Descriptions

This 80V 132A N-channel mosfet in a TO-263 plastic package.

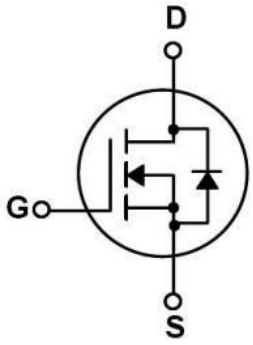
Features

- Ultra low on-resistance,fast switching
- Halogen-free product

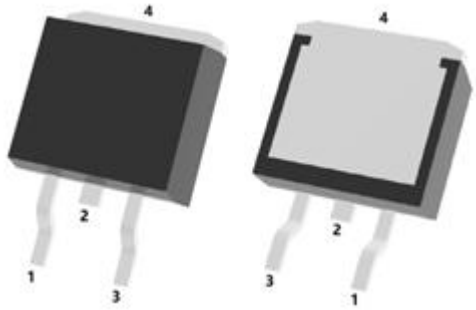
Applications

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

Absolute Maximum Ratings(Ta=25℃)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	80	V
Drain Current		I_D(Tc=25℃)	132	A
Pulsed Drain Current		I_{DM}	276	A
Gate-Source Voltage		V_{GS}	±20	V
Single Pulsed Avalanche Energy(L=0.5mH)		E_{AS}	940.8	mJ
Avalanche Current		I_{AS}	42	A
Total Power Dissipation		P_D(Tc=25℃)	173.6	W
Junction and Storage Temperature Range		T_J,T_{STG}	-55 to 150	℃
Thermal Resistance-Junction to Ambient	t≤10s	$R_{\theta JA}$	15	℃/W
	Steady-State		62	
Thermal Resistance-Junction to Case	Steady-State	$R_{\theta JC}$	0.72	

Electrical Characteristics(Ta=25℃)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V	I_D=250μA	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}=±20V	V_{DS}=0V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}	I_D=250μA	2	3	4	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V	I_D=20A		4.3	5.5	mΩ
	$R_{DS(on)}$	V_{GS}=6V	I_D=10A		5.8	9	
Forward On Voltage	V_{SD}	V_{GS}=0V	I_S=1A			1.2	V
Gate resistance	R_g	f=1MHz			1.85		Ω
Input Capacitance	C_{iss}	V_{DS}=25V f=1MHz	V_{GS}=0V		4130		pF
Output Capacitance	C_{oss}				1640		
Reverse Transfer Capacitance	C_{rss}				220		
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, I_D=20A	V_{DS}=40V,		62		nC
Gate Source Charge	Q_{gs}				20		
Gate Drain Charge	Q_{gd}				23		

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=2Ω R_{GEN}=3Ω		23		ns
Turn-On Rise Time	t_r			32		
Turn-Off Delay Time	$t_{d(off)}$			35		
Turn-Off Fall Time	t_f			27		

