

/ Descriptions

TO-263 N

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

/ Features

 $V_{DS}=80V$ $I_D=155A$ $R_{DS(on)}@10V \leq 4.5m\Omega$ (Type.3.5m Ω) $R_{DS(on)}@6V \leq 9.0m\Omega$ (Type.4.7m Ω)

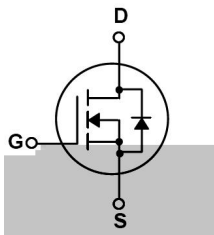
HF Product.

/ Applications

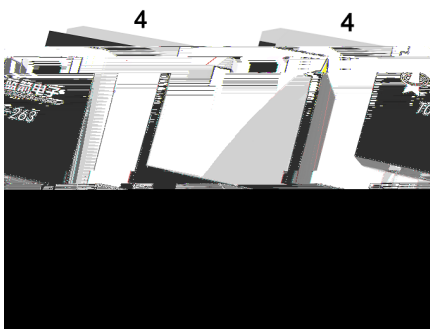
LED

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

/ Equivalent Circuit



/ Pinning



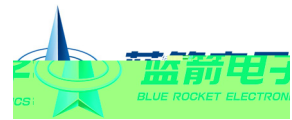
PIN1 G PIN 2 4 D PIN 3 S

/ Marking

See Marking Instructions.

BRCS045N08SHBD

Rev.A Dec.-2023



DATA SHEET

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	80	V
Drain Current		$I_D(T_C=25^\circ\text{C})$	155	A
Pulsed Drain Current		I_{DM}	322	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	986	mJ
Avalanche Current		I_{AS}	43	A
Total Power Dissipation		$P_D(T_C=25^\circ\text{C})$	200	W
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	Steady-State	$R_{\theta JA}$	62.5	/W
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.63	

