

## SOT-23 Plastic-Encapsulate ESD Protection Diodes

### Features

- Low leakage current
- SOT-23 surface mount package
- IEC 61000-4-2 (ESD Air):  $\pm 25\text{kV}$
- IEC 61000-4-2 (ESD Contact):  $\pm 20\text{kV}$
- IEC 61000-4-5 (Lightning 8/20 $\mu\text{s}$ ): 5A

### Applications

- Automotive Applications
- CAN Bus
- Electronic Control Units
- Body Control Units
- ADAS Control Units
- PowerTrain Control Units

### Reference News

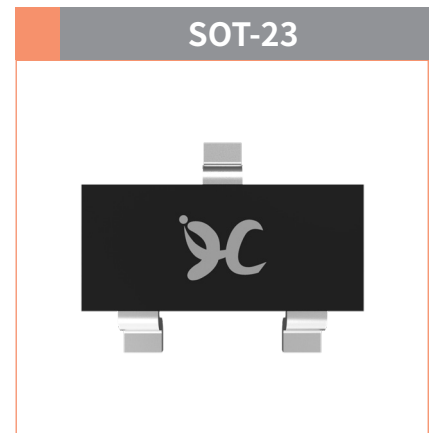
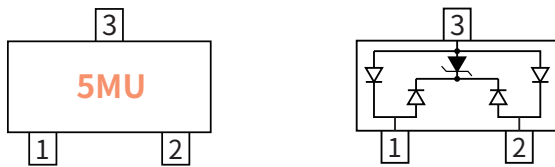
#### Reverse Working Voltage

5V Max.

#### Small capacitance

$C_{I/O-GND}=0.6\text{pF(Typ.)}$

$C_{I/O-I/O}=0.3\text{pF(Typ.)}$

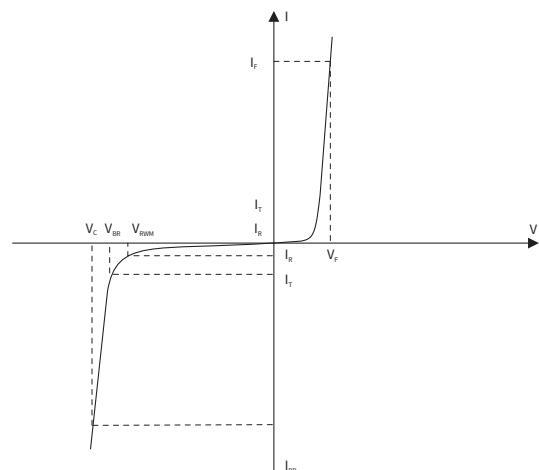


### Maximum Ratings (Ta=25°C Unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{ESD}$	Electrostatic Discharge Voltage	ESD per IEC 61000-4-2( Air )	$\pm 25$	KV
		ESD per IEC 61000-4-2( Contact)	$\pm 20$	KV
$P_{PP}$	Peak Pulse Power	$t_p = 8/20 \mu\text{s}$	80	W
$I_{PP}$	Rated Peak Pulse Current	$t_p = 8/20 \mu\text{s}$	5.0	A
$T_J$	Operating Junction Temperature Range	—	-55 to +125	°C
$T_{STG}$	Operating Junction Temperature Range	—	-55 to +150	°C

