

/ Descriptions

N TO-3PH

N-Channel MOSFET in a TO-3PH Plastic Package.

/ Features

Crss (85pF)

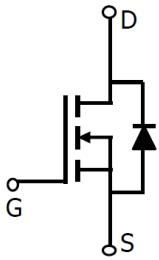
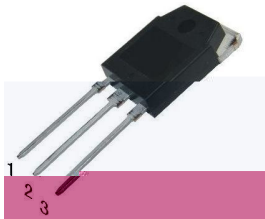
dv/dt

Low gate charge, Low Crss (typical 85pF), Fast switching, 100% avalanche tested, Improved dv/dt capability.

/ Applications

UPS

High efficiency switch mode power supplies, Electronic lamp ballasts based on half bridge, UPS.

/ Equivalent Circuit**/ Pinning**

PIN1 Gate

PIN 2 Drain

PIN 3 Source

/ Marking

See Marking Instructions.

BRCS25N60PH

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Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	600	V
Drain Current -continuous	$I_D(T_c=25^\circ\text{C})$	25.0*	A
	$I_D(T_c=100^\circ\text{C})$	15.5*	A
Drain Current -pulse note 1	I_{DM}	25*	A
Gate-Source Voltage	V_{GS}	30	V
Single Pulsed Avalanche Energy note 2	E_{AS}	550	mJ
Avalanche Current note 1	I_{AR}	25.0	A
Repetitive Avalanche Current note 1	E_{AR}		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off –Characteristics						
Drain-Source Voltage	BV _{DSS}	I _D =250μA, V _{GS} =0V	600			V
Breakdown Voltage Coefficient	BV _{DSS} /ΔTJ	I _D =250μA, referenced to 25		0.5		V/
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =600V,V _{GS} =0V,T _C =25			1	uA
		V _{DS} =480V, T _C =125			10	uA
Gate-body leakage current, forward	I _{GSSF}	V _{DS} =0V, V _{GS} =30V			100	nA
Gate-body leakage current, reverse	I _{GSSR}	V _{DS} =0V, V _{GS} =-30V			-100	nA
On-Characteristics						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D =250μA	2.0		4.0	V
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =10V , I _D =12.5A		0.24	0.28	Ω
Forward Transconductance	g _{fs}	V _{DS} = 40V , I _D =12.5A note 4		18		S
Dynamic Characteristics						
Input capacitance	C _{iss}	V _{DS} =25V, V _{GS} =0V, f=1.0MHz		2310	2920	pF
Output capacitance	C _{oss}			1270	1660	pF
Reverse transfer capacitance	C _{rss}			85	120	pF
Switching –Characteristics						
Turn-On delay time	t _{d(on)}	V _{DD} =250V,I _D =25A,R _G =25Ω note 4 5		60	128	ns
Turn-On rise time	tr			130	270	ns
Turn-Off delay time	t _{d(off)}			220	445	ns
Turn-Off Fall time	t _f			70	145	ns

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2 $L=5.0\text{mH}$, $I_{AS}=25\text{A}$, $V_{DD}=50\text{V}$, $R_G=25\ \Omega$, $T_J=25$

3 $I_{SD} \leq 25\text{A}$, $di/dt \leq 200\text{A}/\mu\text{s}$, $V_{DD} \leq BV_{DSS}$, $T_J=25$

4 $\leq 300\mu\text{s}$, ≤ 2

5

Note:

1 Pulse width limited by maximum junction temperature

2 $L=5.0\text{mH}$, $I_{AS}=25\text{A}$, $V_{DD}=50\text{V}$, $R_G=25$, Starting $T_J=25$

