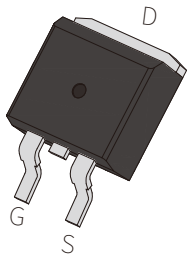
FEATURES

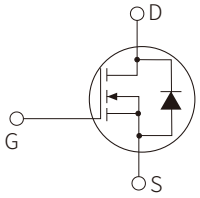
- High avalanche Current
- 100% Avalanche Tested



TO-263

APPLICATIONS

- Power Supply
- DC-DC Converters
- Load Switch



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

Parameter	Symbol	Value	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	30	V
Continuous drain current T_C =25°C	I_D	150	A
Pulse Drain Current Tested (Note2)T_C =25°C	I_{DM}	600	A
Gate-Source Voltage	V_{GS}	±20	V
Maximum Power Dissipation T_C =25°C	P_D	121	W
Diode Continuous Forward Current T_C =25°C	I_S	150	A
Thermal Resistance Junction—to—Case(Note1)	$R_{\theta JC}$	1.03	°C/W
Single Pulse Avalanche Energy (Note1)	E_{AS}	841	mJ
Junction temperature	T_J	-55 ~ +150	°C
Storage temperature	T_{STG}	-55 ~ +150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Static Electrical Characteristics @TJ= 25°C (unless otherwise stated)						
Drain-source Breakdown Voltage	BV_{DSS}	V_{GS}=0V,I_D=250μA	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V,V_{GS}=0V			1	μA
Gate–Body Leakage	I_{GSS}	V_{GS}=±20V,V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250μA	1		2.5	V
Drain-Source On–Resistance(Note4)	$R_{DS(on)}$	V_{GS}=10V,I_D=70A		1.4	1.8	mΩ
		V_{GS}=4.5V,I_D=30A		2	3.2	
Dynamic Electrical Characteristics @T,= 25°C (unless otherwise stated) (Note5)						
Input Capacitance	C_{iss}	V_{DS}=15V,V_{GS}=0V,F=1MHz		6230		pF
Output Capacitance	C_{oss}			920		
Reverse Transfer Capacitance	C_{rss}			770		
Total Gate Charge	Q_g	V_{GS}=10V,V_{DS}=15V,I_D=30A		118		nC
Gate Source Charge	Q_{gs}			10		
Gate Drain Charge	Q_{gd}			25		
Switching Characteristics (Note5)						
Turn–On Delay Time	$t_{d(on)}$	V_{GS}=10V,I_D=30A V_{DS}=15V,R_G=3Ω		33		ns
Turn–On Rise Time	t_r			40		
Turn–Off Delay Time	$t_{d(off)}$			116		
Turn–Off Fall Time	t_f			42		
Source- Drain Diode Characteristics@TJ= 25°C (unless otherwise stated)						
Diode forward voltage(Note 1)	V_{SD}	I_S=30A,V_{GS}=0V			1.2	V

Note:
1.Limited by TJmax, starting T_j = 25° C, R_G =4.5Ω, V_D=20V, V_{GS} =10V. Part not recommended for use above this value.
2.Repetitive Rating: Pulse width limited by maximum junction temperature.
3.Surface Mounted on FR4 Board, t ⩽ 10 sec
4. Pulse Test: pulse width ⩽ 300 us, duty cycle ⩽ 2%.
5. Guaranteed by design, not subject to production testing.

