

# BR12N60 (CS12N60)

# N-CHANNEL MOSFET/N 沟道 MOS 晶体管

用途：该器件适用于高效电源模块，主动式 PFC 电路和基于半桥拓扑结构的电子节能灯。

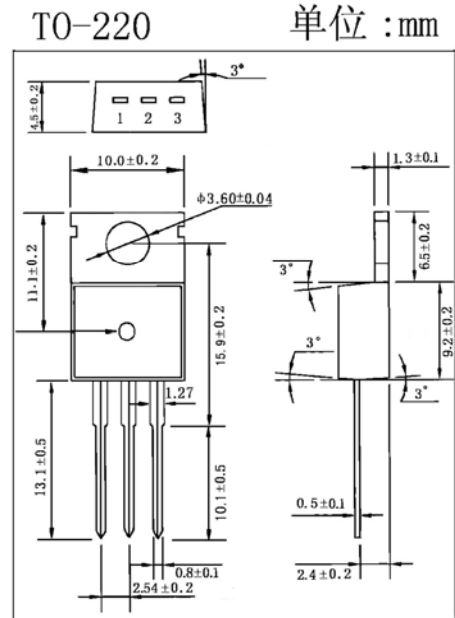
Purpose: These devices are well suited for high efficient switched mode power supplies, active power factor correction, electronic lamp ballast based on half bridge topology.

特点：低栅电荷，反向传输电容低，开关速度快。

Features: Low gate charge, low crss, fast switching.

### 极限参数/Absolute maximum ratings (Ta=25°C)

参数符号 Symbol	数值 Rating	单位 Unit
V <sub>DSS</sub>	600	V
I <sub>D</sub> (Tc=25°C)	12	A
I <sub>D</sub> (Tc=100°C)	7.4	A
I <sub>DM</sub>	48	A
V <sub>GSS</sub>	±30	V
E <sub>AS</sub>	870	mJ
E <sub>AR</sub>	22.5	mJ
I <sub>AR</sub>	12	A
P <sub>D</sub> (Tc=25°C)	225	W
T <sub>J</sub> , T <sub>STG</sub>	-55 to 150	°C



引脚：1 G 2 D 3 S

### 电性能参数/Electrical Characteristics (Ta=25°C)

参数符号 Symbol	测试条件 Test Conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
BV <sub>DSS</sub>	V <sub>GS</sub> =0V I <sub>D</sub> =250 μA	600			V
I <sub>DSS</sub>	V <sub>DS</sub> =600V V <sub>GS</sub> =0V			1	μA
	V <sub>DS</sub> =480V T <sub>C</sub> =125°C			10	μA
I <sub>GSS</sub>	V <sub>GS</sub> =±30V V <sub>DS</sub> =0V			±0.1	μA
V <sub>GS(th)</sub>	V <sub>DS</sub> =V <sub>GS</sub> I <sub>D</sub> =250 μA	2		4	V
R <sub>DS(on)</sub>	V <sub>GS</sub> =10V I <sub>D</sub> =6A		0.53	0.65	Ω
g <sub>FS</sub>	V <sub>DS</sub> =40V I <sub>D</sub> =6A		13		S
V <sub>SD</sub>	V <sub>GS</sub> =0V I <sub>S</sub> =12A			1.4	V
C <sub>iSS</sub>	V <sub>DS</sub> =25V V <sub>GS</sub> =0V f=1MHz		1760	2290	pF
C <sub>oss</sub>			182	235	pF
C <sub>rSS</sub>			21	28	pF
t <sub>d(on)</sub>				30	70
t <sub>r</sub>	V <sub>DD</sub> =300V I <sub>D</sub> =12A R <sub>G</sub> =25 Ω		85	180	ns
t <sub>d(off)</sub>			140	280	ns
t <sub>f</sub>			90	190	ns

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