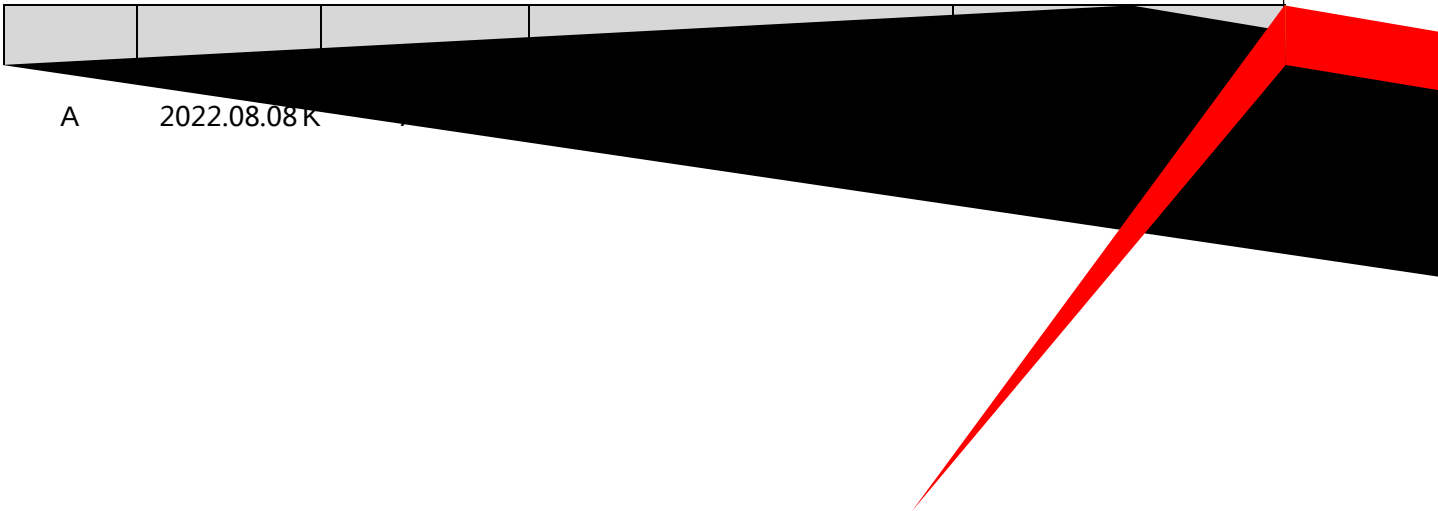




/ Descriptions

TO-263 N

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

/ Features

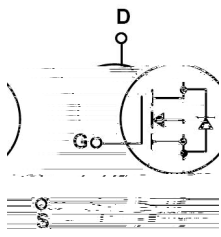
Ultra Low On-Resistance,fast switching,HF Product.

/ Applications

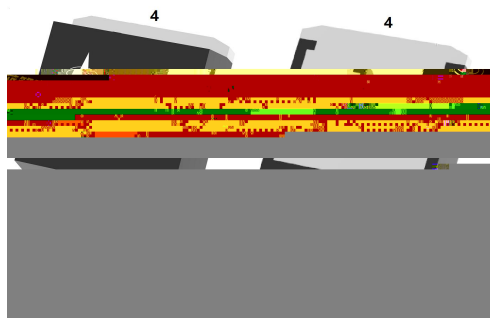
BMS

High frequency switching and synchronous rectification,BMS,Motor.

/ Equivalent Circuit



/ Pinning



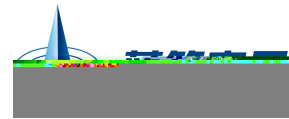
PIN1 G

PIN 2 4 D

PIN 3 S

/ Marking

See Marking Instructions.

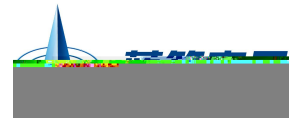


Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V _{DSS}	100	V
Drain Current		I _D (Tc=25℃)	180	A
Pulsed Drain Current		I _{DM}	385	A
Gate-Source Voltage		V _{GS}	± 20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E _{AS}	563	mJ
Avalanche Current		I _{AS}	37.5	A
Total Power Dissipation		P _D (Tc=25℃)	237	W
Junction and Storage Temperature Range		T _J ,T _{STG}	-55 to 150	℃
Thermal Resistance-Junction to Ambient	t≤10s	R _{θJA}	17.7	℃/W
	Steady-State		70.7	
Thermal Resistance-Junction to Case	Steady-State	R _{θJC}	0.53	