PARAMETER CHARACTERISTIC CURVE

Fig 1: Power De-rating

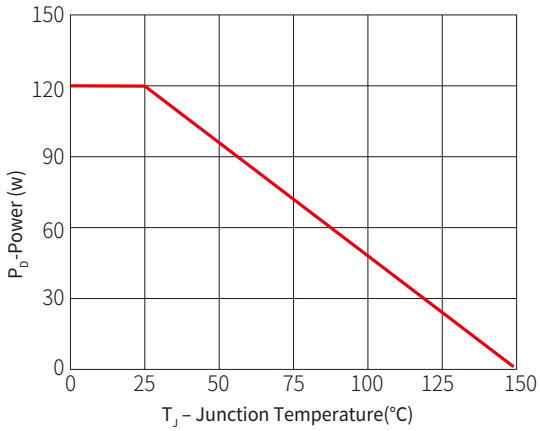


Figure 2: Rdson- Drain Current

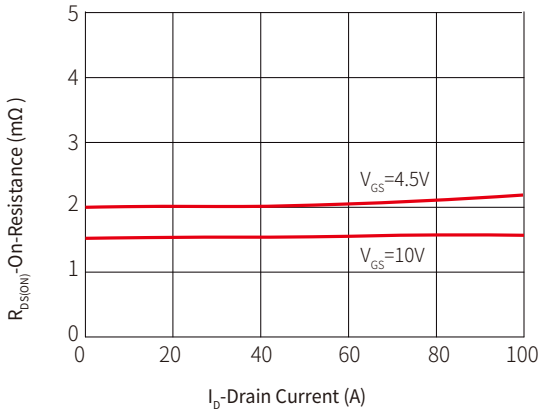


Figure 3: Rdson-Junction Temperature

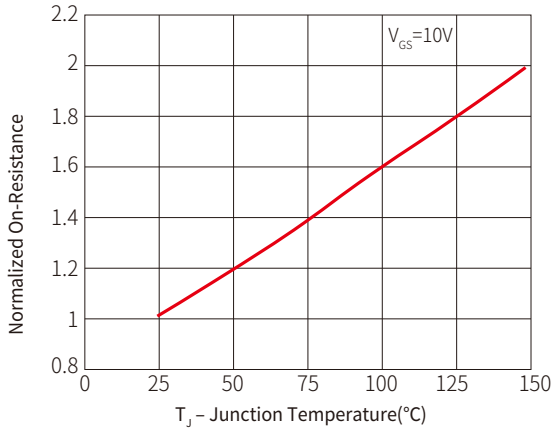


Figure 4: Output Characteristics

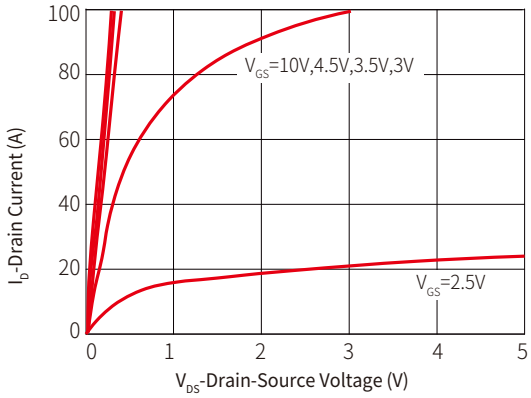


Figure 5: Capacitance vs V_{DS}

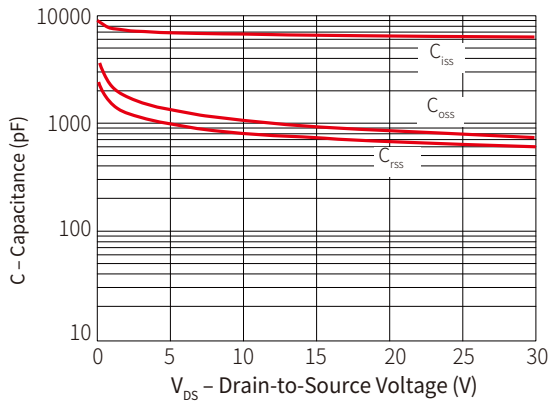


Figure 6: Gate Charge

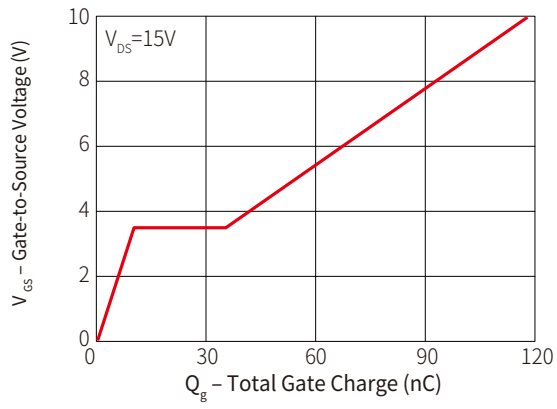


Figure 7: Typical Source-Drain Diode Forward Voltage

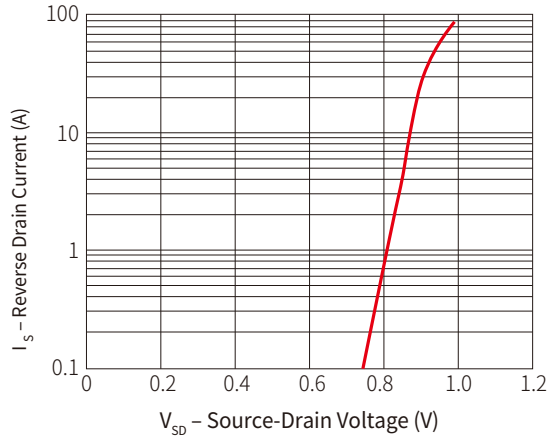


Figure 8: Transfer Characteristics

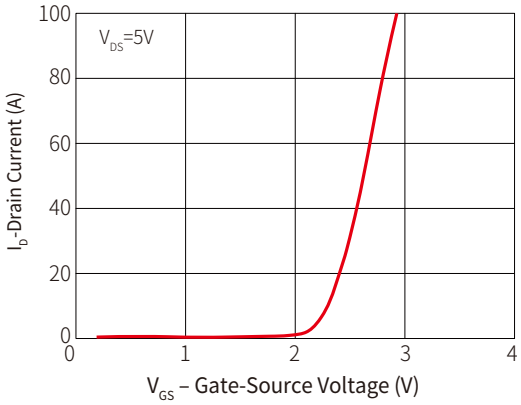


Figure 9: Safe Operation Area

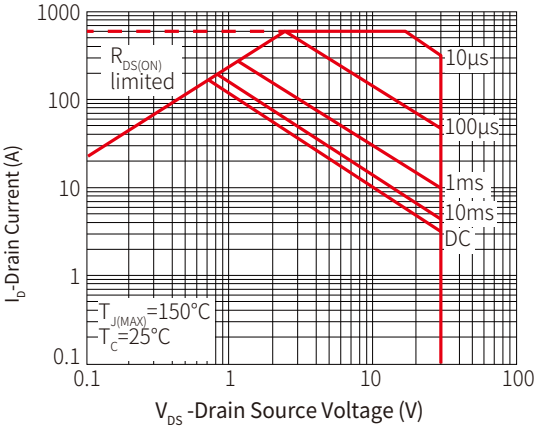
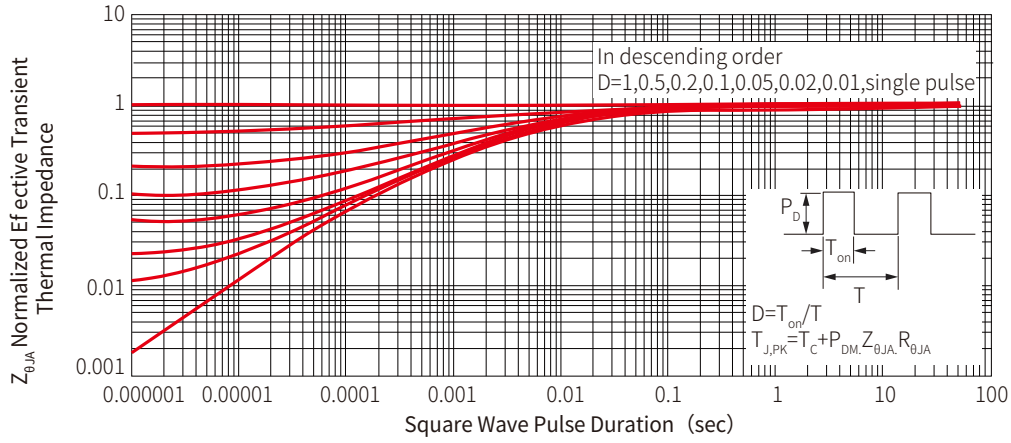
