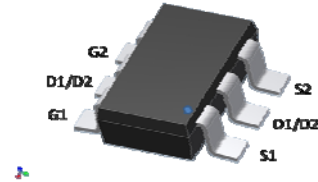
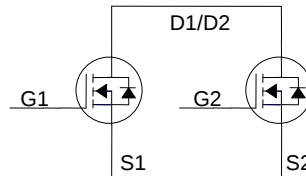


Dual N-Channel Logic Level Enhancement Mode Field Effect Transistor

Product Summary:

BV _{DSS}	20V
R _{DS(on)} (MAX.)	30mΩ
I _D	5A



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}	±12	V
Continuous Drain Current	T _A = 25 °C	I _D	5	A
	T _A = 70 °C		3.6	
Pulsed Drain Current ¹		I _{DM}	20	
Power Dissipation	T _A = 25 °C	P _D	1.25	W
	T _A = 70 °C		0.83	
Operating Junction & Storage Temperature Range		T _j , T _{stg}	-55 to 150	°C

THERMAL RESISTANCE RATINGS

THERMAL RESISTANCE	SYMBOL	TYPICAL	MAXIMUM	UNIT
Junction-to-Ambient	R _{θJA}		100	°C / W

¹Pulse width limited by maximum junction temperature.

²Duty cycle ≤ 1%

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

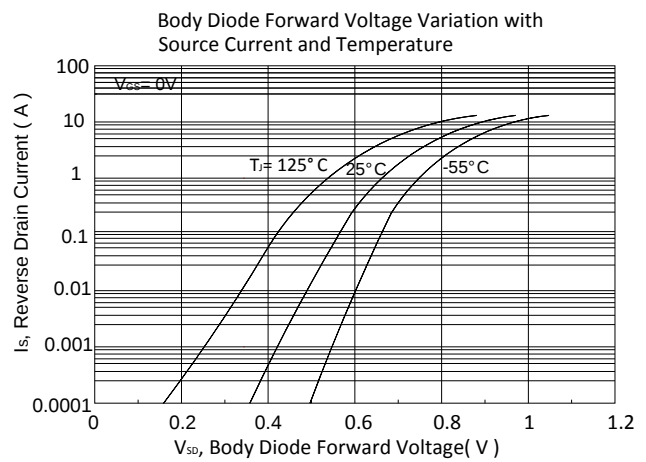
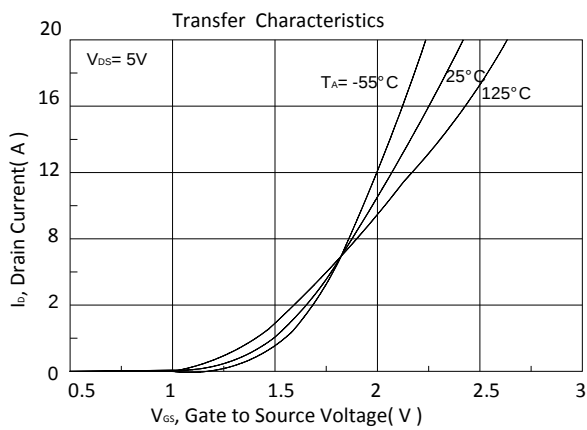
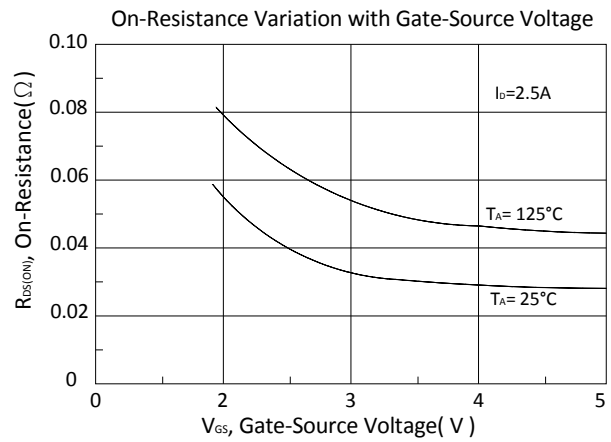
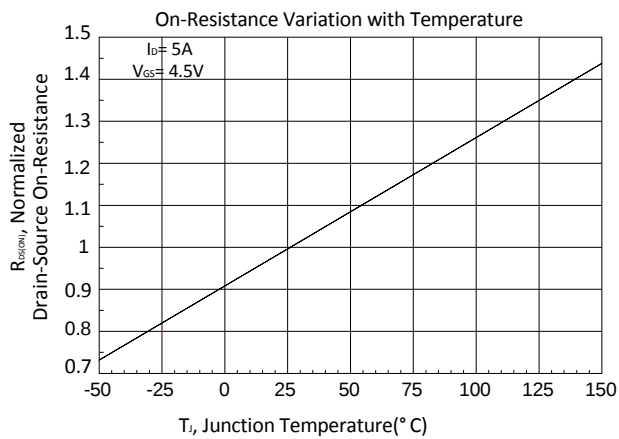
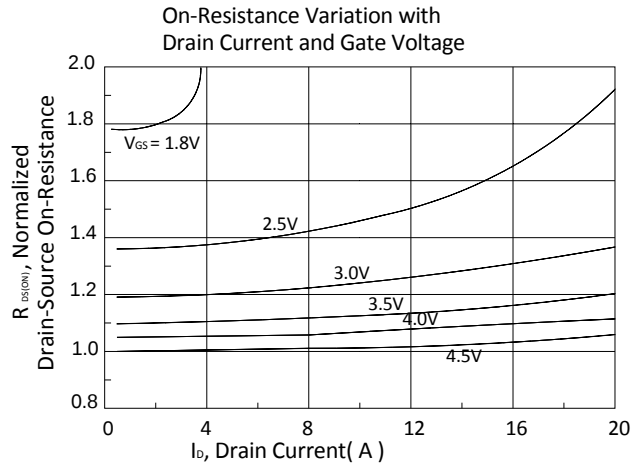
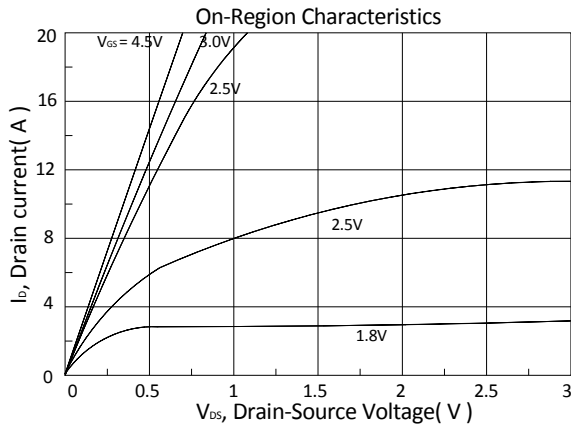
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT	
			MIN	TYP	MAX		
STATIC							
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.45	0.75	1.2		
