

/ Descriptions

TO-263 N

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

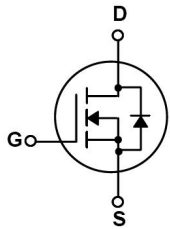
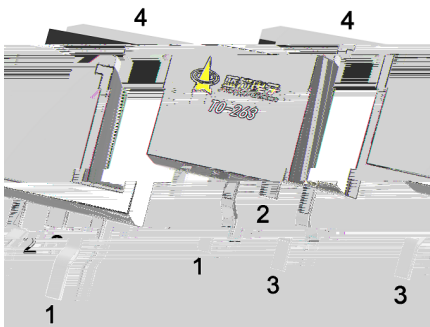
/ Features $V_{DS}=100V$ $I_D=120A$ $R_{DS(on)}@10V \leq 5.5m\Omega$ (Type.4.7m Ω) $R_{DS(on)}@4.5V \leq 7.0m\Omega$ (Type.6.0m Ω)

HF Product.

/ Applications

BMS

High frequency switching and synchronous rectification, BMS, Motor.

/ Equivalent Circuit**/ Pinning**

PIN1 G PIN 2 4 D PIN 3 S

/ Marking

See Marking Instructions.

BRCS055N10SHBD

Rev.B Dec.-2023



DATA SHEET

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	100	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	120	A
Pulsed Drain Current	I_{DM}	255	A
Gate-Source Voltage	V_{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)	E_{AS}	883.6	mJ
Avalanche Current	I_{AS}		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=50V$ $R_L=2.5\Omega$ $R_{GEN}=3\Omega$		28.3		ns
Turn-On Rise Time	t_r			24		
Turn-Off Delay Time	$t_{d(off)}$			62		
Turn-Off Fall Time	t_f			33		