### Electrical Parameter

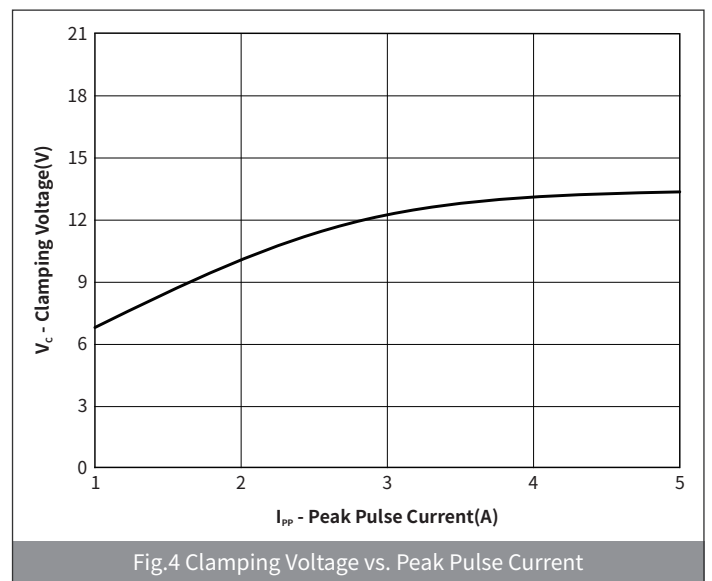
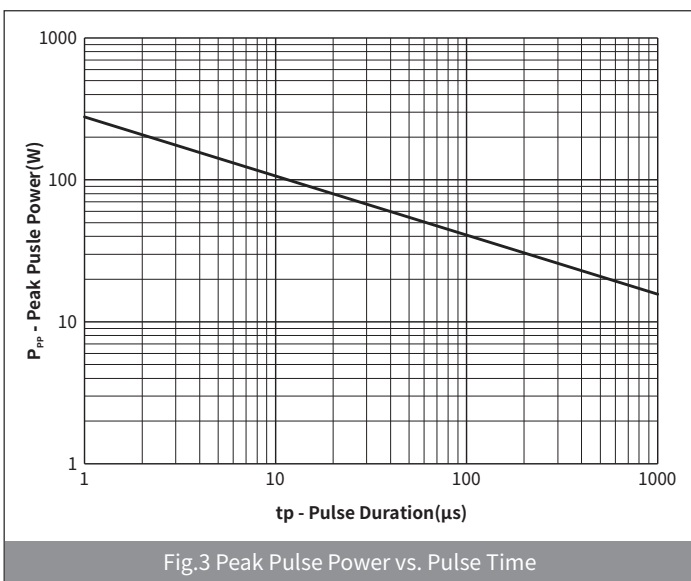
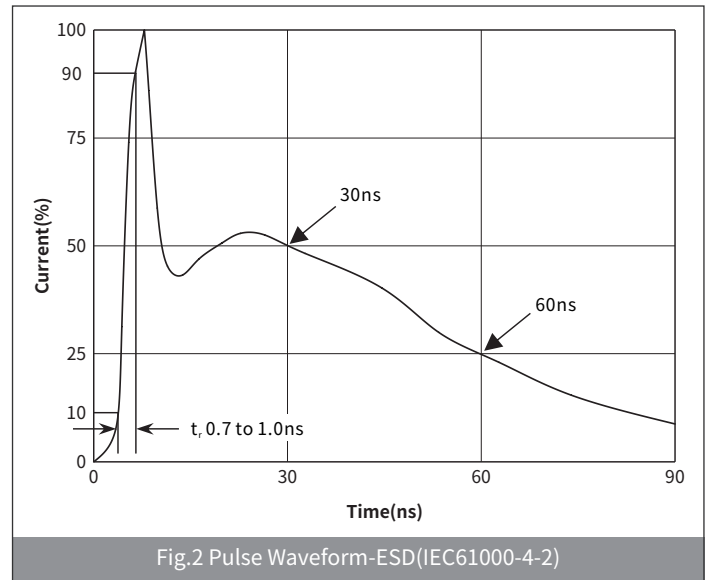
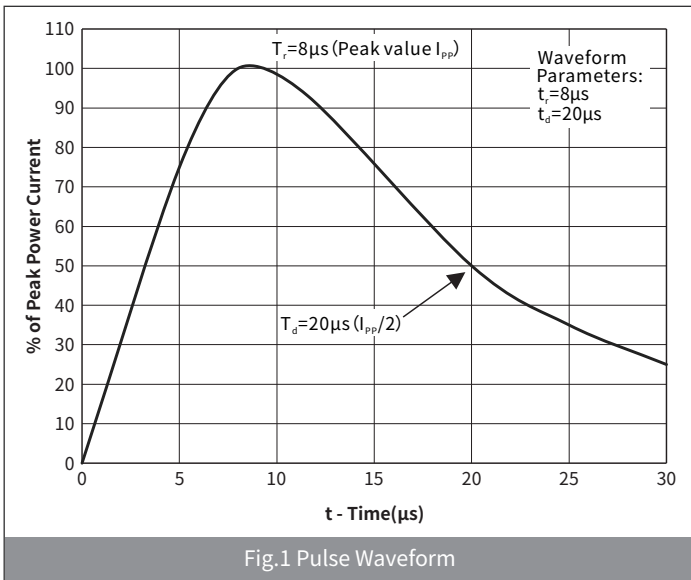
SYMBOL	PARAMETER
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_{PP}$	Peak Pulse Current
$I_T$	Test Current
$I_R$	Reverse Leakage Current @ VRWM
$V_{RWM}$	Peak Reverse Working Voltage
$P_{PP}$	Peak Pulse Power Dissipation
$C_J$	Junction Capacitance @ $V_R=0\text{V}, f=1\text{MHz}$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