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0\text{V}$ $I_D=250\mu\text{A}$	100	112		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=100\text{V}$ $V_{GS}=0\text{V}$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20\text{V}$ $V_{DS}=0\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu\text{A}$	2	2.9	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10\text{V}$ $I_D=20\text{A}$		3.5	4.0	$\text{m}\Omega$

BRCS035N10SHBD

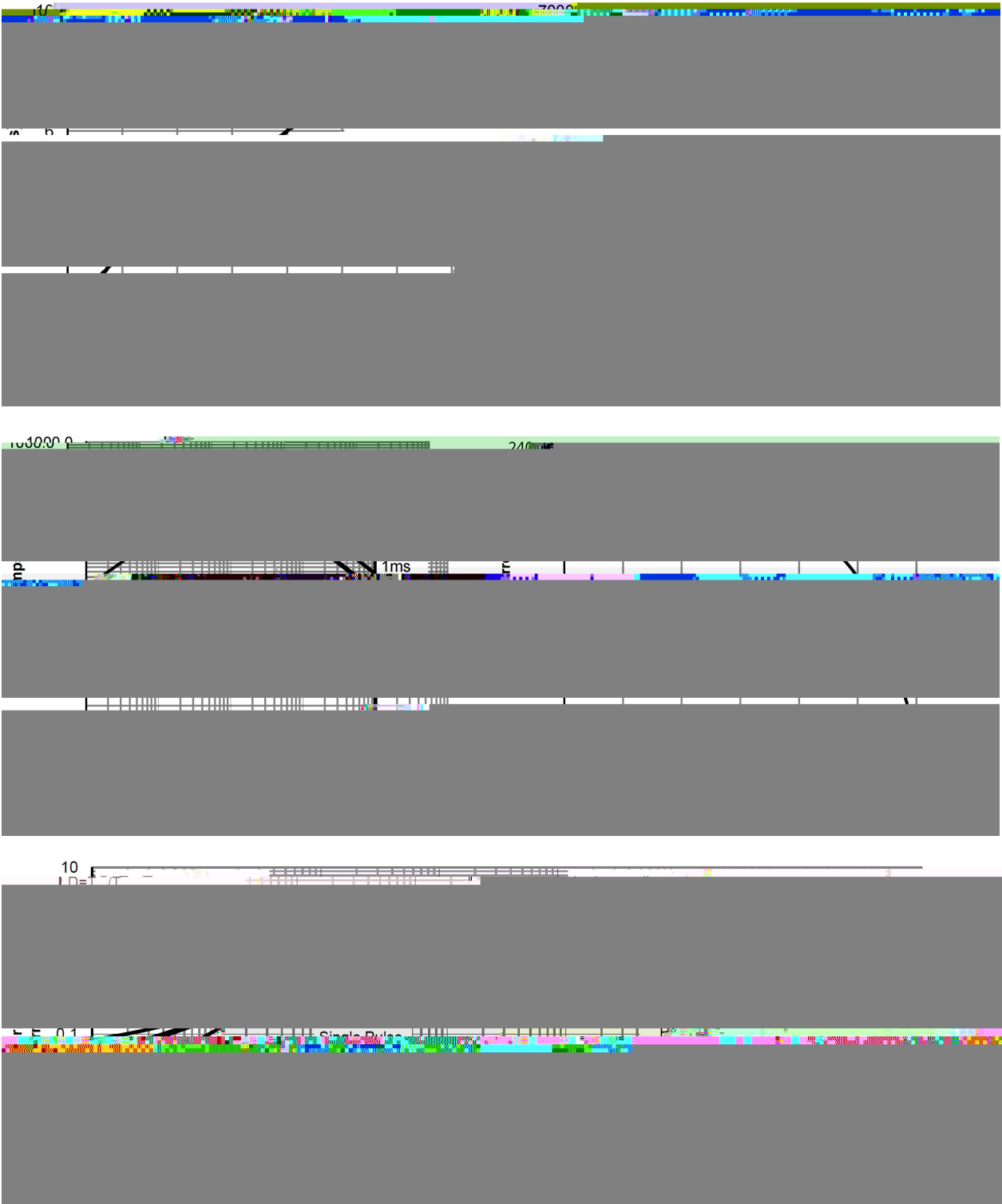
Rev.A Aug.-2022



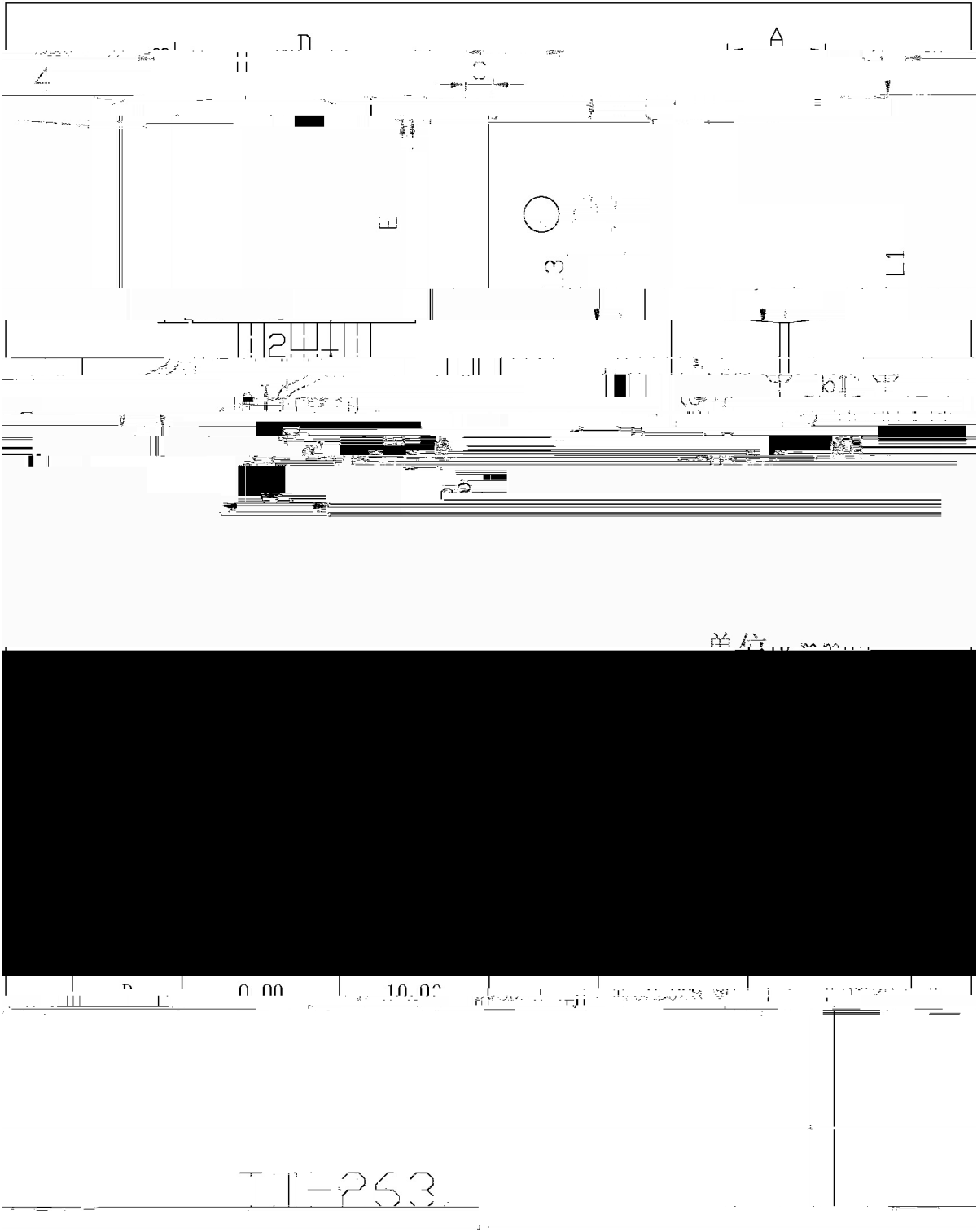
DATA SHEET

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$			25		
Turn-On Rise Time	t_r	$V_{GS}=10V$ $R_L=2.5\Omega$ $V_{DS}=50V$ $R_{GEN}=3\Omega$		17		ns

/ Electrical Characteristic Curve



/ Package Dimensions



() / Temperature Profile for IR Reflow Soldering(Pb-Free)

Note:

- | | | | | | |
|---|-------|-----|-----------|--------|--|
| 1 | 150 | 180 | 60 | 90sec; | 1.Preheating:150~180°C, Time:60~90sec. |
| 2 | 245±5 | | 5±0.5sec; | | 2.Peak Temp.:245±5°C, Duration:5±0.5sec. |
| 3 | | 2 | 10°C/sec. | | 3. Cooling Speed: 2~10°C/sec. |

/ Resistance to Soldering Heat Test Conditions

260±5°C	10±1 sec.	Temp.:260±5°C	Time:10±1 sec
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/ Packaging SPEC.

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Reel /	Reels/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	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 /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	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