

# ASB05LCDF

## FEATURES:

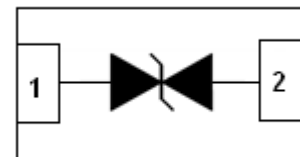
- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 5.0V
- ✧ Low leakage current
- ✧ Ultra Low Capacitance: 0.5 pF
- ✧ ROHS compliant



0402(DFN-2L)

## MAIN APPLICATIONS

- ✧ USB Ports
- ✧ Display Port
- ✧ Wireless Communications
- ✧ Digital Visual Interface (DVI)
- ✧ Cellular Handsets & Accessories



PIN Configuration

## PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)

## MECHANICAL CHARACTERISTICS

- ✧ Package 0402(DFN-2L)
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Quantity Per Reel : 10,000pcs
- ✧ Lead Finish :Halogen Free
- ✧ Marking Code: 5BL or N

## ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , RH=45%-75%, unless otherwise noted)

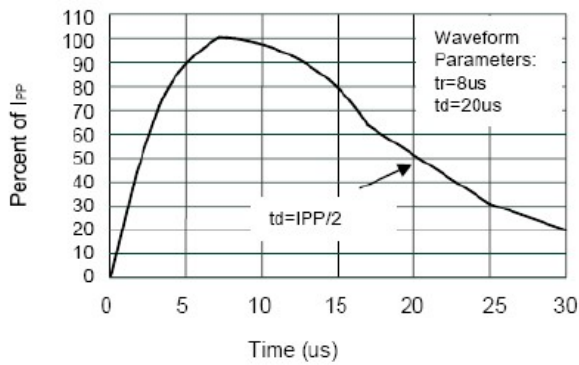
Symbol	Parameter	Value	Units
$V_{\text{ESD}}$	ESD per IEC 61000-4-2 (Air)	$\pm 20$	kV
	ESD per IEC 61000-4-2 (Contact)	$\pm 20$	
$P_{\text{PP}}$	Peak Pulse Power (8/20 $\mu\text{s}$ )	88	W
$T_{\text{OPT}}$	Operating Temperature	-55~125	$^\circ\text{C}$
$T_{\text{STG}}$	Storage Temperature	-55~150	$^\circ\text{C}$

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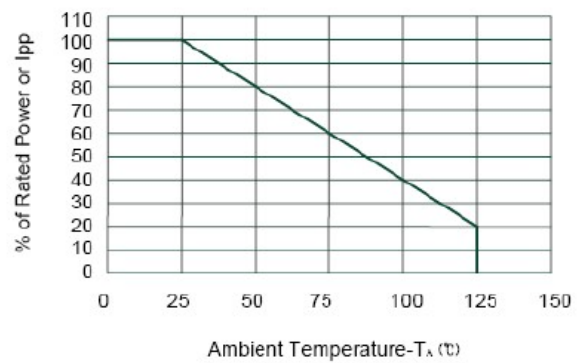
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				5.0	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	6.0			V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 5V			100	nA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			13	V
		I <sub>PP</sub> = 4A, t <sub>p</sub> = 8/20μs			22	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz		0.5		pF

## RATINGS AND V-I CHARACTERISTICS CURVES (T<sub>A</sub>=25°C, unless otherwise noted)



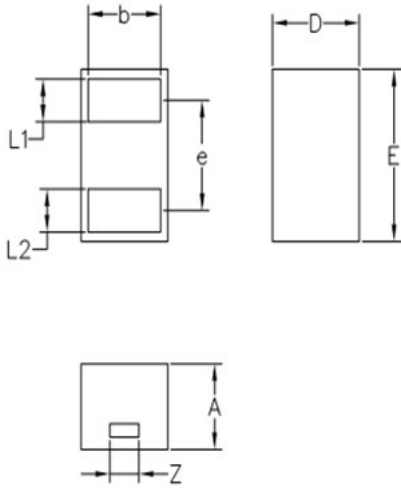
Pulse Waveform



Power Derating Curve

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## PACKAGE MECHANICAL DATA



**NOTE: ALL DIMENSIONS IN MM**

	MIN	NOM	MAX
<b>D</b>	<b>0.55</b>	<b>0.60</b>	<b>0.65</b>
<b>E</b>	<b>0.95</b>	<b>1.00</b>	<b>1.05</b>
<b>L1</b>	<b>0.20</b>	<b>0.25</b>	<b>0.30</b>
<b>L2</b>	<b>0.20</b>	<b>0.25</b>	<b>0.30</b>
<b>A</b>	<b>0.45</b>	<b>0.50</b>	<b>0.55</b>
<b>Z</b>	<b>0.15</b>	<b>0.20</b>	<b>0.25</b>
<b>b</b>	<b>0.45</b>	<b>0.50</b>	<b>0.55</b>
<b>e</b>		<b>0.64BSC</b>	

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