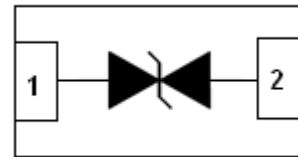


### FEATURES:

- ✧ 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
- ✧ Compliant to Halogen-free
- ✧ Suffix "-Q1" for AEC-Q101



DFN-2L(0402)



PIN Configuration

### MAIN APPLICATIONS

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

### PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$ (air),  $\pm 15\text{kV}$  (contact)
- ✧ IEC61000-4-5 (Lightning) 4A (8/20us)

### MECHANICAL CHARACTERISTICS

- ✧ Package DFN-2L(0402)
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Lead Finish :Halogen Free
- ✧ Marking Code: 5BL or N $\infty$

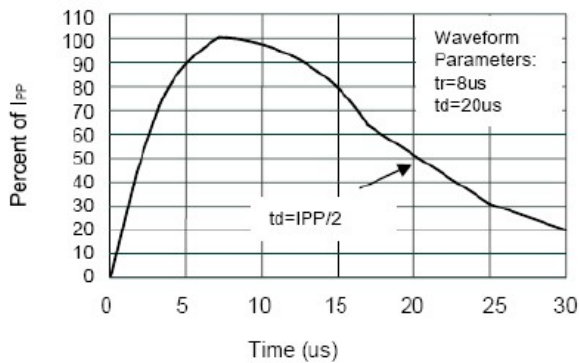
### ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , RH=45%-75%, unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 15$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu\text{s}$ )	80	W
$T_{OPT}$	Operating Temperature	-55~125	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55~150	$^\circ\text{C}$

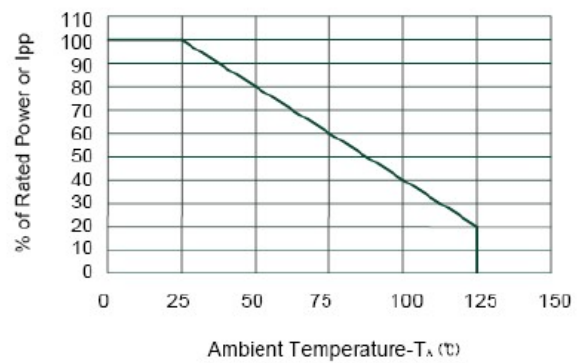
## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ )

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				5.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6.0			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5\text{V}$			1	$\mu\text{A}$
$V_C$	Clamping Voltage	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			13	V
		$I_{PP} = 3.5\text{A}, t_p = 8/20\mu\text{s}$			22	V
$C_J$	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		0.5		pF

## RATINGS AND V-I CHARACTERISTICS CURVES ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

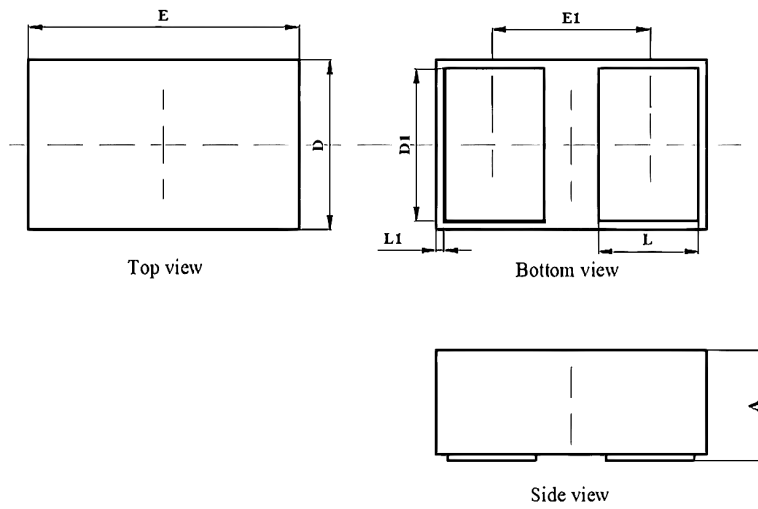


Pulse Waveform



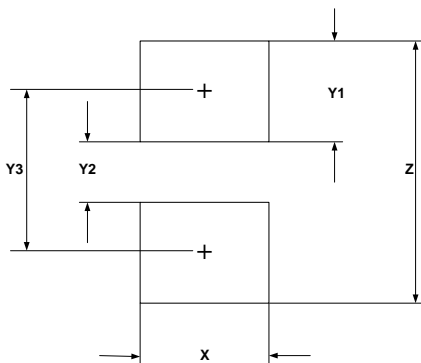
Power Derating Curve

### PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
<b>A</b>	0.350	0.450	0.014	0.018
<b>D</b>	0.550	0.650	0.022	0.026
<b>E</b>	0.950	1.050	0.037	0.041
<b>D1</b>	0.420	0.520	0.017	0.020
<b>E1</b>	0.550	0.650	0.022	0.026
<b>L</b>	0.270	0.370	0.011	0.015
<b>L1</b>	0.000	0.100	0.000	0.004

### PAD DIMENSIONS



SYM	Dimensions	
	MILLIMETERS	INCHES
X	0.60	0.024
Y1	0.50	0.020
Y2	0.30	0.012
Y3	0.80	0.032
Z	1.30	0.052