

SOT-353 Plastic-Encapsulate ESD Protection Diodes

● Features

- Low leakage current
- Low clamping voltage
- 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 μs): 10A

● Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

● Function Diagram



Reverse Working Voltage
5.0V Max.
Normal capacitance
60pF(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)	± 30	KV
		ESD per IEC 61000-4-2(Contact)	± 30	KV
P _{PP}	Peak Pulse Power	tp = 8/20 μs	150	W
I _{PP}	Rated Peak Pulse Current	tp = 8/20 μs	10	A
T _J	Operating JunctionTemperature Range	—	-55 to +125	°C
T _{STG}	Operating JunctionTemperature Range	—	-55 to +150	°C

● Electrical Parameter

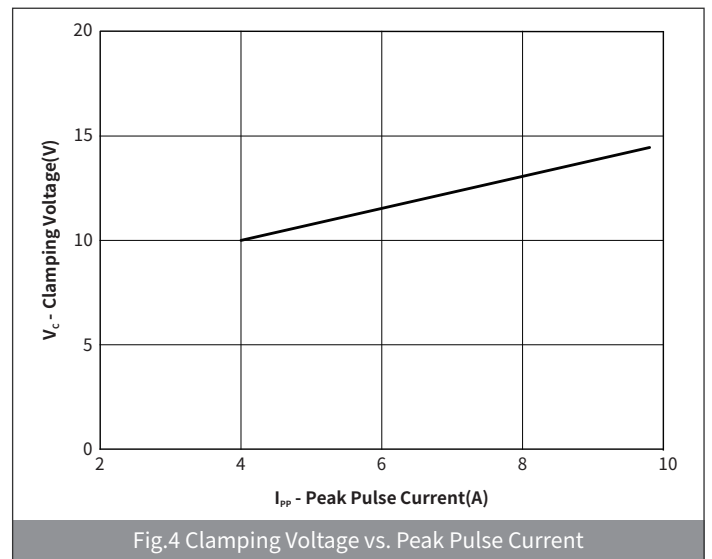
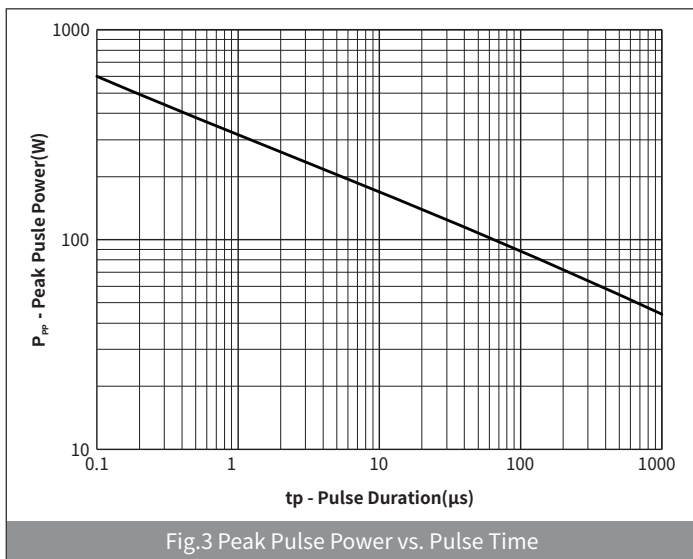
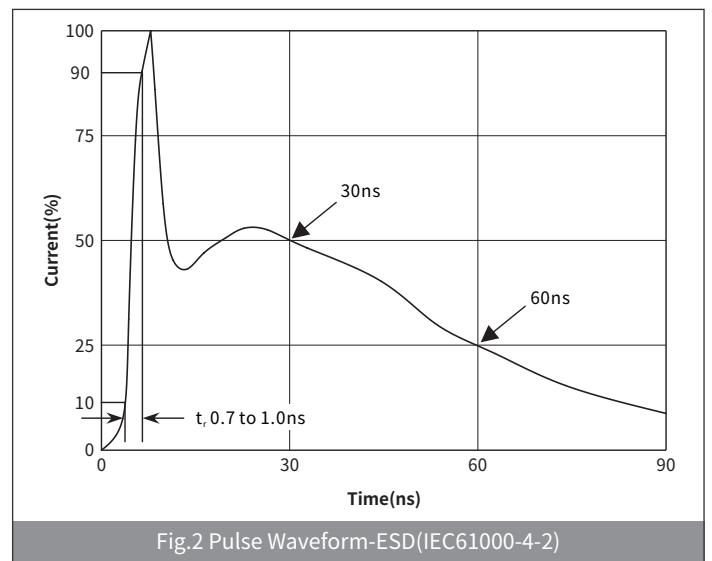
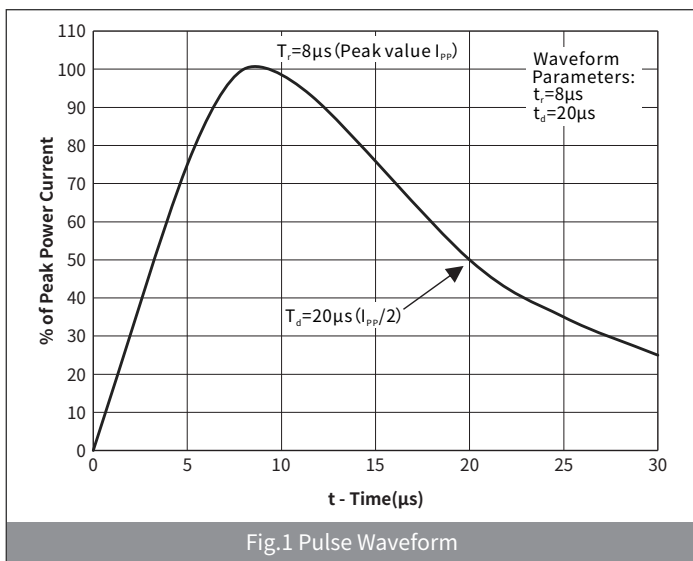
SYMBOL	PARAMETER
V _C	Clamping Voltage @ I _{PP}
V _{BR}	Breakdown Voltage @ I _T
I _{PP}	Peak Pulse Current
I _T	Test Current
I _R	Reverse Leakage Current @ VRWM
V _{RWM}	Peak Reverse Working Voltage
P _{PP}	Peak Pulse Power Dissipation
C _J	Junction Capacitance @ V _R =0V,f=1MHz
I _F	Forward Current
V _F	Forward Voltage @I _F