Gate-Body Leakage	I_{GSS}	$V_{DS} = 0V, V_{GS} = \pm 12V$			± 100	nA	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 16V, V_{GS} = 0V$			1	μA	
		$V_{DS} = 16V, V_{GS} = 0V, T_J = 125^\circ C$			10		
On-State Drain Current ¹	$I_{D(ON)}$	$V_{DS} = 5V, V_{GS} = 4.5V$	5			A	
Drain-Source On-State Resistance ¹	$R_{DS(ON)}$	$V_{GS} = 4.5V, I_D = 5A$		26	30	m Ω	
		$V_{GS} = 2.5V, I_D = 4A$		45	51		
Forward Transconductance ¹	g_{fs}	$V_{DS} = 5V, I_D = 5A$		7		S	
DYNAMIC							
Input Capacitance	C_{iss}	$V_{GS} = 0V, V_{DS} = 10V, f = 1MHz$		280		pF	
Output Capacitance	C_{oss}			47			
Reverse Transfer Capacitance	C_{rss}			38			
Total Gate Charge ^{1,2}	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V,$ $I_D = 5A$		6.2		nC	
Gate-Source Charge ^{1,2}	Q_{gs}			0.9			
Gate-Drain Charge ^{1,2}	Q_{gd}			2.1			
Turn-On Delay Time ^{1,2}	$t_{d(on)}$	$V_{DS} = 10V,$ $I_D = 1A, V_{GS} = 4.5V, R_{GS} = 6\Omega$		12		nS	
Rise Time ^{1,2}	t_r			15			
Turn-Off Delay Time ^{1,2}	$t_{d(off)}$			30			
Fall Time ^{1,2}	t_f			13			
SOURCE-DRAIN DIODE RATINGS AND CHARACTERISTICS (T _c = 25 °C)							
Continuous Current	I_S				2	A	
Pulsed Current ³	I_{SM}				8		
Forward Voltage ¹	V_{SD}	$I_F = I_S, V_{GS} = 0V$			1.2	V	

