

/ Descriptions

TO-263 N

N-CHANNEL MOSFET in a TO-263 Plastic Package.

/ Features

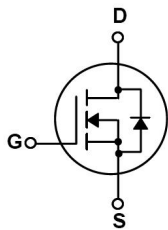
Ultra Low On-Resistance,fast switching,HF product.

/ Applications

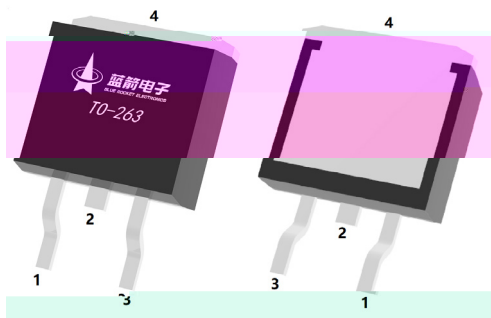
LED

Boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

/ Equivalent Circuit



/ Pinning



PIN1 G

PIN 2 4 D

PIN 3 S

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings(Ta=25)

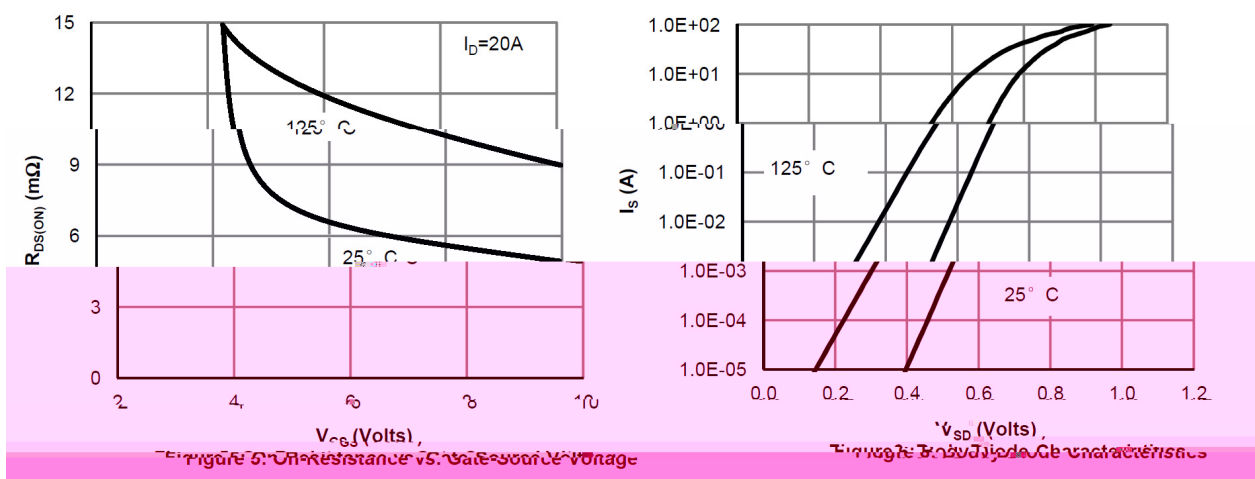
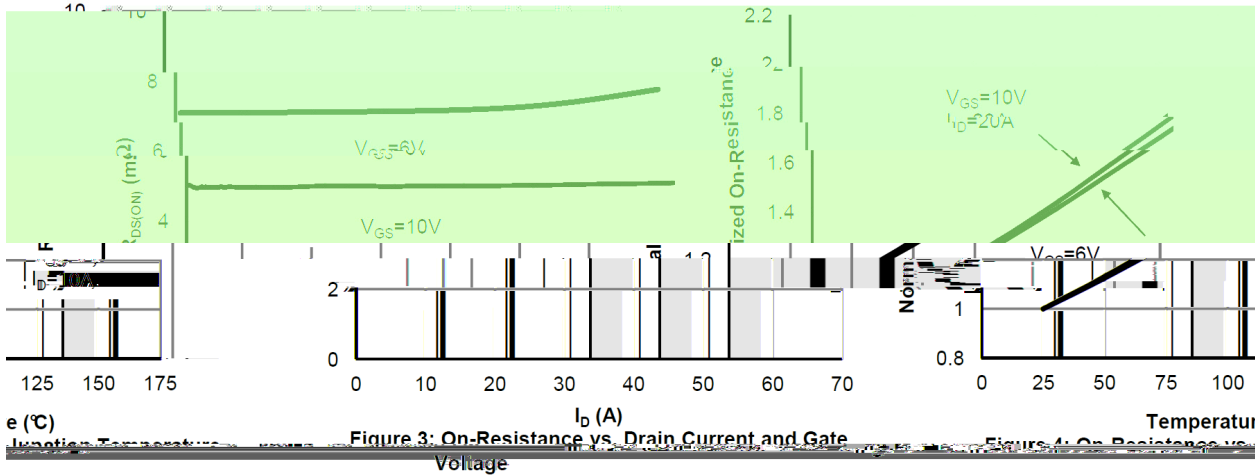
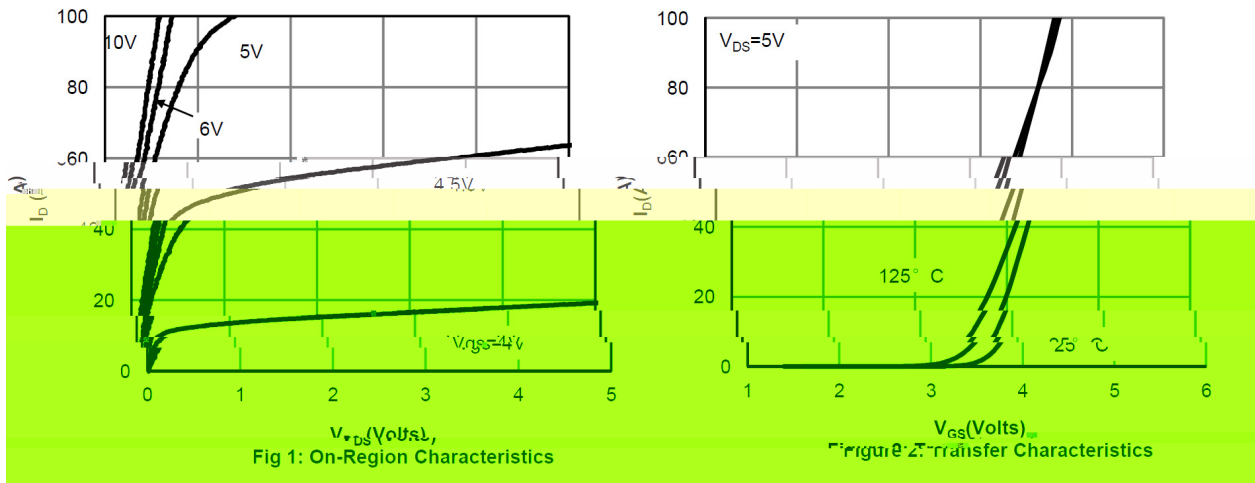
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	80	V
Drain Current		$I_D(T_C=25^{\circ}C)$	115	A
Pulsed Drain Current		I_{DM}	241	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	710	mJ
Avalanche Current		I_{AS}	36.5	A
Total Power Dissipation		$P_D(T_C=25^{\circ}C)$	156.2	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	$^{\circ}C$
Thermal Resistance-Junction to Ambient	$t \leq 10s$	$R_{\theta JA}$	15.5	/W
	Steady-State		62.5	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.8	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$	$I_D=250\mu A$	80	95		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=85V$	$V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$	$V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250\mu A$	2	3	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$	$I_D=20A$		5.1	6.5	m Ω
	$R_{DS(on)}$	$V_{GS}=6V$	$I_D=10A$		7.0	10	
Forward On Voltage	V_{SD}	$V_{GS}=0V$	$I_S=1A$			1.2	V
Gate resistance	R_g	$f=1MHz$			1.4		Ω
Input Capacitance	C_{iss}	$V_{DS}=25V$ $f=1MHz$	$V_{GS}=0V$		3230		pF
Output Capacitance	C_{oss}				1310		
Reverse Transfer Capacitance	C_{rss}				185		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V,$ $I_D=20A$	$V_{DS}=40V,$		46		nC
Gate Source Charge	Q_{gs}				13		
Gate Drain Charge	Q_{gd}				8.5		