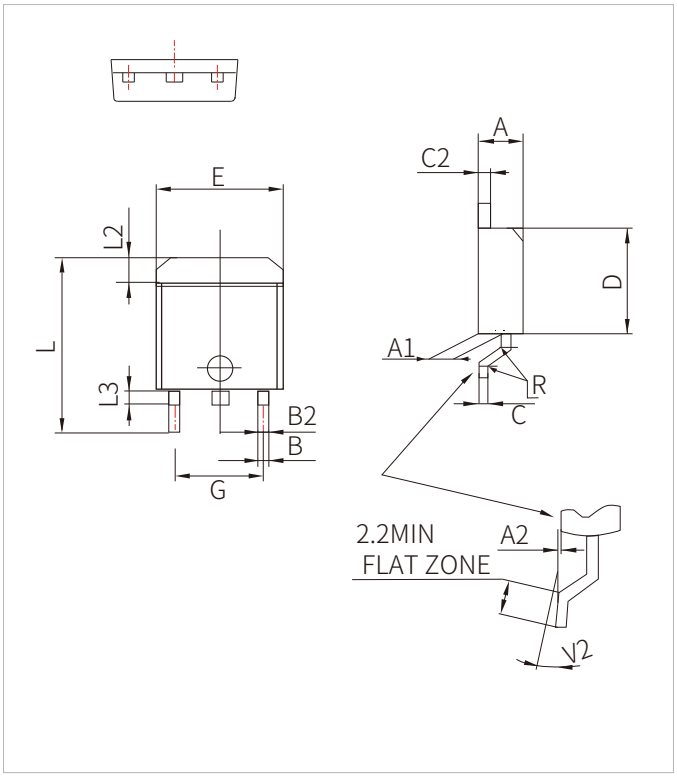


Figure 10: Normalized Maximum Transient Thermal Impedance



TO-263 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.30		4.60	0.169		0.181
A1	2.49		2.69	0.098		0.106
A2	0.03		0.23	0.001		0.009
B	0.70		0.93	0.027		0.037
B2	1.25	1.40		0.048	0.055	
C	0.45		0.60	0.017		0.024
C2	1.21		1.36	0.047		0.054
D	8.95		9.35	0.352		0.368
E	9.80		10.28	0.386		0.405
G	4.88		5.28	0.192		0.208
L	14.80		15.85	0.583		0.624
L2	1.27		1.40	0.050		0.055
L3	1.40		1.75	0.055		0.069
R		0.40			0.016	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Package	QTY/Reel	Reel Size
SNM150N03E	TO-263	800PCS	13”

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Minhang Shanghai China
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