200V N-Channel Enhancement Mode MOSFET

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

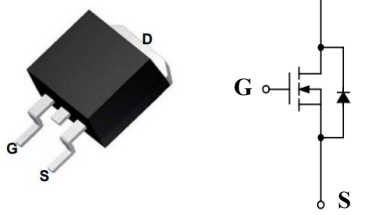
General Features

- 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

TO-263-2



Ordering Information

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

Absolute Maximum Ratings

TA =25℃ 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℃	51	A
I_D	Continuous Drain Current	T_C=25℃	102	
I_{DM}[1]	Pulsed Drain Current	T_C=25℃	306	
T_J	Maximum Junction Temperature		150	℃
T_{STG}	Storage Temperature Range		-55 to 150	

Electrical Characteristics

Static Characteristics

TA =25℃ 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 μA
I_{DSS}	Zero Gate Voltage Drain Current	-	-	1	μA	V_{DS}=160V, V_{GS}=0V
		-	-	30		T_J=85℃
$V_{GS(th)}$	Gate Threshold Voltage	2	3	4	V	V_{DS}=V_{GS}, I_{DS}=250 μA
I_{GSS}	Gate Leakage Current	-	-	±100	nA	V_{GS}=±20V, V_{DS}=0V
$R_{DS(ON)}$ [2]	Drain-to-Source On-state Resistance	-	10	11	mΩ	V_{GS}=10V, I_{DS}=50A

Diode Characteristics

TA =25℃ 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℃ unless otherwise specified

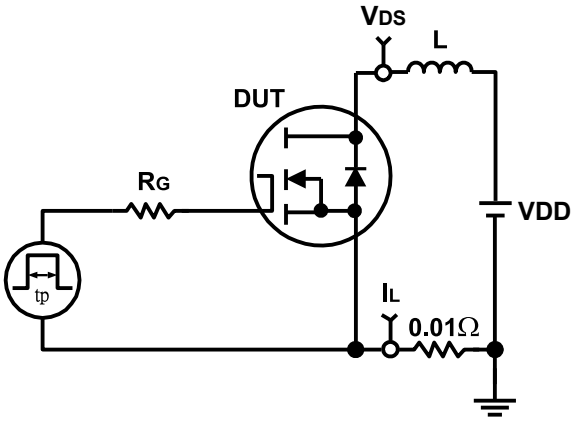
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conditions
R_G	Gate Resistance	-	2	-	Ω	V_{GS}=0V, V_{DS}=0V,F=1MHz
C_{iss}	Input Capacitance	-	6826	-	pF	V_{GS}=0V, V_{DS}=100V, F=1.0MHz
C_{oss}	Output Capacitance	-	356	-		
C_{rss}	Reverse Transfer Capacitance	-	46	-		

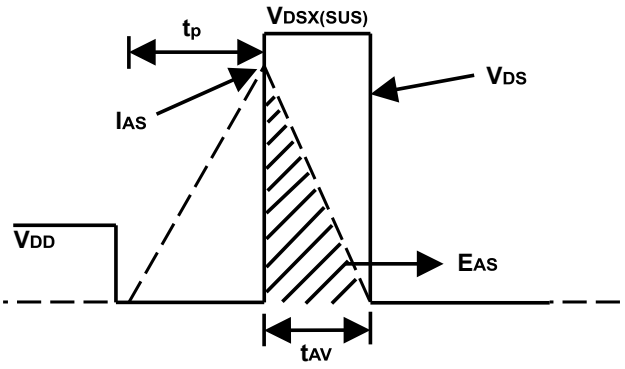
Note [1]: Pulse width is limited by maximum junction temperature.

Note [2]: Pulse test ; pulse width≤300us, duty cycle≤2%.

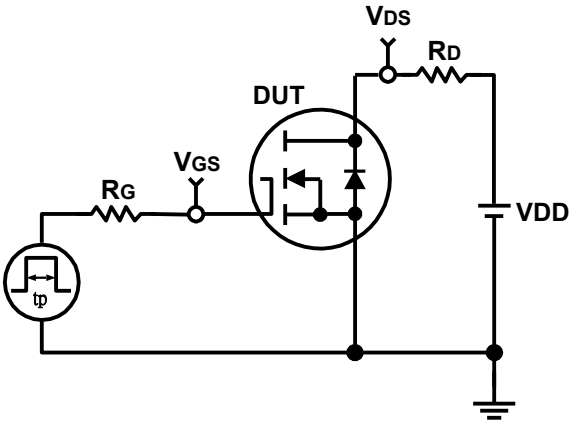
Note [3]: Guaranteed by design, not subject to production testing.

