

200V N-Channel Enhancement Mode MOSFET

General Features

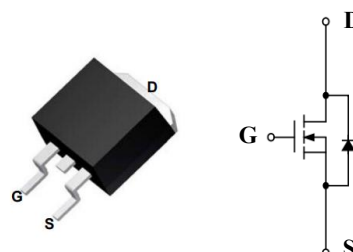
- Reliable and Rugged
- Lead Free and Green Devices Available
- RoHS Compliant
- Halogen-free available
- Moisture Sensitivity Level MSL1

Applications

- Synchronous Rectification
- Power Management in Inverter Systems
- DC/DC Converter

BV_{DSS}	R_{DS(ON)} (Max.)	I_D
200V	11m Ω	102A

TO-263-2



Ordering Information

Part Number	Package	Marking	Remark
FTB200N11	TO-263-2	200N11	Halogen Free

Absolute Maximum Ratings

TA =25°C unless otherwise specified

Symbol	Parameter		FTB200N11	Unit
V _{DSS}	Drain-to-Source Voltage		200	V
V _{GSS}	Gate-to-Source Voltage		±20	V
I _S	Diode Continuous Forward Current	T _C =25°C	51	A
I _D	Continuous Drain Current	T _C =25°C	102	
I _{DM} ^[1]	Pulsed Drain Current	T _C =25°C	306	
T _J	Maximum Junction Temperature		150	°C
T _{STG}	Storage Temperature Range		-55 to 150	

Electrical Characteristics

Static Characteristics

TA =25°C unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
BV_{DSX}	Drain-to-Source Breakdown Voltage	200	-	-	V	$V_{GS}=0V, I_{DS}=250 \mu A$
I_{DSS}	Zero Gate Voltage Drain Current	-	-	1	μA	$V_{DS}=160V,$ $V_{GS}=0V$
		-	-	30		
$V_{GS(th)}$	Gate Threshold Voltage	2	3	4	V	$V_{DS}=V_{GS}, I_{DS}=250 \mu A$
I_{GSS}	Gate Leakage Current	-	-	± 100	nA	$V_{GS}=\pm 20V, V_{DS}=0V$
$R_{DS(ON)}^{[2]}$	Drain-to-Source On-state Resistance	-	10	11	m Ω	$V_{GS}=10V, I_{DS}=50A$

Diode Characteristics

TA =25°C unless otherwise specified

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
$V_{SD}^{[2]}$	Diode Forward Voltage	-	0.8	-	V	$I_{SD}=25A, V_{GS}=0V$

Dynamic Characteristics ^[3]

TA =25°C unless otherwise specified

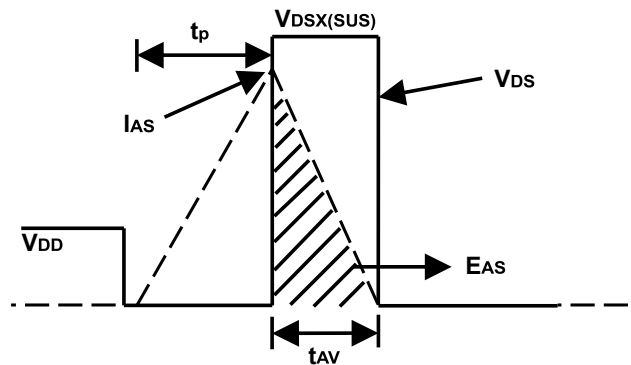
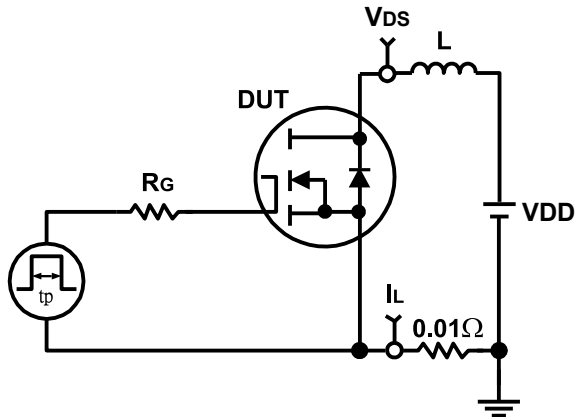
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
R_G	Gate Resistance	-	2	-	Ω	$V_{GS}=0V, V_{DS}=0V, F=1MHz$
C_{iss}	Input Capacitance	-	6826	-	pF	$V_{GS}=0V, V_{DS}=100V,$ $F=1.0MHz$
C_{oss}	Output Capacitance	-	356	-		
C_{rss}	Reverse Transfer Capacitance	-	46	-		

Note [1]: Pulse width is limited by maximum junction temperature.

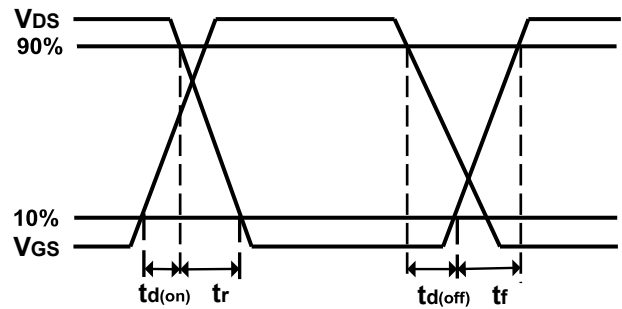
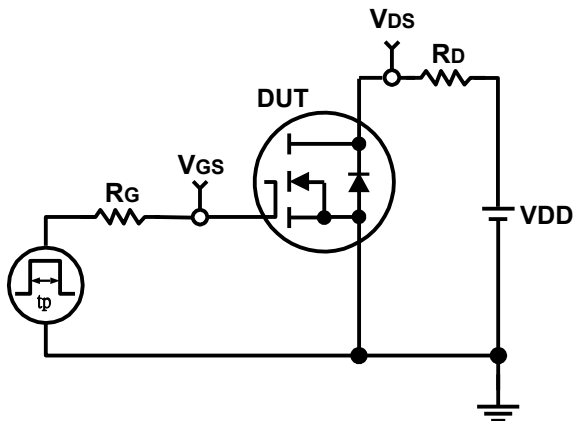
 Note [2]: Pulse test ; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

Note [3]: Guaranteed by design, not subject to production testing.

Avalanche Test Circuit and Waveforms



Switching Time Test Circuit and Waveforms



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