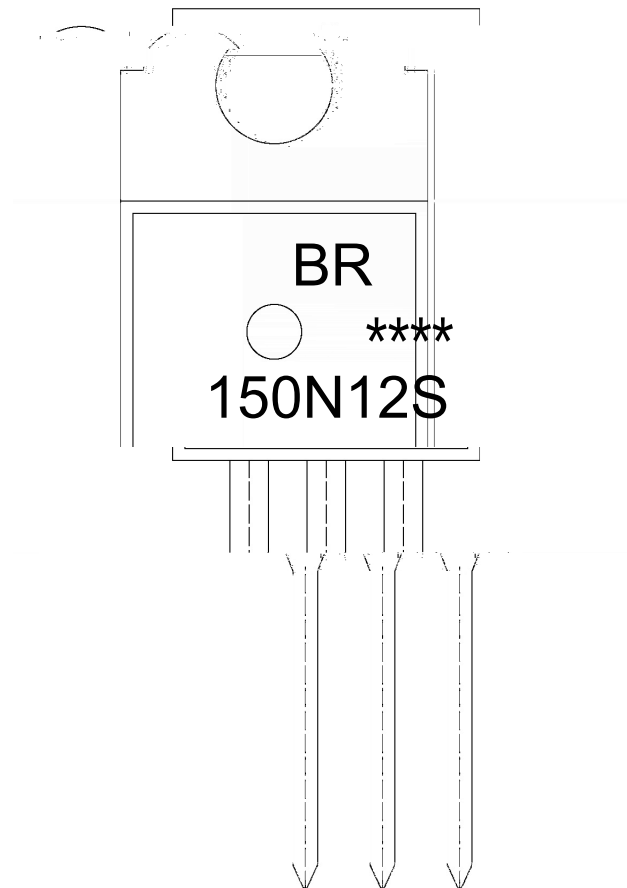


I Package Dimensions



Dimensions In Millimeters			Dimensions In Millimeters		
Symbol	Min	Max	Symbol	Min	Max
A	9.8	10.2	C	1.2	1.4
R	3.56	3.64	B	6.3	6.7
B1	9.0	9.4	C1	2.3	2.7
a	1.22	1.27	L	3.9	4.1
b1	1.22	1.27	a1	0.4	0.6

/ Marking Instructions



BR

150N12S

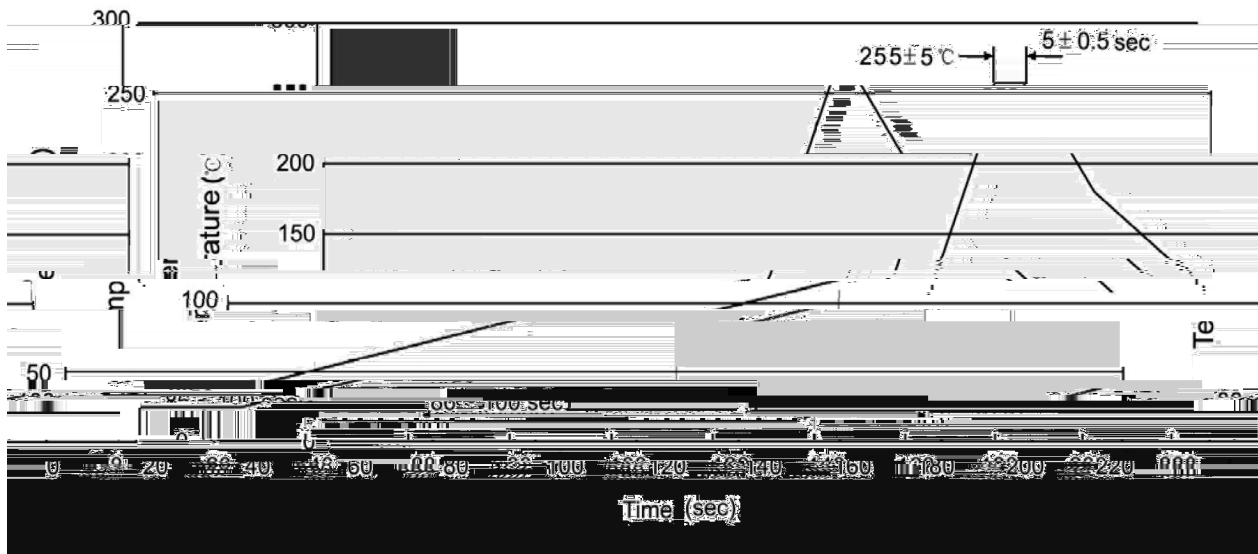
Note:

BR: Company Code

150N12S: Product Type

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

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



Note:

- | | | | | | |
|---|-------|-----|-----------|--------|--|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150°C, Time:60~90sec. |
| 2 | 255±5 | | 5±0.5sec; | | 2.Peak Temp.:255±5°C, Duration:5±0.5sec. |
| 3 | | 2 | 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Bag 只/袋	Bags/Inner Box 袋/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Bag 袋	Inner Box 盒	Outer Box 箱
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices