

## Features

- Low capacitance: 15pF(Typ.)
- Reverse Working Voltage: 5V
- Bi-directional protection
- DFN0603 surface mount package
- IEC 61000-4-2 (ESD Air):  $\pm 30\text{kV}$
- IEC 61000-4-2 (ESD Contact):  $\pm 30\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 8A

## Applications

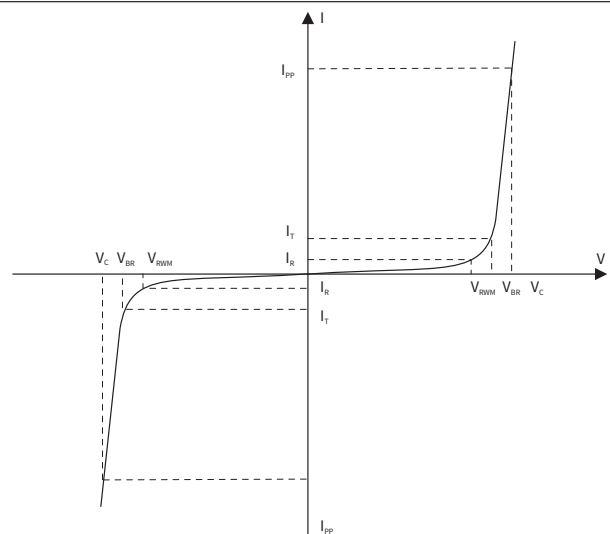
- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- Digital cameras
- PADS

## Maximum Ratings (Ta=25°C Unless otherwise specified)

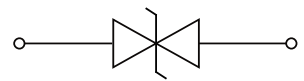
SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{\text{ESD}}$	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2( Air )	$\pm 30$	KV
		ESD per IEC 61000-4-2( Contact )	$\pm 30$	KV
$P_{\text{PP}}$	Peak Pulse Power	$t_p = 8/20 \mu\text{s}$	80	W
$I_{\text{PP}}$	Rated Peak Pulse Current	$t_p = 8/20 \mu\text{s}$	7	A
$T_J$	Operating JunctionTemperature Range	—	-55 to +125	°C
$T_{\text{stg}}$	Storage Temperature Range	—	-55 to +150	°C

## Electrical Parameter

SYMBOL	PARAMETER
$V_C$	Clamping Voltage @ $I_{\text{PP}}$
$V_{\text{BR}}$	Breakdown Voltage @ $I_T$
$I_{\text{PP}}$	Peak Pulse Current
$I_T$	Test Current
$I_R$	Reverse Leakage Current @ $V_{\text{RWM}}$
$V_{\text{RWM}}$	Peak Reverse Working Voltage
$P_{\text{PP}}$	Peak Pulse Power Dissipation
$C_J$	Junction Capacitance @ $V_r=0\text{V}, f=1\text{MHz}$



## DFN0603

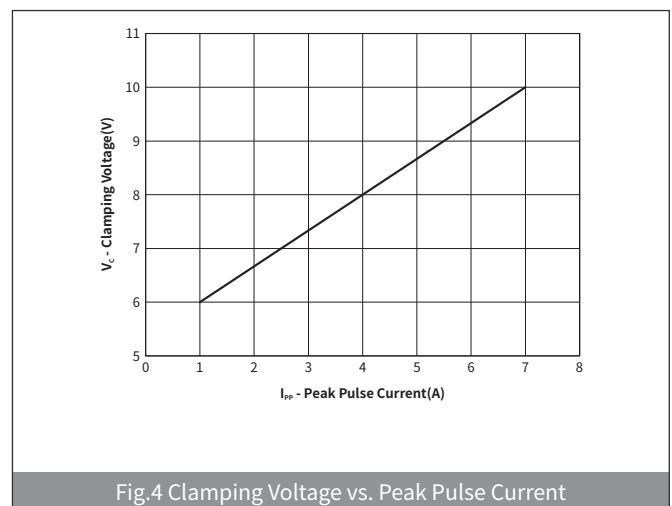
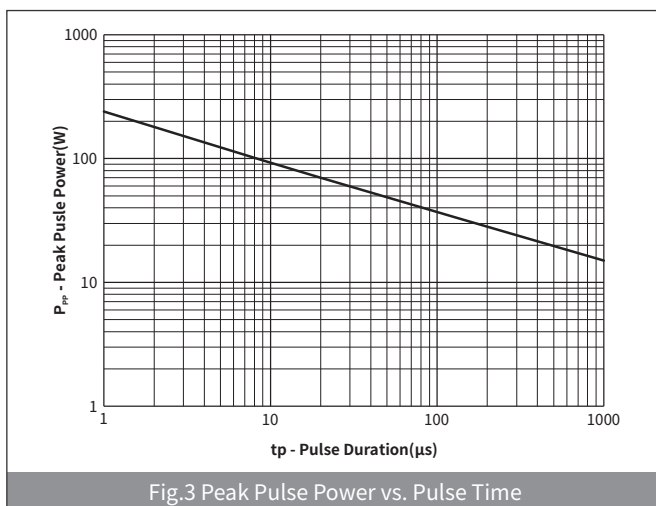
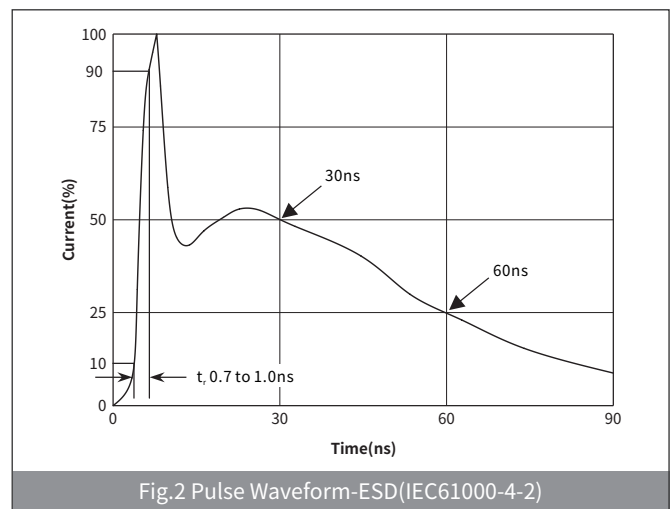
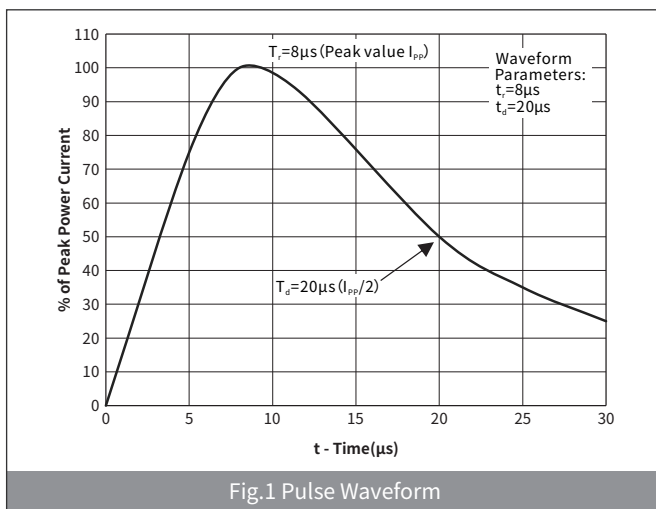