The graph plots current (I) versus voltage (V). It shows the diode's behavior in both forward and reverse bias. Key points on the graph include: V_C (clamping voltage), V_{BR} (breakdown voltage), V_{RWM} (peak reverse working voltage), I_R (reverse leakage current), I_T (test current), I_F (forward current), V_F (forward voltage), and I_{PP} (peak pulse current).

● **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}	$I_T=1\text{mA}, T_a=25^\circ\text{C}$	6.0	—	9.0	V
Reverse Leakage Current	I_R	$V_{RWM}=5.0\text{V}, T_a=25^\circ\text{C}$	—	—	100	nA
Clamping Voltage	V_C	$I_{PP}=4.5\text{A}, t_p=8/20\mu\text{s}$	—	—	11	V
Clamping Voltage	V_C	$I_{PP}=10\text{A}, t_p=8/20\mu\text{s}$	—	—	14	V
Junction Capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}, \text{IO to GND}$	—	60	90	pF
Junction Capacitance	C_J	$V_{RWM}=0\text{V}, f=1\text{MHz}, \text{IO to IO}$	—	30	—	pF

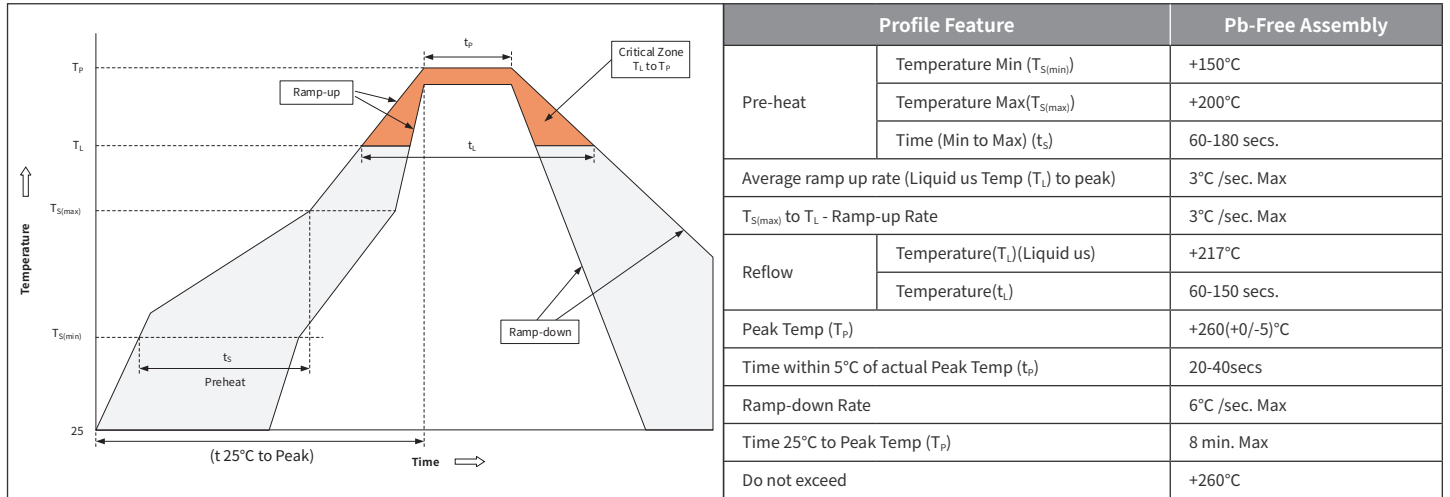
● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



● Ordering Information

PREFERRED P/N	PACKAGE	SIZE(mm)	DELIVERY MODE	MPQ(PCS)
H5VNT3U	SOT-353	2.10×1.35×1.0	7"	3000

● Recommended Soldering Conditions



● Package Outline Dimensions (SOT-353)

