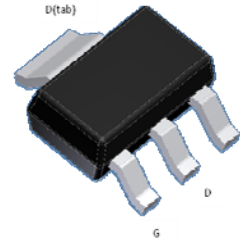
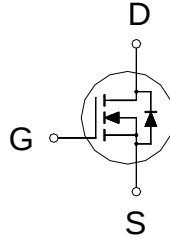


N-Channel Logic Level Enhancement Mode Field Effect Transistor

Product Summary:

BV _{DSS}	150V
R _{DS(on)} (MAX.)	500mΩ
I _D	2.1A



UIS, R_g 100% Tested

Pb-Free Lead Plating & Halogen Free



ABSOLUTE MAXIMUM RATINGS (T_C = 25 °C Unless Otherwise Noted)

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNIT
Gate-Source Voltage		V _{GS}	±20	V
Continuous Drain Current	T _C = 25 °C	I _D	2.1	A
	T _C = 100 °C		1.4	
Pulsed Drain Current ¹		I _{DM}	8.4	
Avalanche Current		I _{AS}	2	
Avalanche Energy	L = 0.1mH, I _D =2A, R _G =25Ω	E _{AS}	0.2	mJ
Repetitive Avalanche Energy ²	L = 0.05mH	E _{AR}	0.1	
Power Dissipation	T _C = 25 °C	P _D	6.25	W
	T _C = 100 °C		2.5	
Operating Junction & Storage Temperature Range		T _J , T _{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNIT
Junction-to-Case	R _{θJC}		20	°C / W
Junction-to-Ambient ³	R _{θJA}		150	

¹Pulse width limited by maximum junction temperature.

²Duty cycle ≤ 1%

ELECTRICAL CHARACTERISTICS (T_c = 25 °C, Unless Otherwise Noted)

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN	TYP	MAX	
STATIC						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	150			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.0	1.5	3.0	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 120V, V _{GS} = 0V			1	μA
		V _{DS} = 100V, V _{GS} = 0V, T _J = 125 °C			25	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 10V, V _{GS} = 10V	3			A
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 10V, I _D = 1.1A		430	500	mΩ
		V _{GS} = 5V, I _D = 0.6A		450	540	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 1.1A		2		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 25V, f = 1MHz		572		pF
Output Capacitance	C _{oss}			13		
Reverse Transfer Capacitance	C _{rss}			11		
Gate Resistance	R _g	V _{GS} = 15mV, V _{DS} = 0V, f = 1MHz		3.5		Ω
Total Gate Charge ^{1,2}	Q _g	V _{DS} = 75V, V _{GS} = 10V, I _D = 1.1A		14.1		nC
Gate-Source Charge ^{1,2}	Q _{gs}			2.8		
Gate-Drain Charge ^{1,2}	Q _{gd}			3.4		
Turn-On Delay Time ^{1,2}	t _{d(on)}	V _{DS} = 75V, I _D = 1A, V _{GS} = 10V, R _{GS} = 6Ω		12		nS
Rise Time ^{1,2}	t _r			15		
Turn-Off Delay Time ^{1,2}	t _{d(off)}			16		
Fall Time ^{1,2}	t _f			15		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _c = 25 °C)						
Continuous Current	I _S				2.1	A
Pulsed Current ³	I _{SM}				8.4	
Forward Voltage ¹	V _{SD}	I _F = I _S , V _{GS} = 0V			1.3	V
Reverse Recovery Time	t _{rr}	I _F = 1.5A, dI _F /dt = 100A / μS		80		nS
Reverse Recovery Charge	Q _{rr}			120		nC

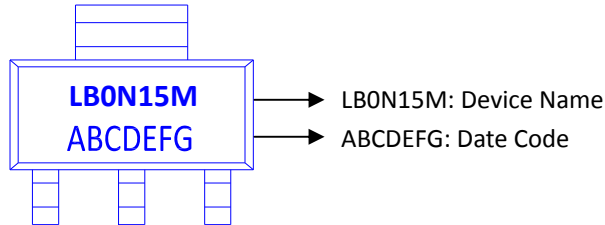
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

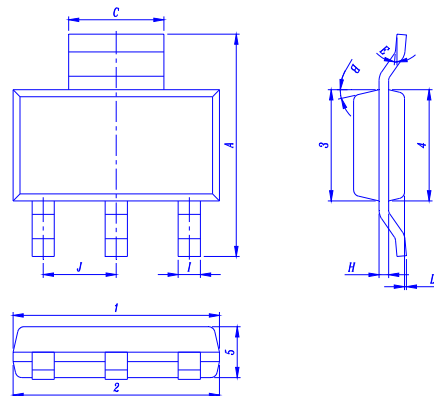
³Pulse width limited by maximum junction temperature.

Ordering & Marking Information:

Device Name: LB0N15M for SOT-223



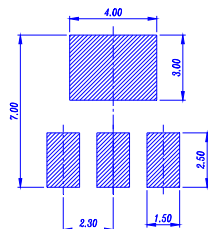
Outline Drawing



Dimension in mm

Dimension	A	C	D	E	I	H	B	J	1	2	3	4	5
Min.	6.70	2.90	0.02	0°	0.60	0.25			6.30	6.30	3.30	3.30	1.40
Typ.							13°	2.30					
Max.	7.30	3.10	0.10	10°	0.80	0.35			6.70	6.70	3.70	3.70	1.80

Recommended minimum pads



TYPICAL CHARACTERISTICS