/ Electrical Characteristic Curve

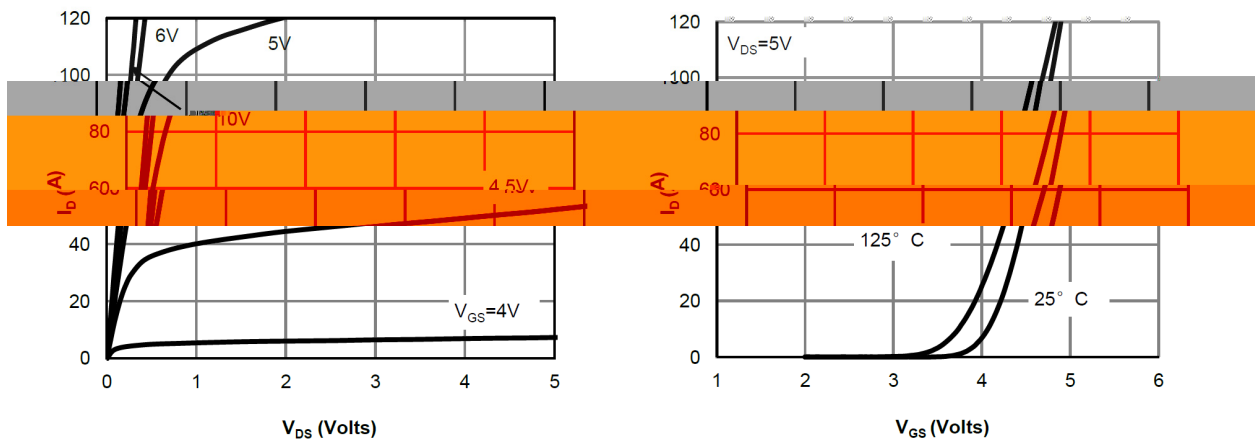


Figure 1: On-Region Characteristics

Figure 2: Transfer Characteristics

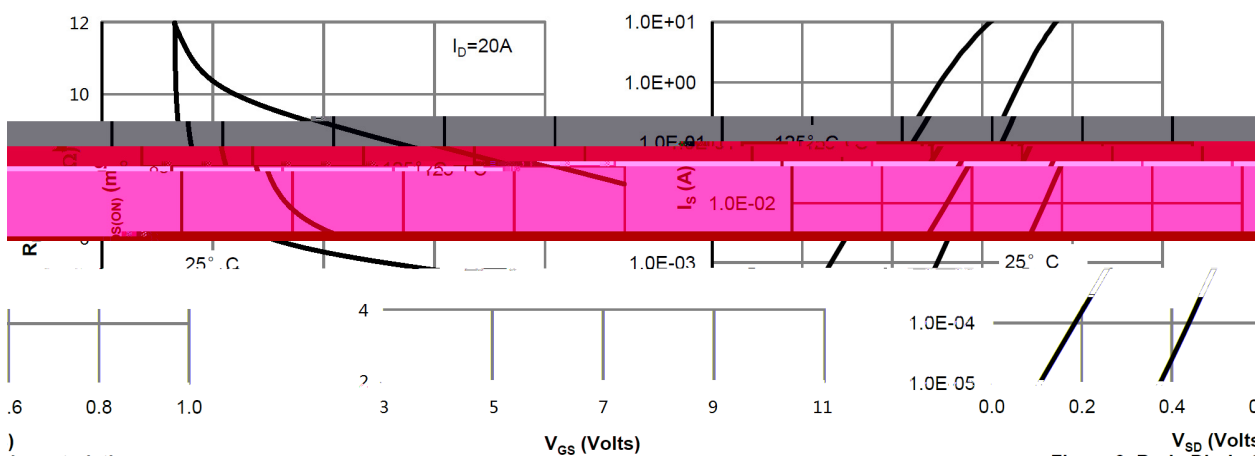
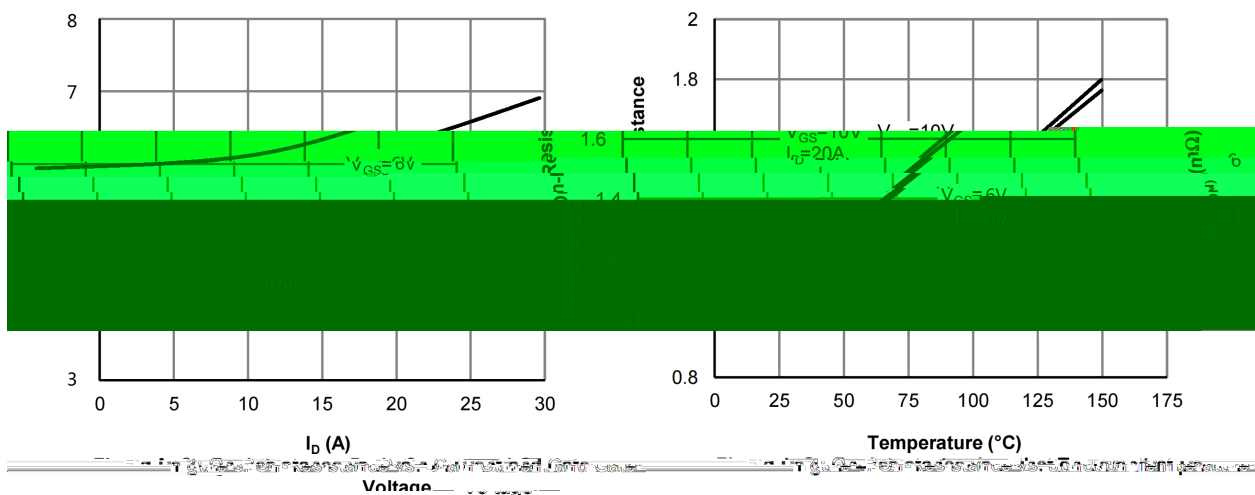