## ● Electrical Characteristics (Ta=25°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	$V_{BR}$	$I_R=1\text{mA}, T_a=25^\circ\text{C}$	6.0	—	9.0	V
Reverse Leakage Current	$I_R$	$V_R=5\text{V}, T_a=25^\circ\text{C}$	—	—	0.2	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{pp}=1.0\text{A}, t_p=8/20\mu\text{s}, \text{pin1 or pin2 to pin3}$	—	—	9.0	V
		$I_{pp}=5\text{A}, t_p=8/20\mu\text{s}, \text{pin1 or pin2 to pin3}$	—	—	16	
Junction Capacitance	$C_J$	$V_{RWM}=0\text{V}, f=1\text{MHz}, \text{I/O pin to GND}$	—	0.6	0.8	pF
		$V_{RWM}=0\text{V}, f=1\text{MHz}, \text{Between I/O pins}$	—	0.3	0.4	

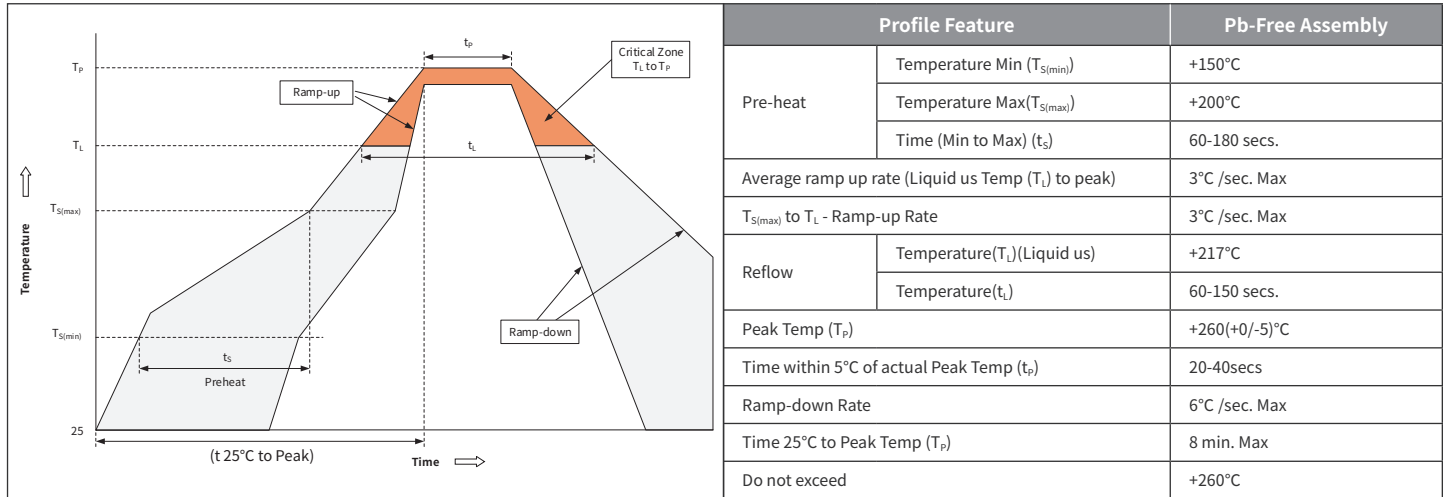
## ● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