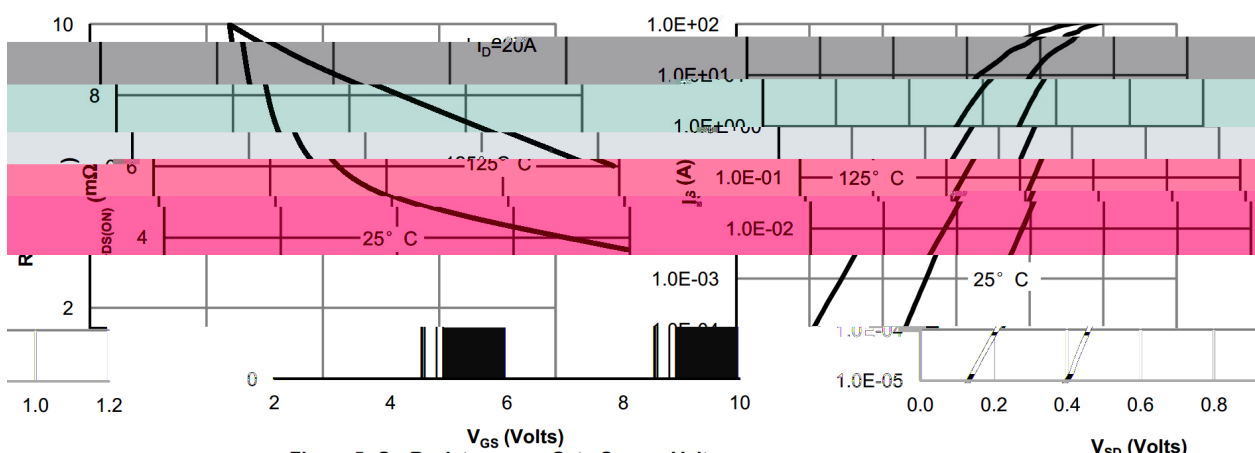
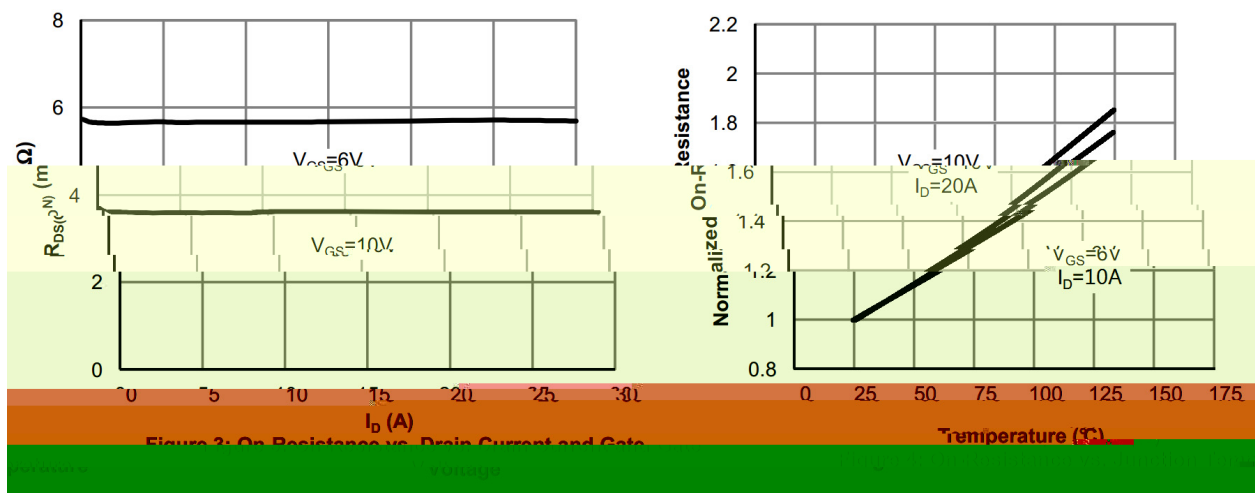
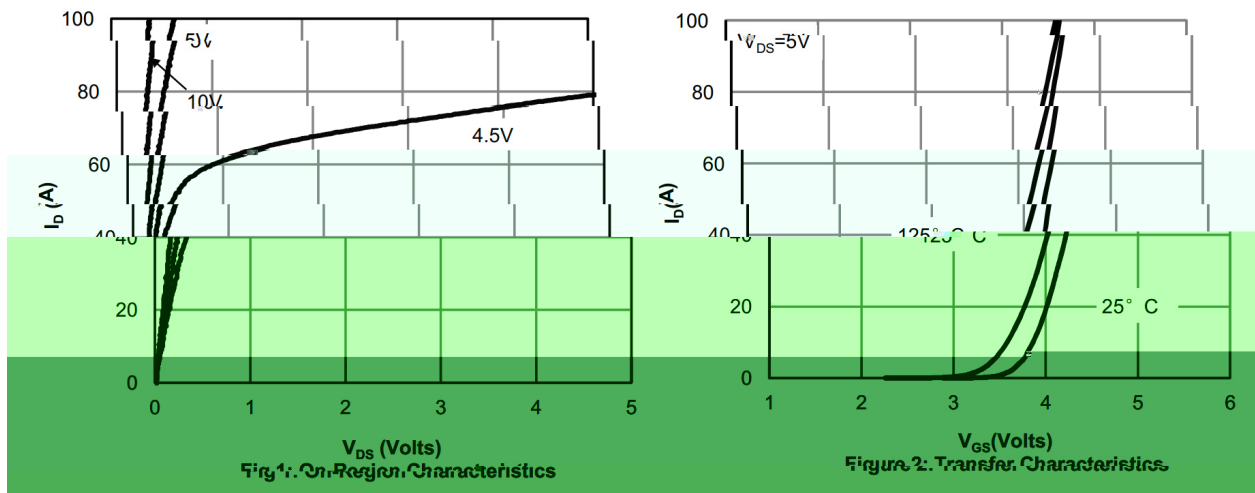
-1.3886 TD-.0007 T309Unit

Parameter Symbol

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=40V$ $R_L=2\Omega$ $R_{GEN}=3\Omega$		19		ns
Turn-On Rise Time	t_r			12.5		
Turn-Off Delay Time	$t_{d(off)}$			40		
Turn-Off Fall Time	t_f			8		