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ V_{DS}				

Electrical Characteristic Curve



Electrical Characteristic Curve

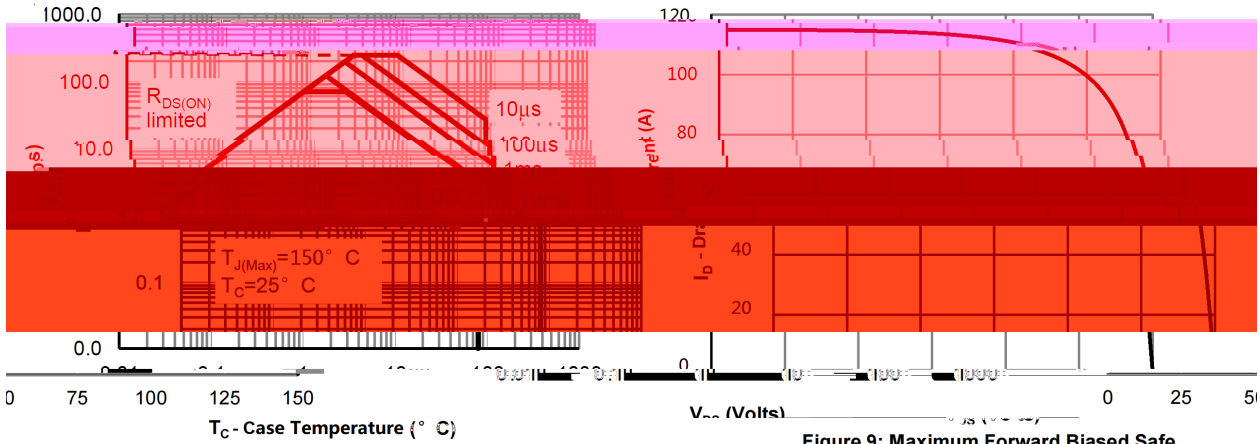