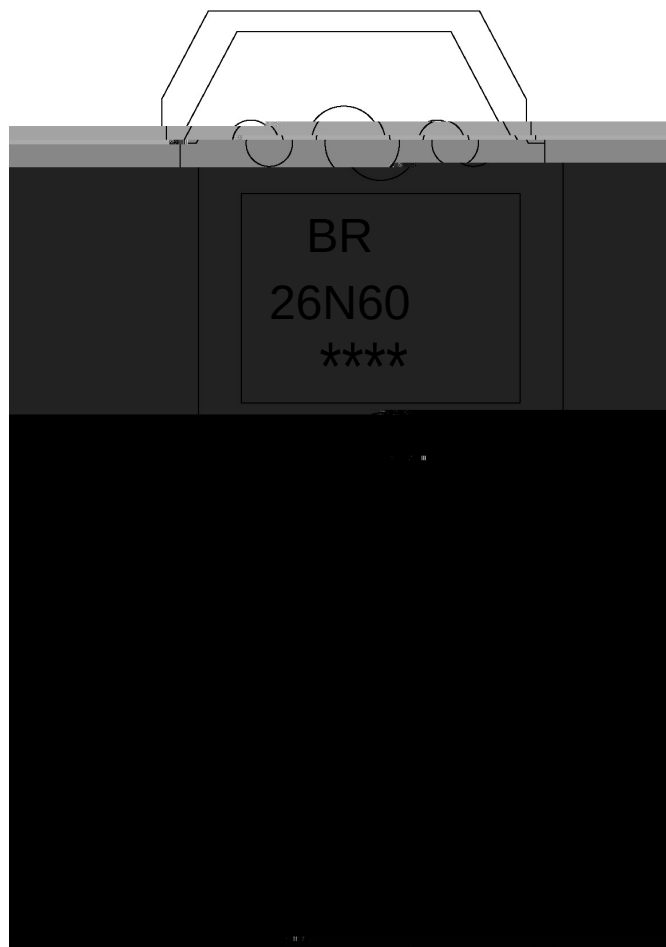
3 $I_{SD} \leq 25\text{A}$, di/dt

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/ Electrical Characteristic Curve

/ Marking Instructions



BR:

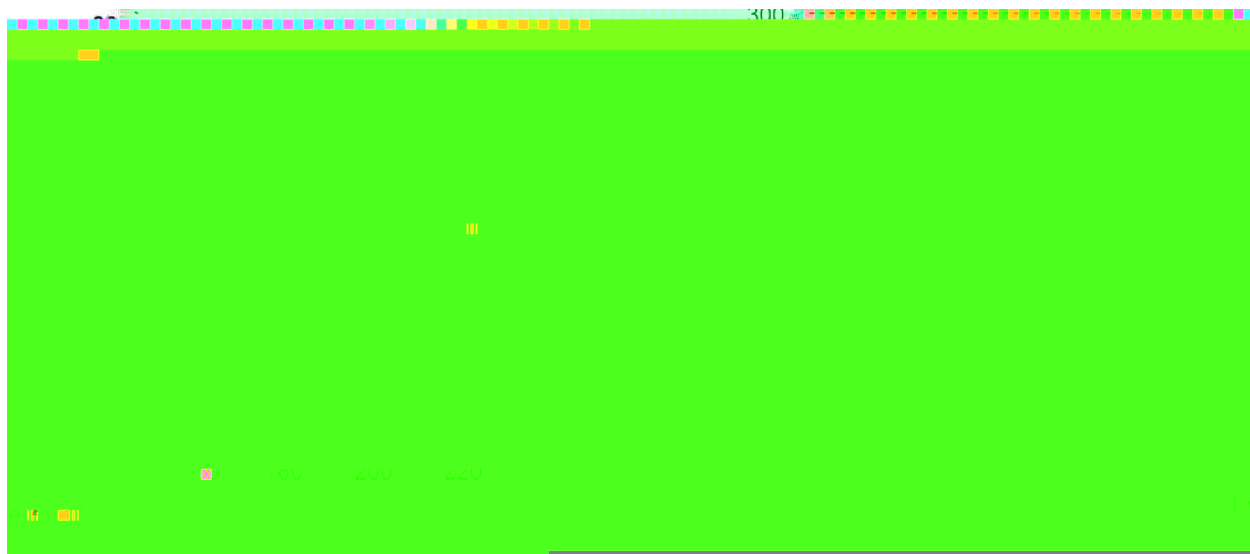
26N60

Note:

BR: Company Code.

26N60: 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.
/ 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-3PH	30	15	450	5	2250	497.5×46×8	555×164×50	575×290×180

/ Notices