/ Electrical Characteristic Curve

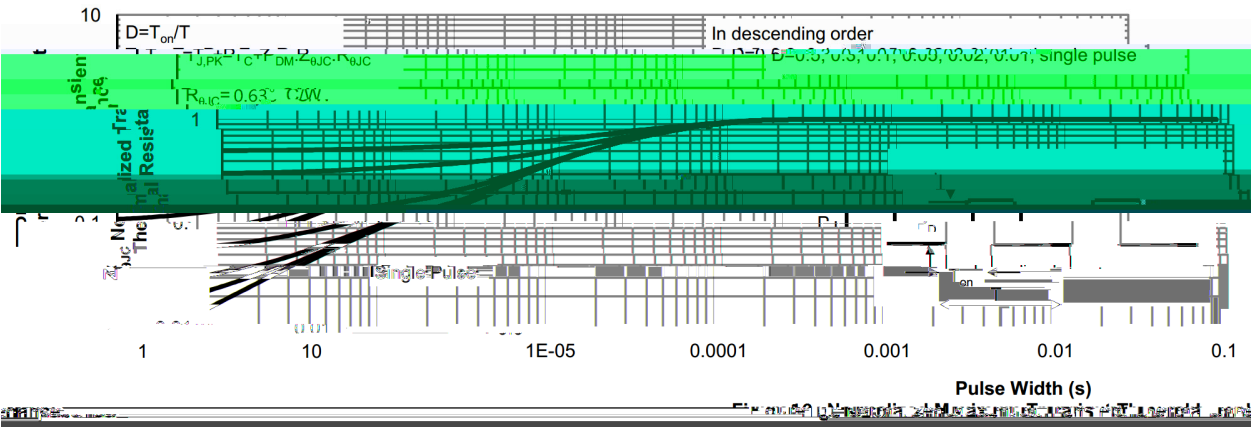
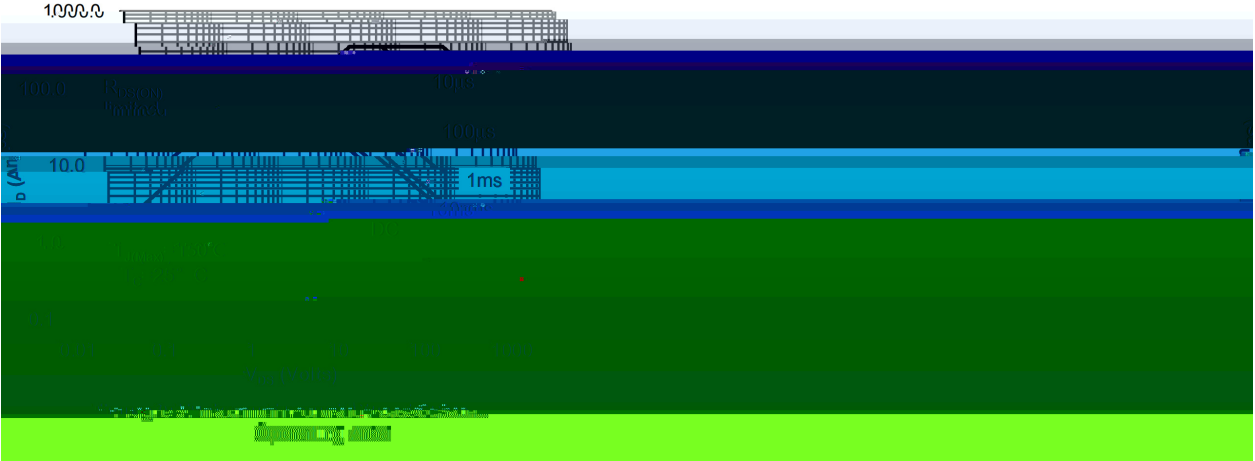
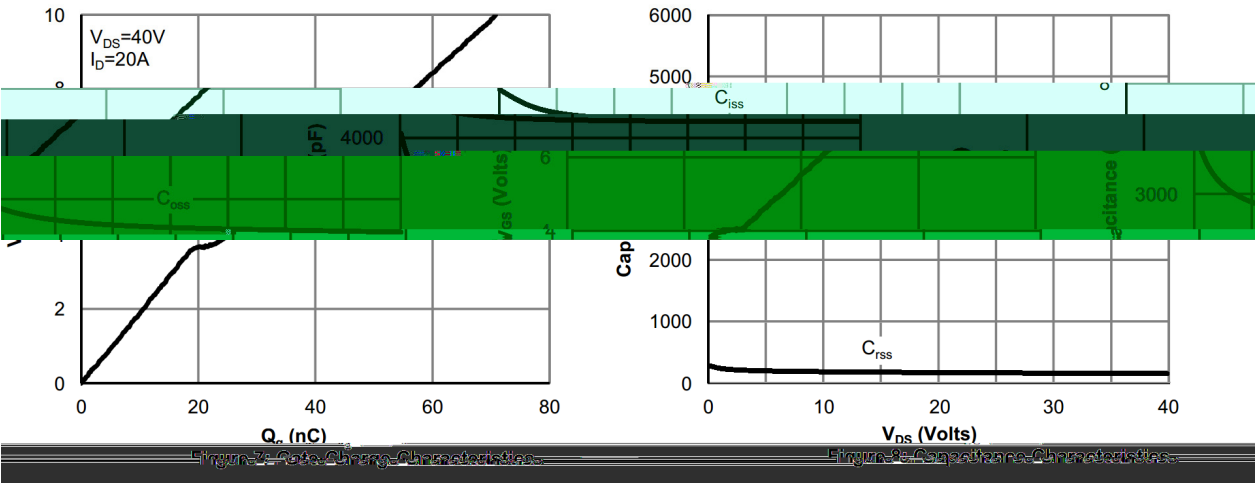