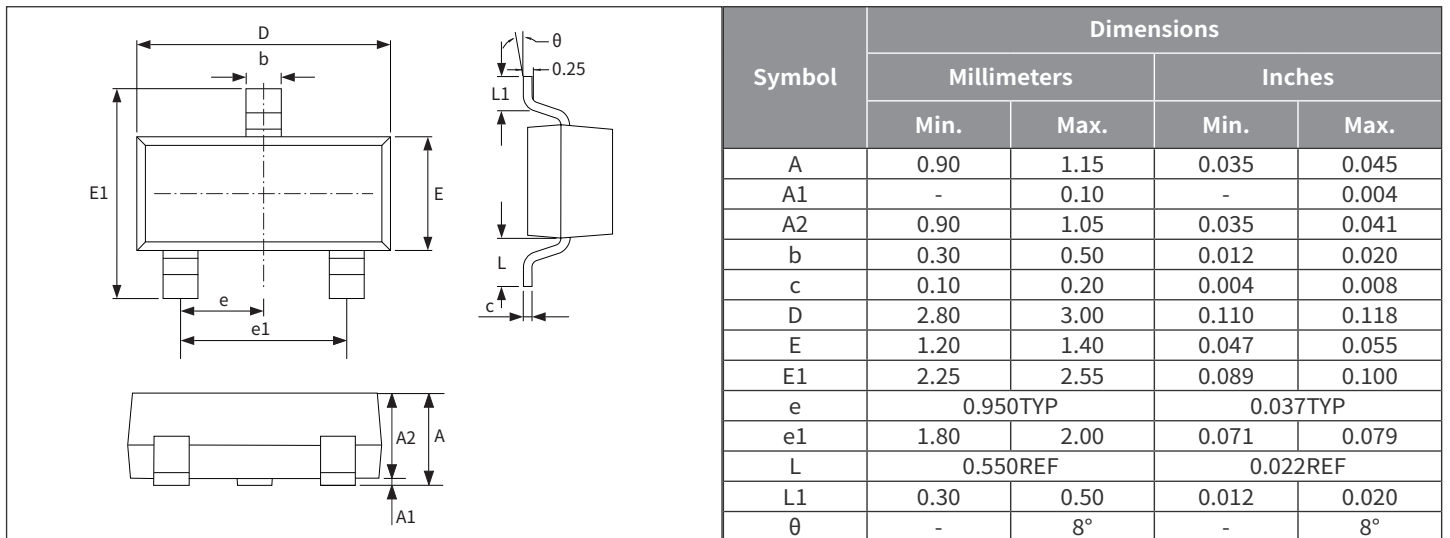
## Ordering Information

PREFERED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VUT2U	SOT-23	2.90×2.40×1.025	7" REEL	3000

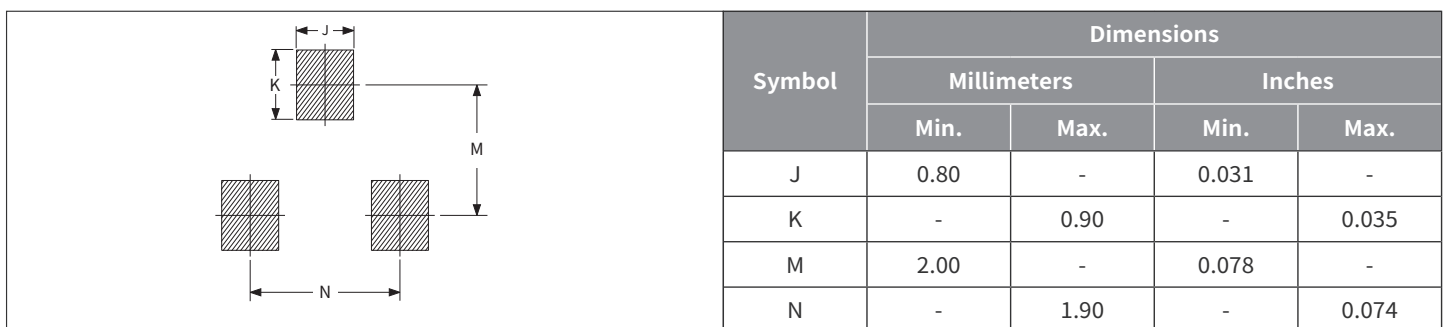
## Recommended Soldering Conditions



## Package Outline Dimensions (SOT-23)



## Suggested Pad Layout



Note:

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