Electrical Characteristic Curve

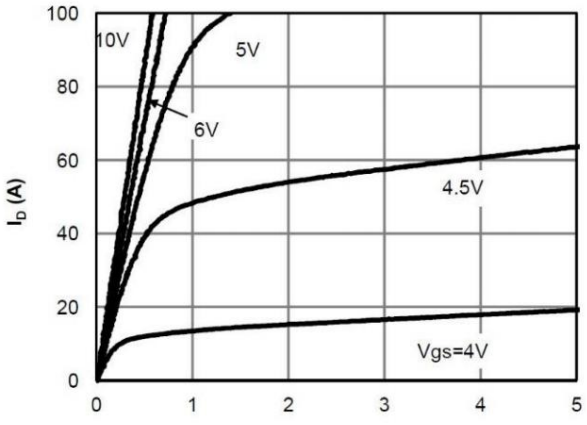


Fig 1: On-Region Characteristics

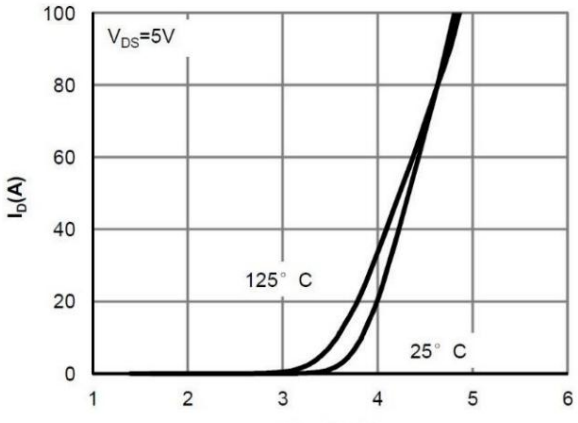


Figure 2: Transfer Characteristics

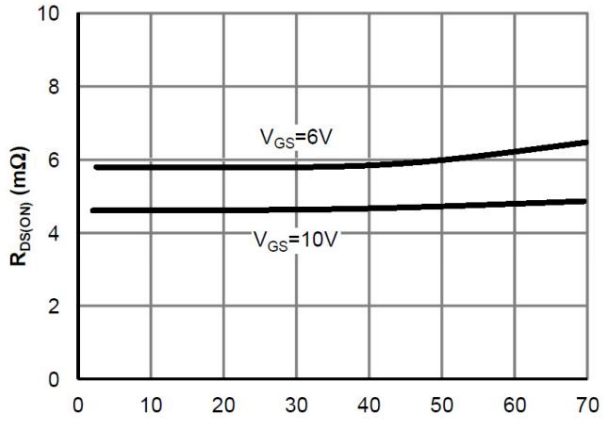


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

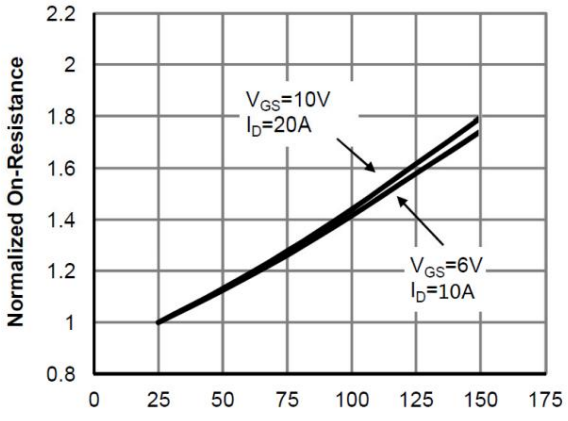


Figure 4: On-Resistance vs. Junction Temperature

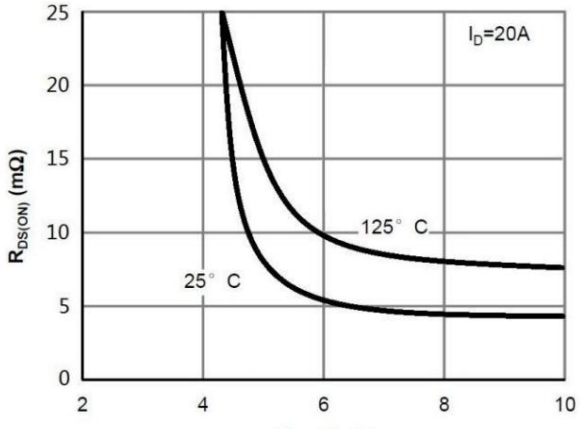


Figure 5: On-Resistance vs. Gate-Source Voltage

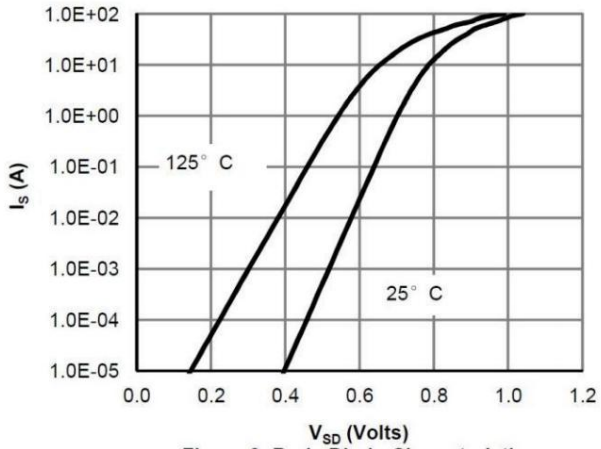