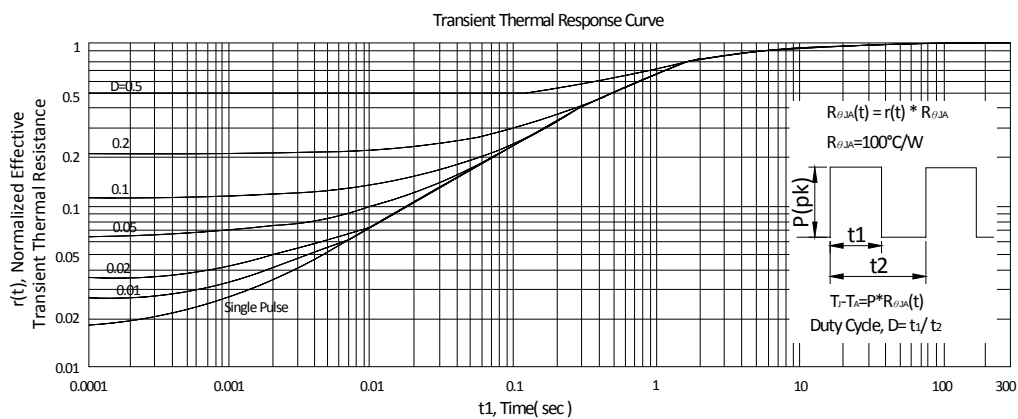
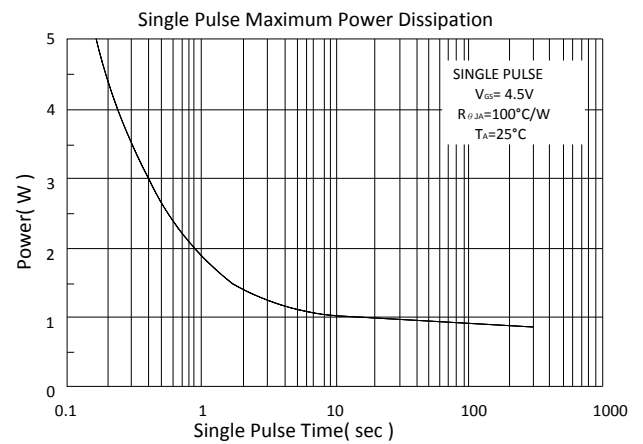
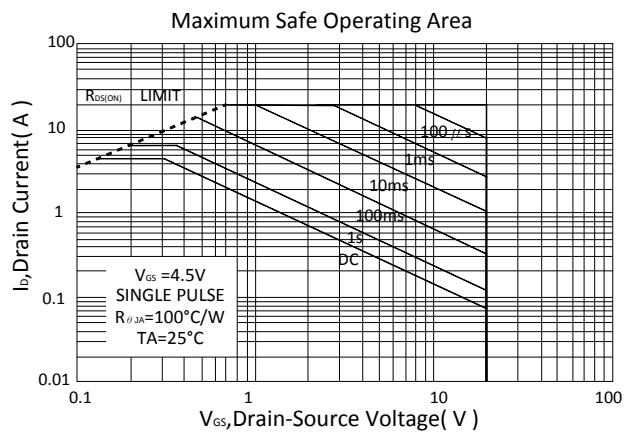
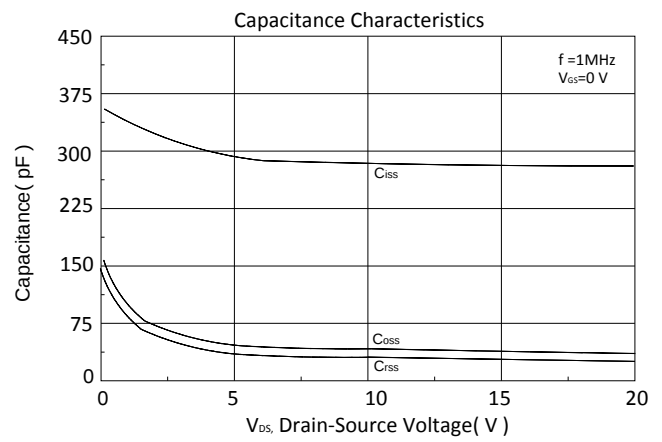
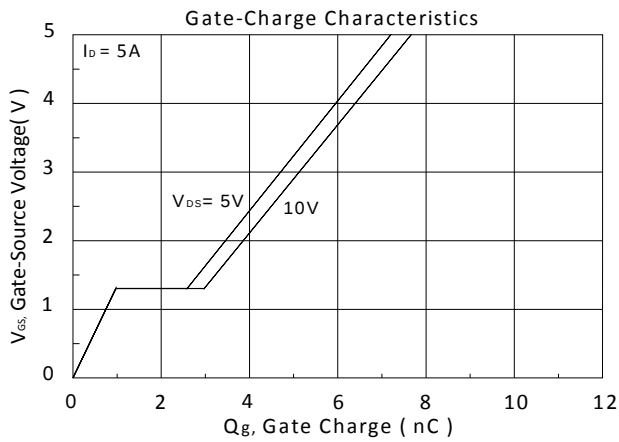
¹Pulse test : Pulse Width ≤ 300 μsec, Duty Cycle ≤ 2%.

