/ Revised record

A			AOS-AOT2144L		

/ Descriptions

TO-220 N

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

/ Features

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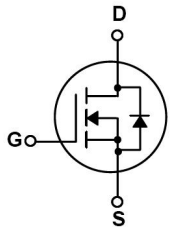
Ultra Low On-Resistance,fast switching.

/ Applications

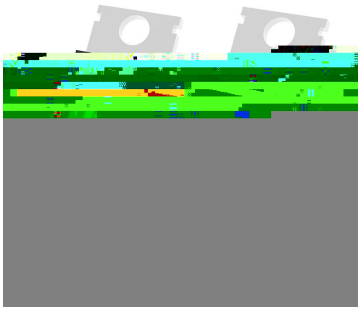
PFC

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}	30	V
Drain Current		I_D(Tc=25℃)	217	A
Pulsed Drain Current		I_{DM}	770	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy L=0.5mH		E_{AS}	590	mJ
Avalanche Current		I_{AS}	33.5	A
Total Power Dissipation		P_D(Tc=25℃)	150	W
Junction and Storage Temperature Range		T_J,T_{STG}	-55 to 150	℃
Thermal Resistance-Junction to Ambient	t ≤ 10s	$R_{\theta JA}$	15	℃/W
	Steady-State		60	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.8	

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
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	30	35		V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V	V_{GS}=0V			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	V_{GS}=±20V	V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	1	1.5	3	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=20A		1.8	2	mΩ
		V_{GS}=4.5V	I_D=10A		2.5	3	
Forward On Voltage	V_{SD}	V_{GS}=0V	I_S=1A			1.2	V
Input Capacitance	C_{iss}	V_{DS}=25V f=1MHz	V_{GS}=0V		5700		pF
Output Capacitance	C_{oss}				610		
Reverse Transfer Capacitance	C_{rss}						