**Electrical Characteristics** ( $T_A=25^\circ\text{C}$  Unless otherwise specified)

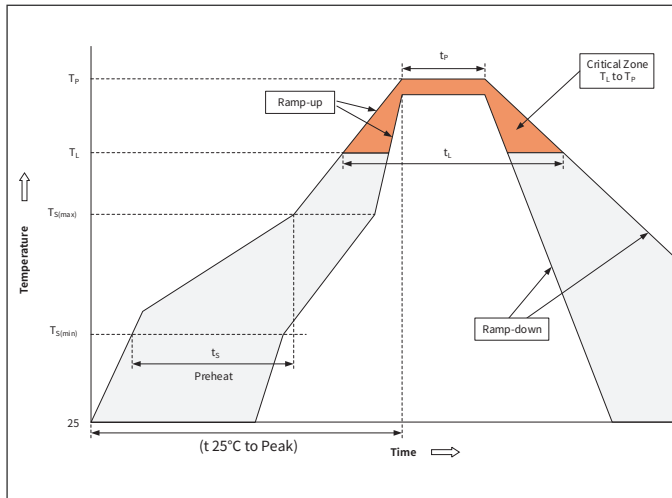
PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Peak Reverse Working Voltage	$V_{RWM}$	$T_A=25^\circ\text{C}$	—	—	5.0	V
Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}; T_A=25^\circ\text{C}$	5.6	—	8.4	V
Reverse Leakage Current	$I_R$	$V_{RWM}=5.0\text{V}; T_A=25^\circ\text{C}$	—	—	0.1	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP}=1.0\text{A}, t_p=8/20\mu\text{s}$	—	—	6.0	V
		$I_{PP}=7.0\text{A}, t_p=8/20\mu\text{s}$	—	—	10.0	V
Junction Capacitance	$C_J$	$V_R=0\text{V}, f=1\text{MHz}$	—	15	20	pF

**Ordering Information**

PREFERRED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VL06B	DFN0603	0.60×0.30×0.30	7" REEL	15,000

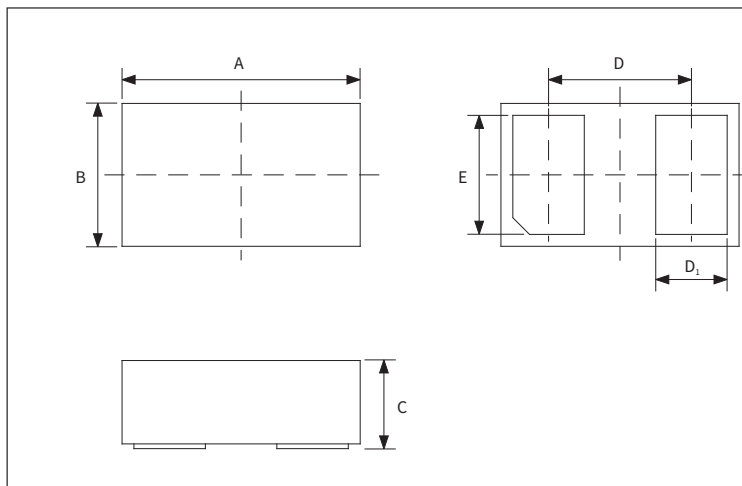
**Ratings And Characteristics Curves** ( $T_A=25^\circ\text{C}$  Unless otherwise specified)


### ▶ Recommended Soldering Conditions



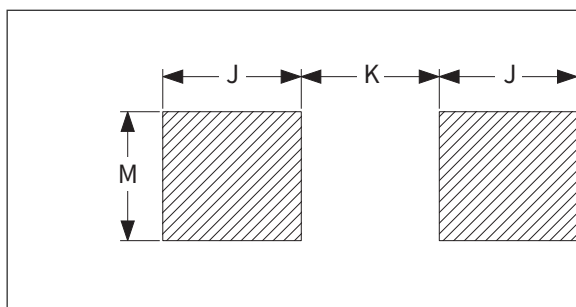
Profile Feature		Pb-Free Assembly
Pre-heat	Temperature Min ( $T_{S(min)}$ )	+150°C
	Temperature Max ( $T_{S(max)}$ )	+200°C
	Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C /sec. Max
$T_{S(max)}$ to $T_L$ - Ramp-up Rate		3°C /sec. Max
Reflow	Temperature( $T_L$ )(Liquid us)	+217°C
	Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C /sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C

### ▶ Package Outline Dimensions (DFN0603)



Symbol	Millimeters(mm)		
	Min.	Type.	Max.
A	0.55	0.60	0.65
B	0.25	0.30	0.35
C	0.23	0.30	0.34
D	—	—	0.40
D <sub>1</sub>	0.16	0.19	0.22
E	0.20	0.25	0.30

### ▶ Suggested Pad Layout



Symbol	Millimeters(mm)		
	Min.	Type.	Max.
J	0.20	0.22	0.24
K	0.18	0.20	0.22
M	0.30	0.32	0.34

Note :

This soldering footprint is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met.