Figure 6: Body-Diode Characteristics

Electrical Characteristic Curve

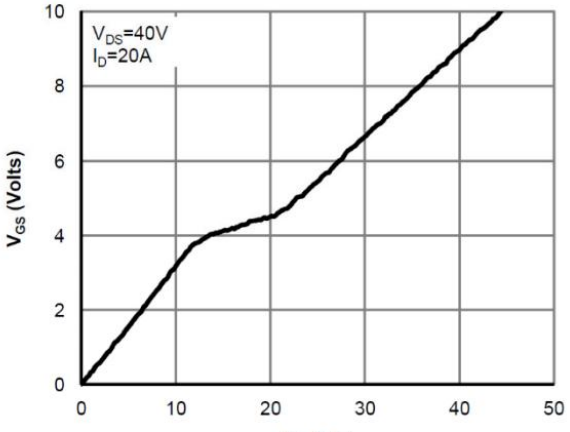


Figure 7: Gate-Charge Characteristics

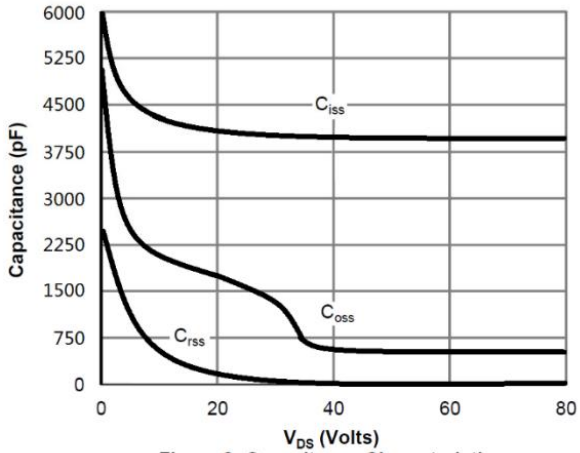


Figure 8: Capacitance Characteristics

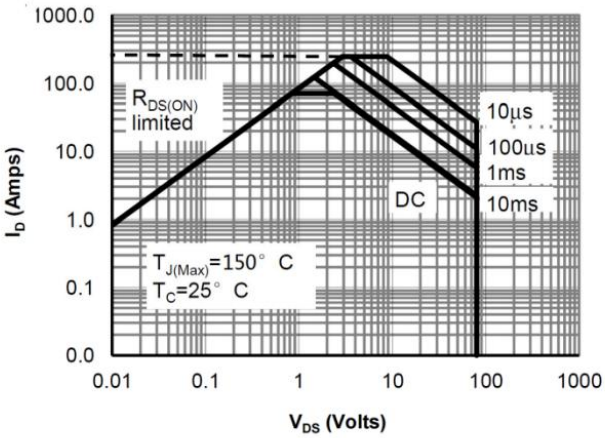


Figure 9: Maximum Forward Biased Safe Operating Area

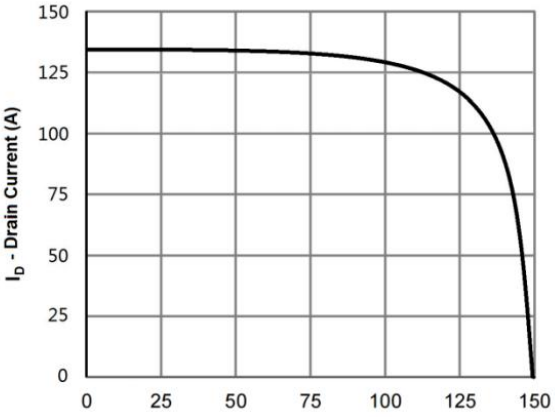


Figure 10: Maximum Continuous Drain Current vs Case Temperature

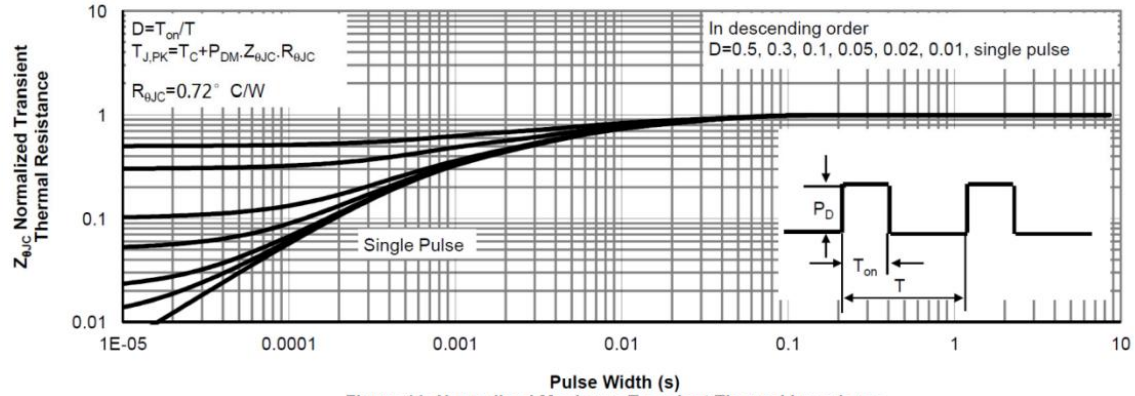


Figure 11: Normalized Maximum Transient Thermal Impedance