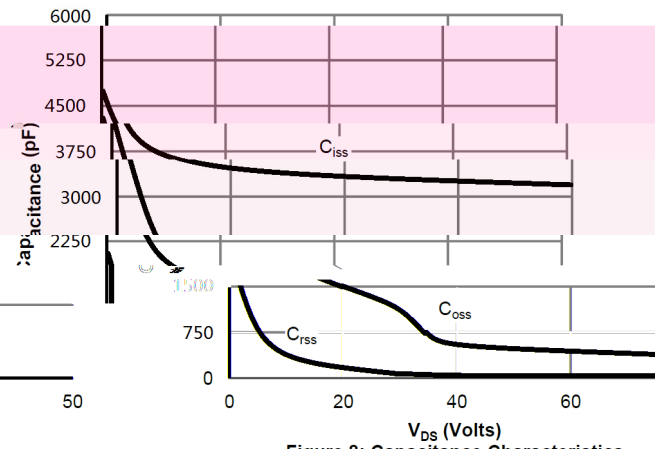
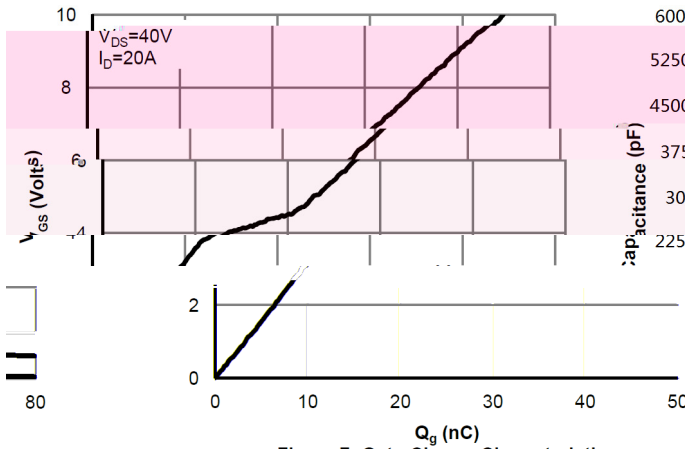
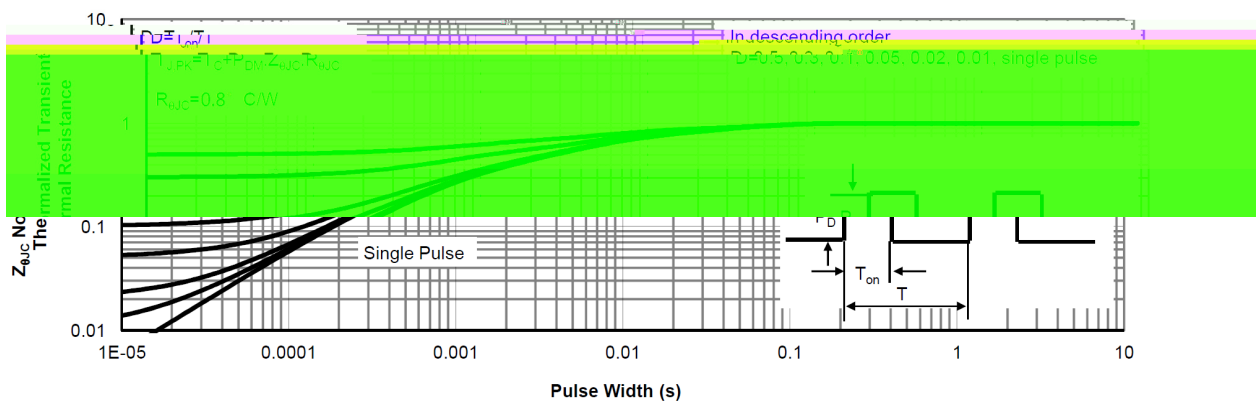
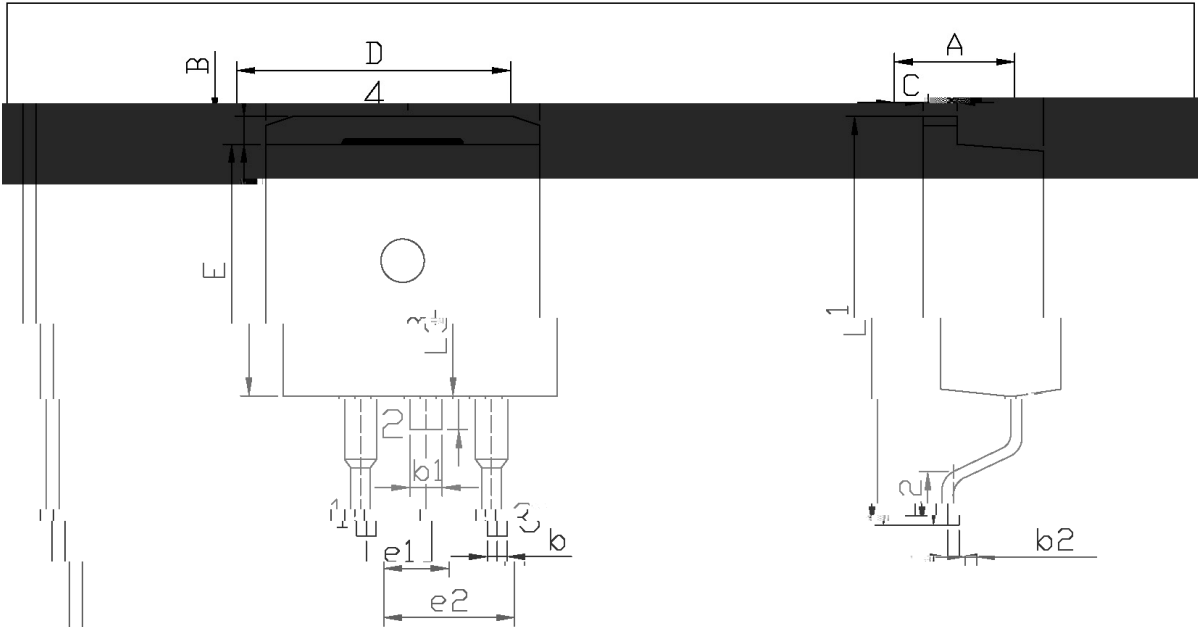