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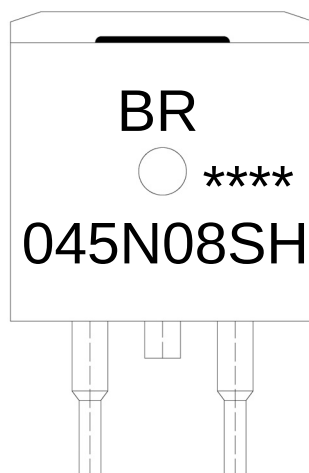
Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Character

Electrical Characteristic Curve



/ Marking Instructions



BR

045N08SH

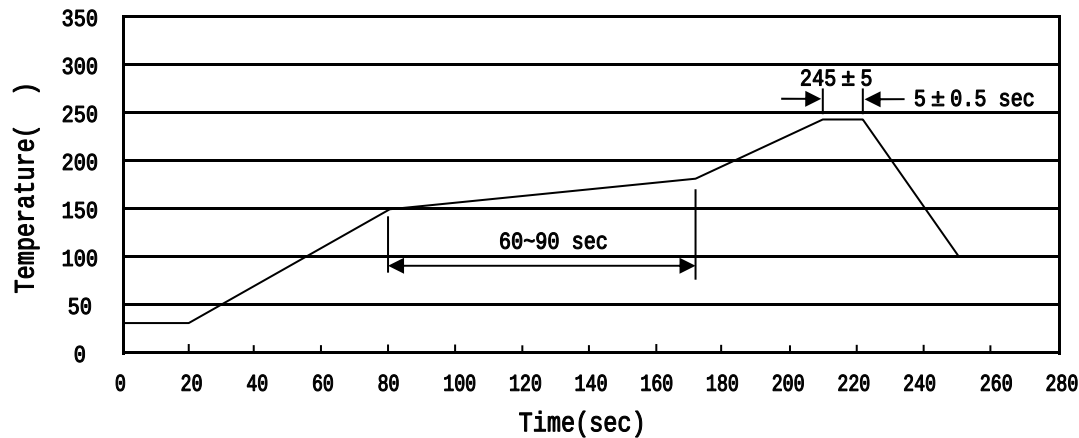
Note:

BR: Company Code

045N08SH: Product Type Code

****: 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)		
TO-263	800	1	800	6	4,800	13 ×24	360×360×50	380×335×366

/ TUBE

Package Type	Units					Dimension (unit mm ³)		
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

/ Notices