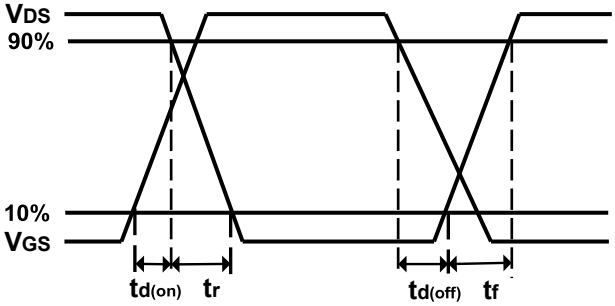
Avalanche Test Circuit and Waveforms





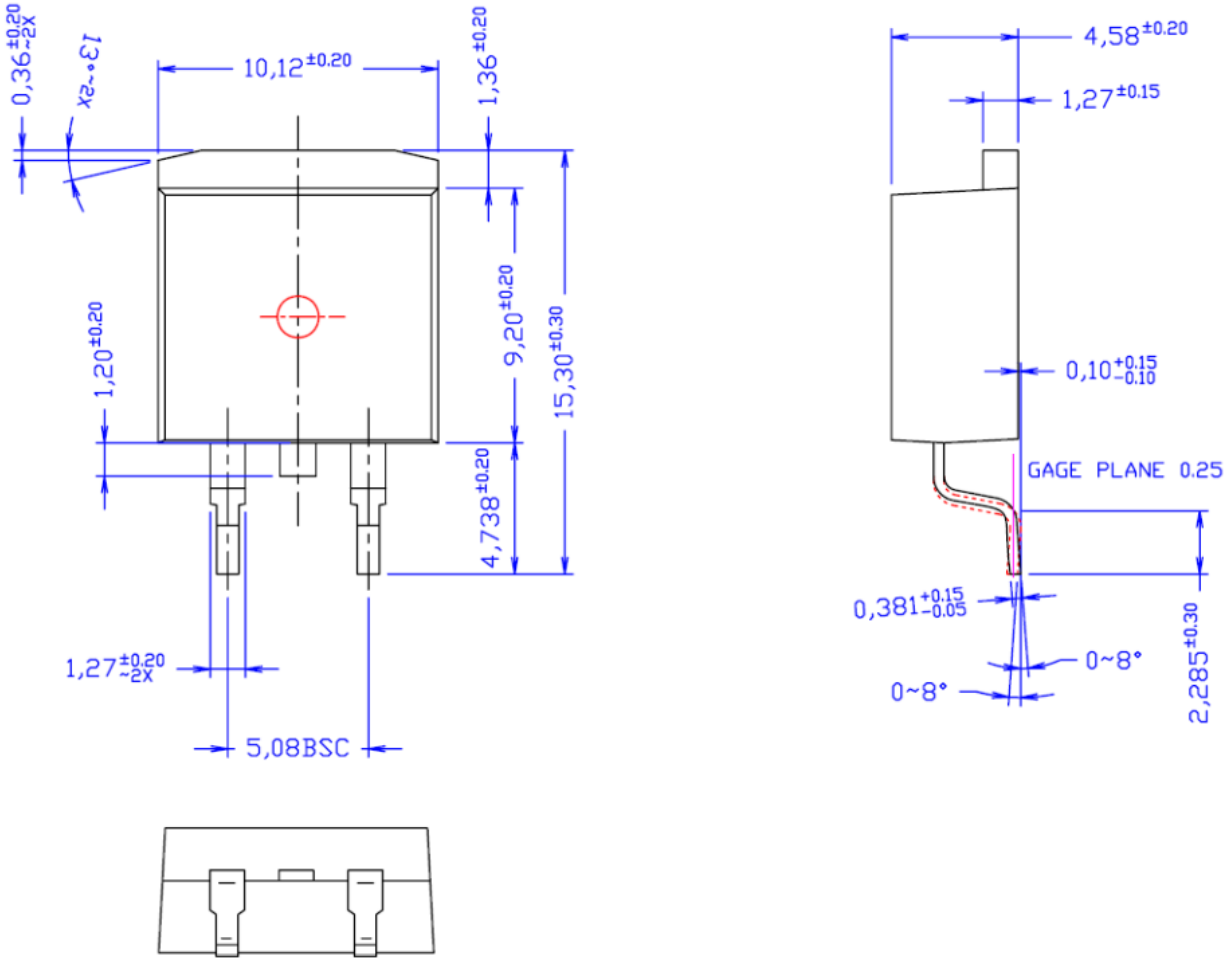
Switching Time Test Circuit and Waveforms





Package Dimensions

TO-263-2



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