Figure 10: Maximum Continuous Drain Current vs Case Temperature



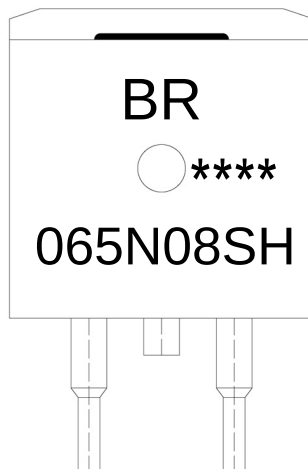
I Package Dimensions



单位: mm

Symbol		Dimensions In Millimeters		Symbol		Dimensions In Millimeters	
		Min	Max			Min	Max
A		4.30	4.70	E		0.90	0.95
B		1.00	1.40	e1		2.34	2.54
b		0.70	0.90	e2		1.83	2.03

/ Marking Instructions



BR

065N08SH

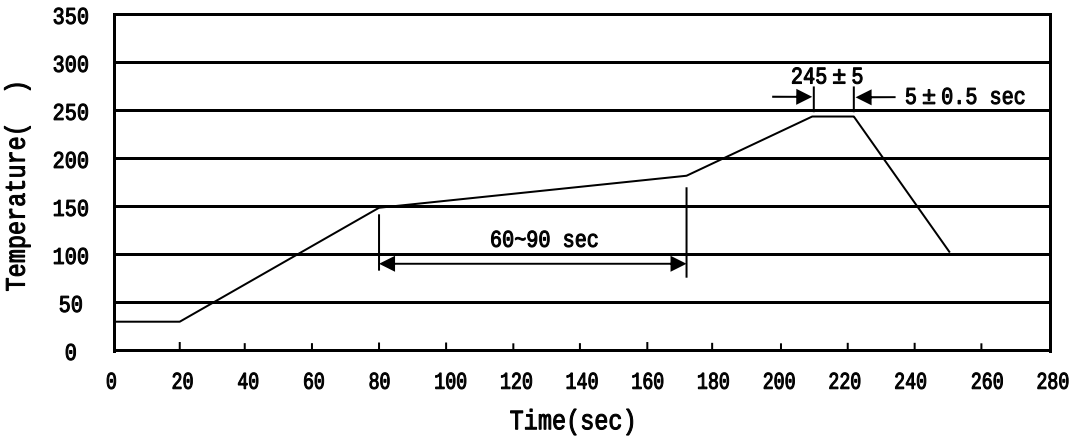
Note:

BR: Company Code

065N08SH: Product Type

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

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Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245±5

5±0.5sec;

2.Peak Temp.:245±5 , Duration:5±0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

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

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Reel	Inner Box	Outer Box
TO-263	800	1	800	6	4,800	13" ×24	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

/ Notices