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

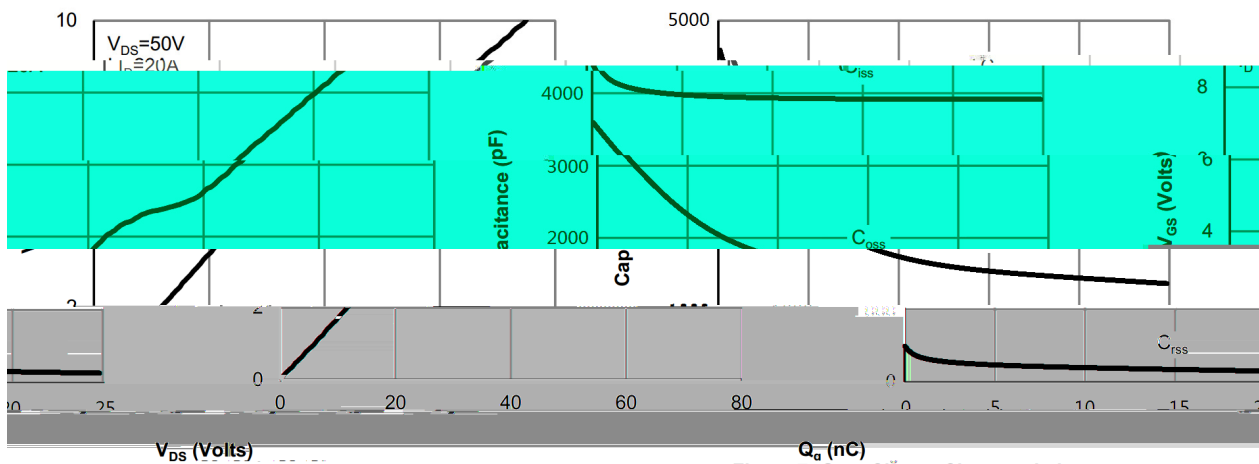


Figure 8: Capacitance Characteristics

Figure 7: Gate-Charge Characteristics

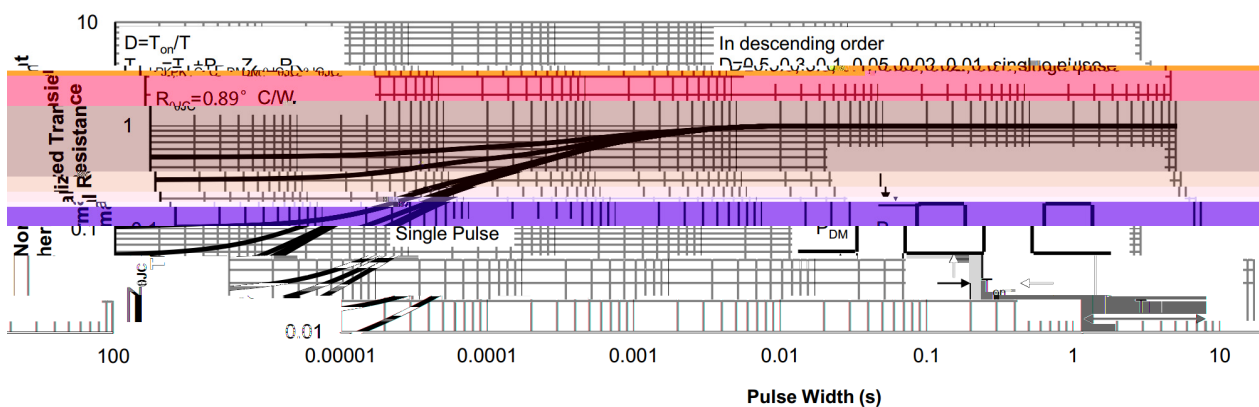
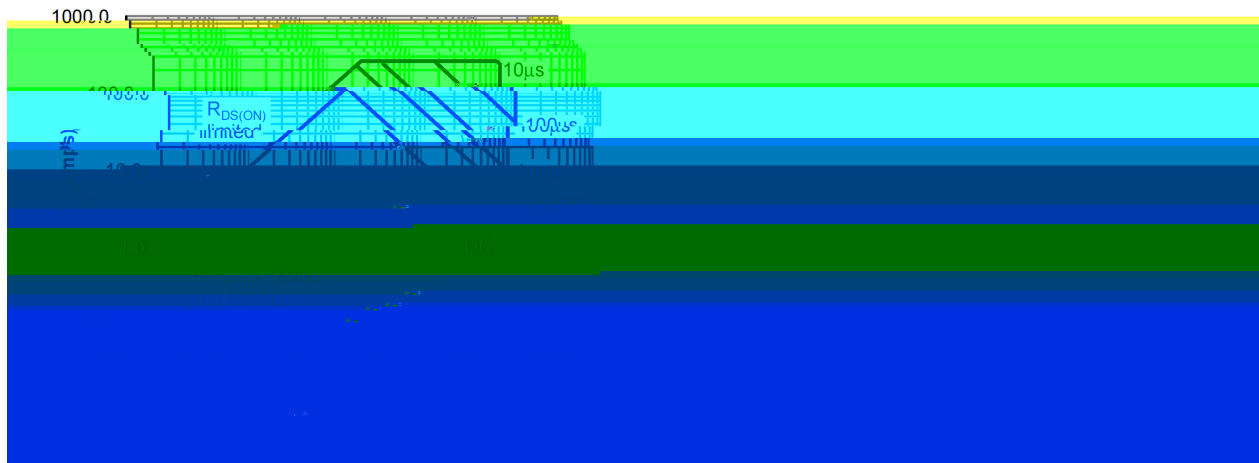
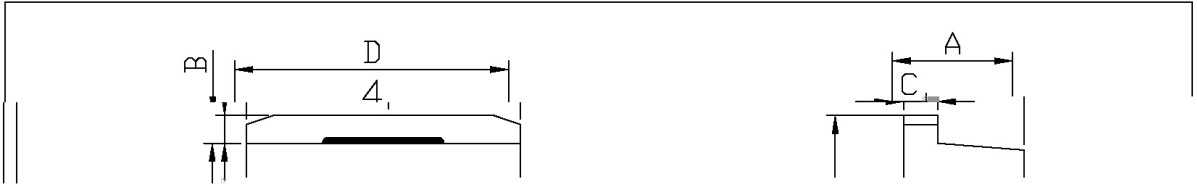


Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions

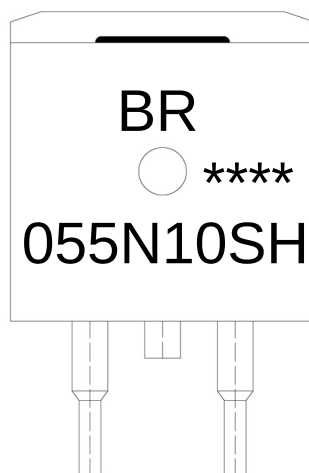


单位: mm

Symbol	Dimensions in Millimeters		Symbol	Dimensions in Millimeters	
	Min	Max		Min	Max
A	4.30	4.70	E	9.00	9.40
B	1.00	1.40	e1	2.34	2.74
b	0.70	0.90	e2	4.88	5.28
b1	1.15	1.35	L1	15.00	16.00
b2	0.40	0.60	L2	2.24	2.84
C	1.20	1.40	L3	1.20	1.60
D	9.80	10.20			

TP-263

/ Marking Instructions



BR

055N10SH

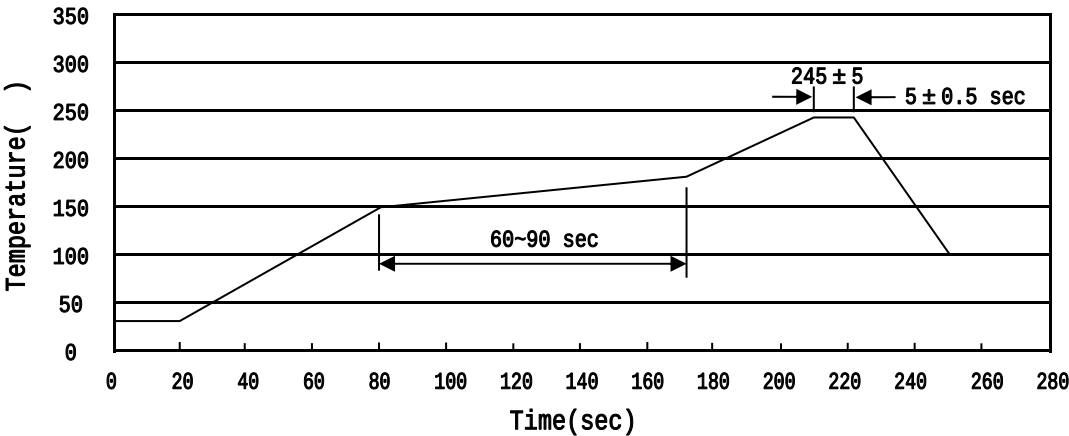
Note:

BR: Company Code

055N10SH: 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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
TO-263	800	1	800	6	4,800	13 ×24	360×360×50	380×335×366

/ 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-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

/ Notices