²Independent of operating temperature.

³Pulse width limited by maximum junction temperature.

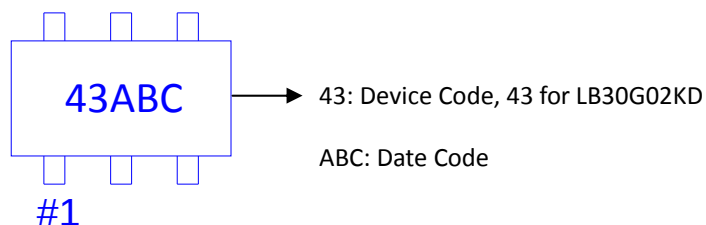
TYPICAL CHARACTERISTICS



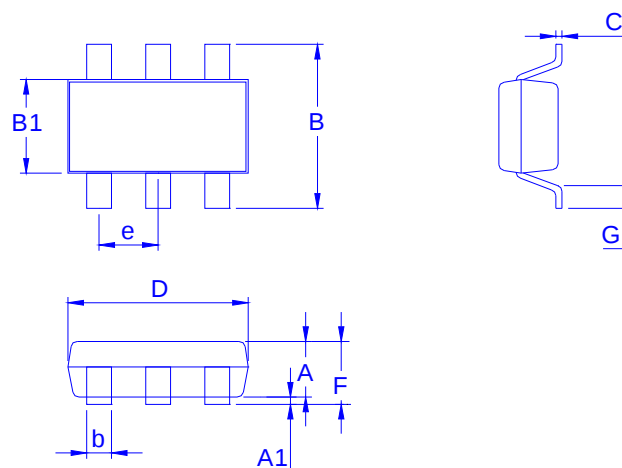


Ordering & Marking Information:

Device Name: LB30G02KD for TSOP-6



Outline Drawing



Dimension in mm

Dimension	A	A1	B	B1	b	C	D	e	F	G
Min.	0.85	0	2.50	1.50	0.30	0.08	2.70		0.85	0.20
Typ.	0.95		2.80	1.60	0.40		2.90	0.95		
Max.	1.25	0.15	3.10	1.70	0.50	0.20	3.10		1.40	0.60

Footprint