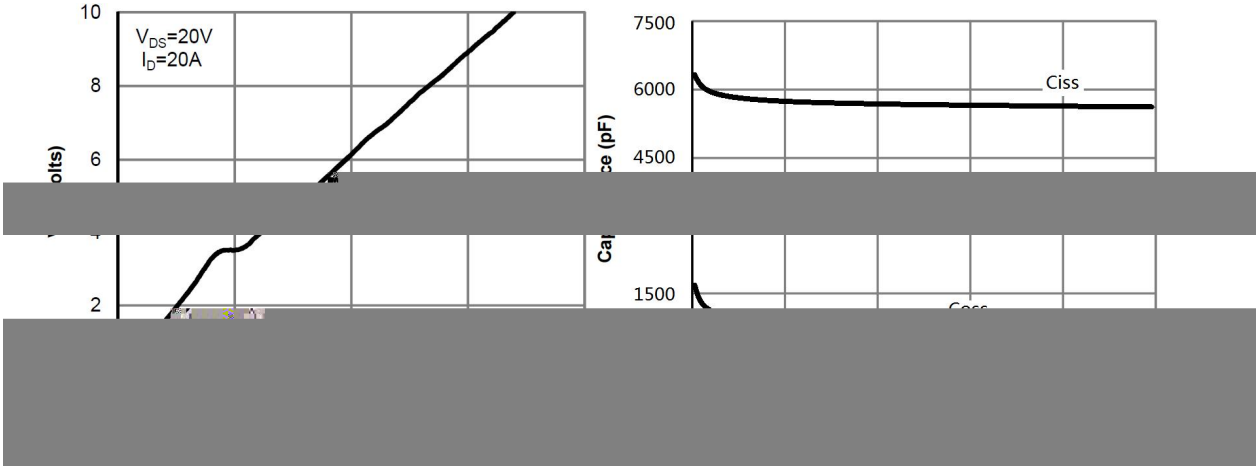
BRCS020N03RA

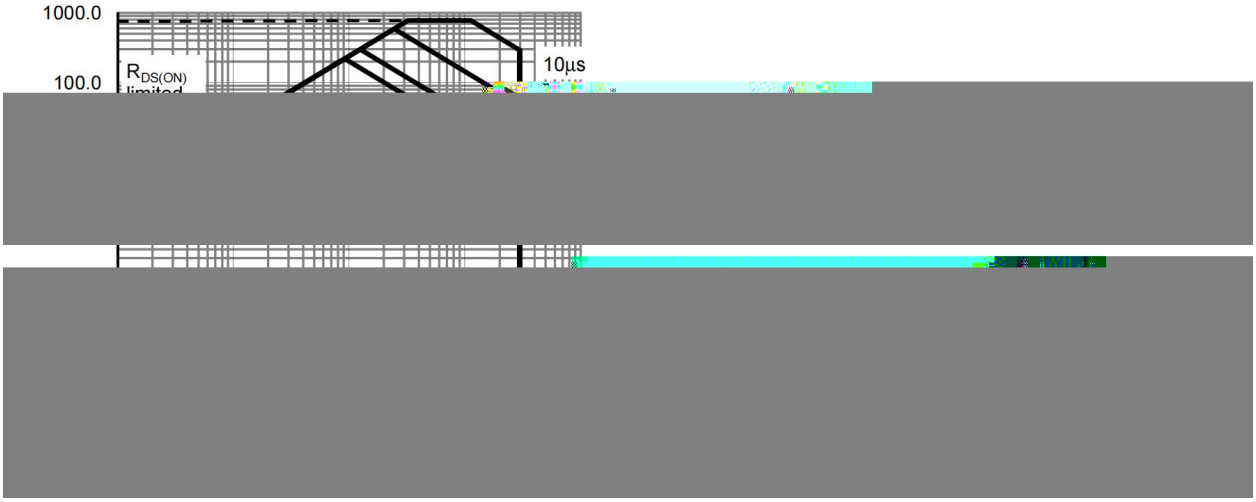
Rev.A Jun.-2022

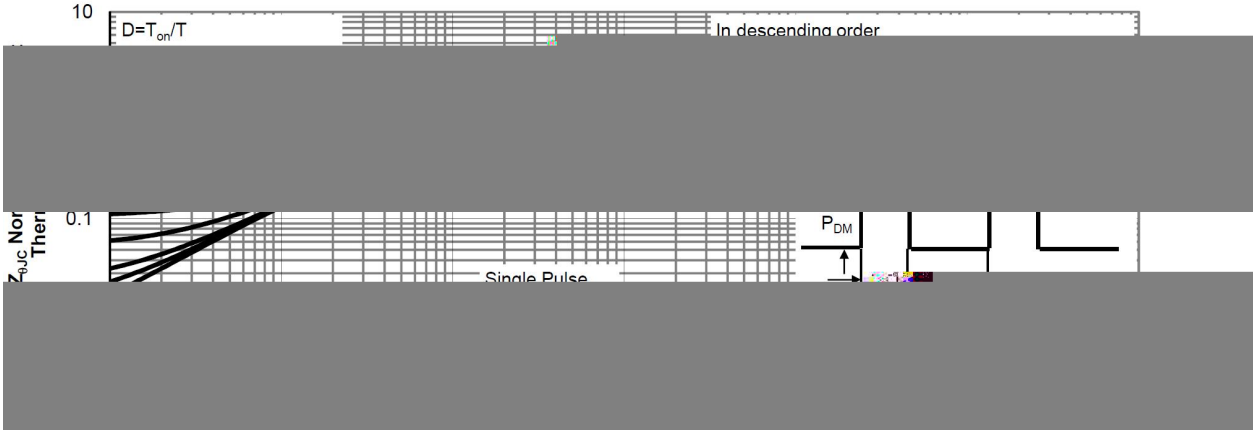
DATA SHEET

http://www.fsbrec

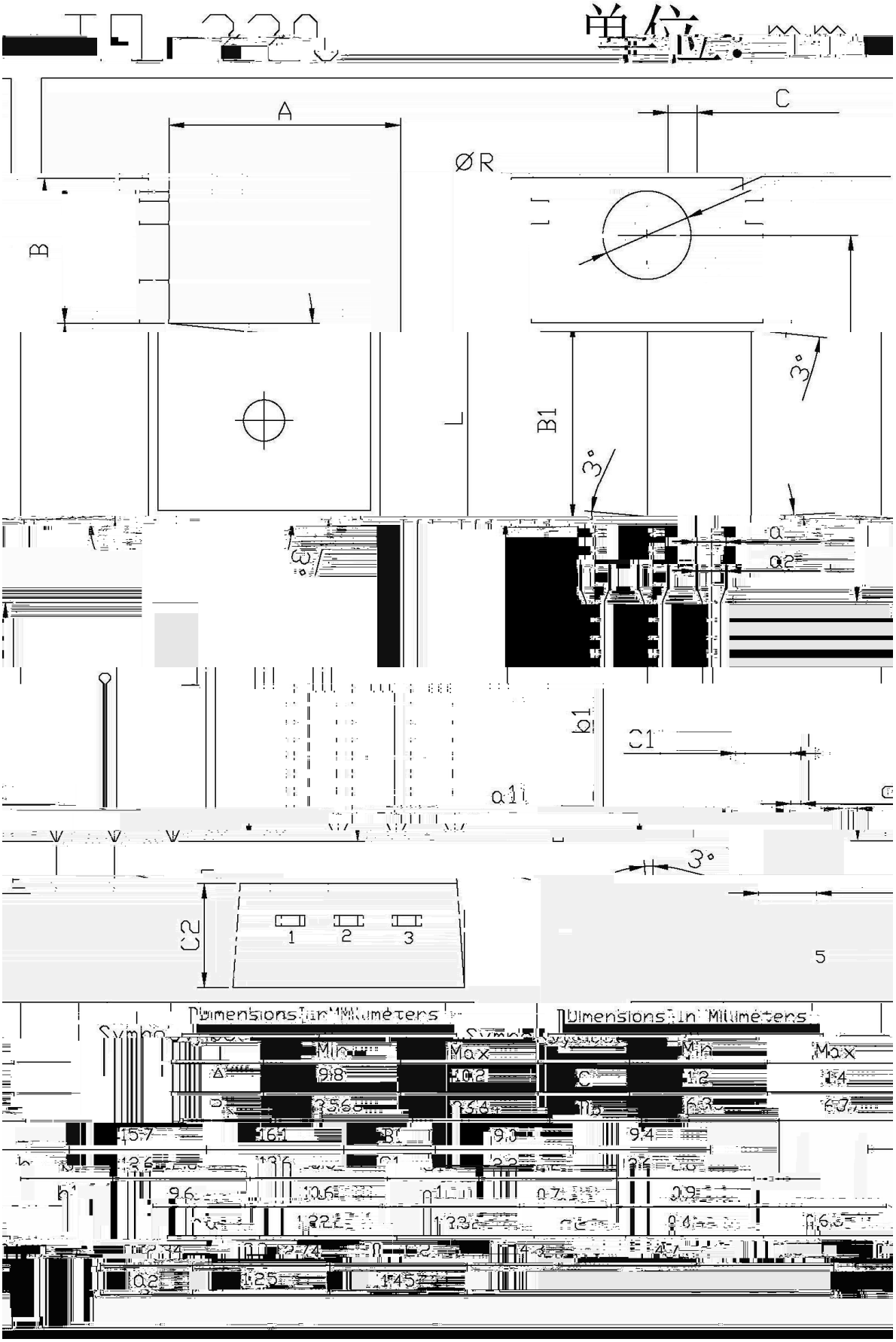
/ Electrical Characteristic Curve



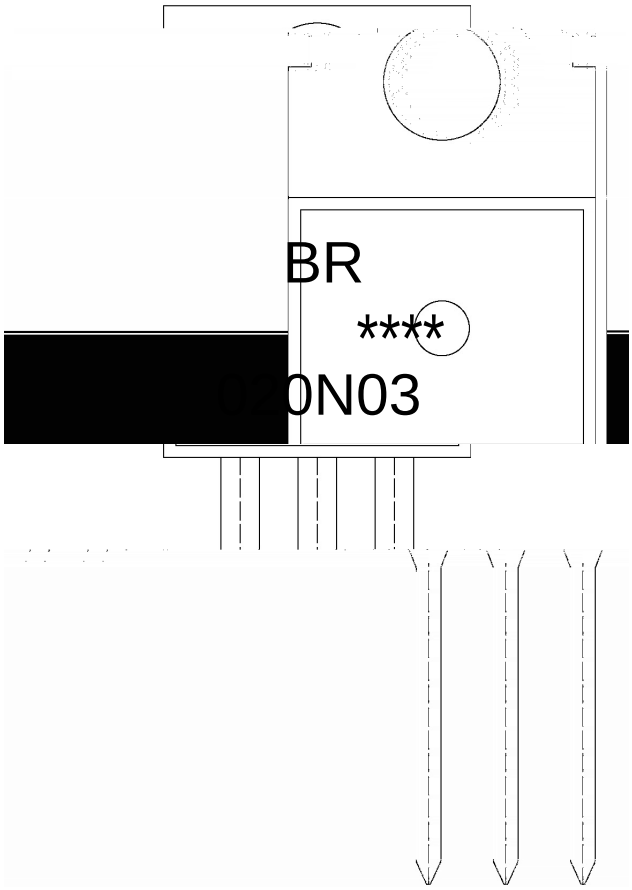




/ Package Dimensions