Marking Instructions

Note:

COT: Company Code.

055N08SH: Product Type Code

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

Packaging SPEC

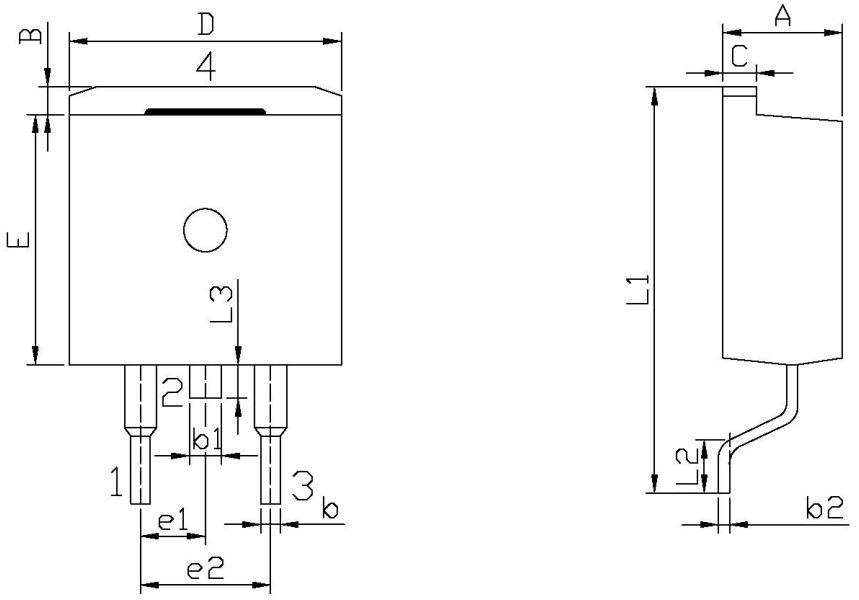
REEL

Package Type	Units					Dimension (unit：mm³)		
	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：mm³)		
	Units/Tube	Tubes/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Bo	Tube	Inner Box	Outer Box
TO-263	50	20	1,000	5	5,000	532×33×7.0	555×164×50	575×290×180

Package Outline 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			

TO-263