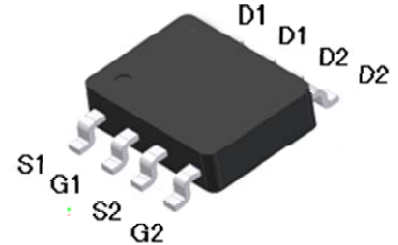
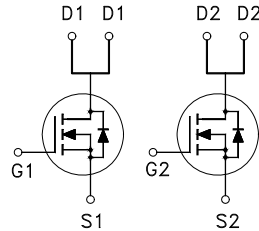


Dual N-Channel Logic Level Enhancement Mode Field Effect Transistor

Product Summary:

	N-CH
BV _{DSS}	100V
R _{DS(on)} (MAX.)	150mΩ
I _D	3A



Pb-Free Lead Plating & Halogen Free



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

PARAMETERS/TEST CONDITIONS		SYMBOL	LIMITS	UNIT
Gate-Source Voltage		V _{GS}	±20	V
Continuous Drain Current	T _A = 25 °C	I _D	3	A
	T _A = 100 °C		2.1	
Pulsed Drain Current ¹		I _{DM}	12	
Power Dissipation	T _A = 25 °C	P _D	2	W
	T _A = 100 °C		0.8	
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}		25	°C / W
Junction-to-Ambient	R _{θJA}		62.5	

¹Pulse width limited by maximum junction temperature.

²Duty cycle ≤ 1%

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$, 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	100			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	1.0	2.0	3.0	
Gate-Body Leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±20V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 80V, V _{GS} = 0V			1	μA
		V _{DS} = 70V, V _{GS} = 0V, T _J = 125 °C			25	
On-State Drain Current ¹	I _{D(ON)}	V _{DS} = 5V, V _{GS} = 10V	3			A
Drain-Source On-State Resistance ¹	R _{DS(ON)}	V _{GS} = 10V, I _D = 2A		125	150	mΩ
		V _{GS} = 5V, I _D = 1.5A		168	225	
Forward Transconductance ¹	g _{fs}	V _{DS} = 5V, I _D = 2A		8		S
DYNAMIC						
Input Capacitance	C _{iss}	V _{GS} = 0V, V _{DS} = 20V, f = 1MHz		1030		pF
Output Capacitance	C _{oss}			50		
Reverse Transfer Capacitance	C _{rss}			42		
Total Gate Charge ^{1,2}	Q _g	V _{DS} = 80V, V _{GS} = 10V, I _D = 2A		23		nC
Gate-Source Charge ^{1,2}	Q _{gs}			2.3		
Gate-Drain Charge ^{1,2}	Q _{gd}			6.1		
Turn-On Delay Time ^{1,2}	t _{d(on)}	V _{DS} = 50V, I _D = 1A, V _{GS} = 10V, R _{GS} = 6Ω		12		nS
Rise Time ^{1,2}	t _r			20		
Turn-Off Delay Time ^{1,2}	t _{d(off)}			25		
Fall Time ^{1,2}	t _f			25		
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _c = 25 °C)						
Continuous Current	I _S				3	A
Pulsed Current ³	I _{SM}				12	
Forward Voltage ¹	V _{SD}	I _F = I _S , V _{GS} = 0V			1.3	V

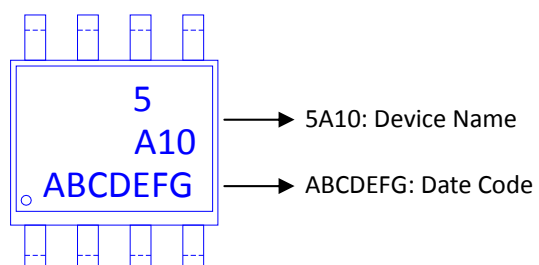
¹Pulse test : Pulse Width $\leq 300\text{ }\mu\text{sec}$, Duty Cycle $\leq 2\%$.

²Independent of operating temperature.

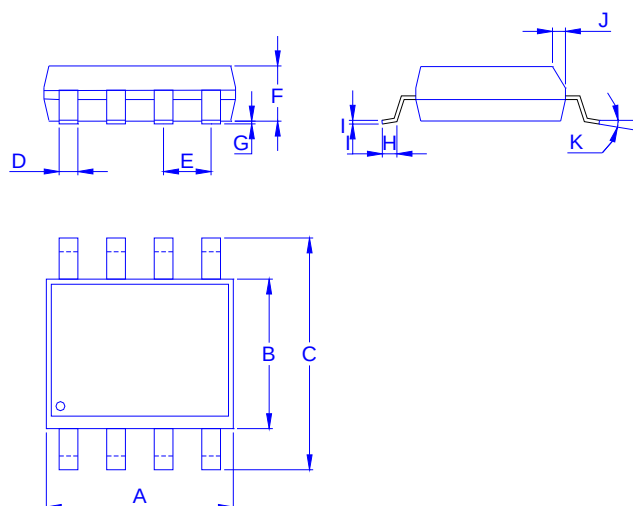
³Pulse width limited by maximum junction temperature.

Ordering & Marking Information:

Device Name: LB5N10HD for SOP-8



Outline Drawing



Dimension in mm

Dimension	A	B	C	D	E	F	G	H	I	J	K
Min.	4.70	3.70	5.80	0.33		1.20	0.08	0.40	0.19	0.25	0°
Typ.					1.27						
Max.	5.10	4.10	6.20	0.51		1.62	0.28	0.83	0.26	0.50	8°