/ Marking Instructions



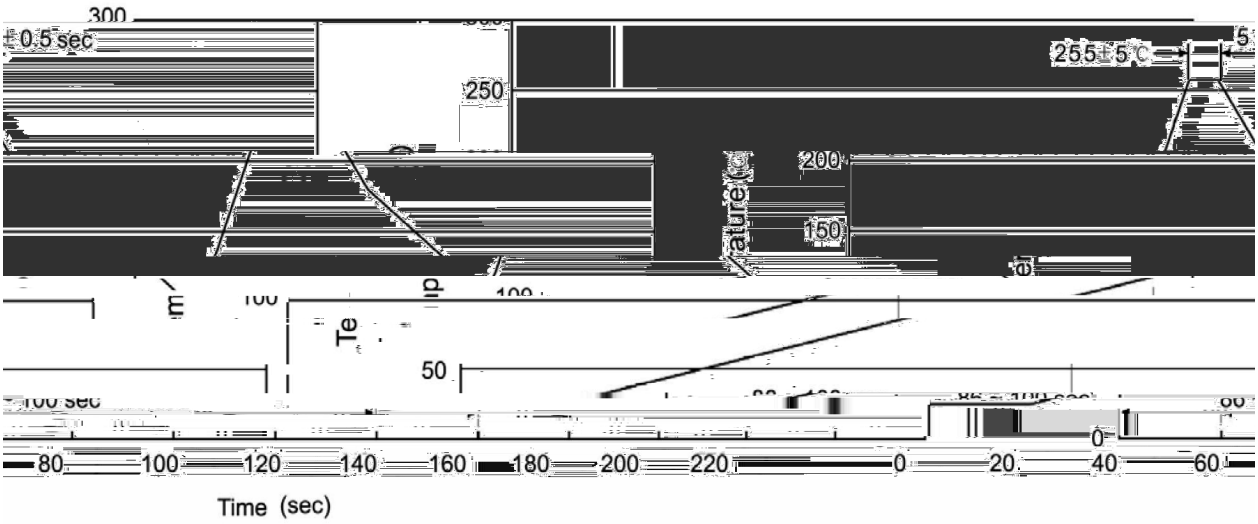
说明：

BR：	为公司代码
020N03：	为型号代码
****：	为生产批号代码，随生产批号变化

Note:

BR:	Company Code
020N03:	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℃, 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.

/ BULK

Package Type	Units					Dimension		(unit mm³)
	Units/Bag /	Bags/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Bag	Inner Box	Outer Box
TO-220/F	200	10	2,000	5	10,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension		(unit mm³)
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-220/F	50	20	1,000	5	5,000	532×31.4×5.5	555×164×50	575×290×180

/ Notices