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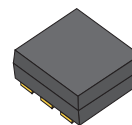
## SMD ESD Protection Diode



# CPDVR065V0U-HF

## RoHS Device

## Halogen Free



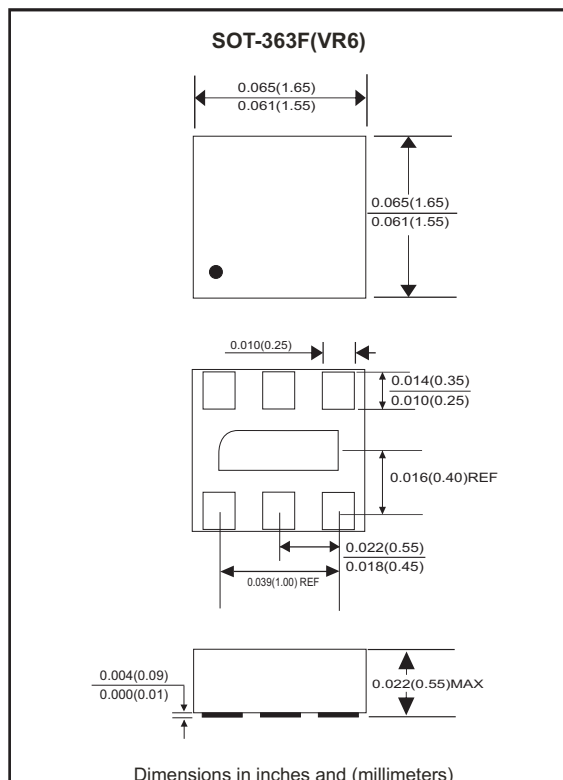
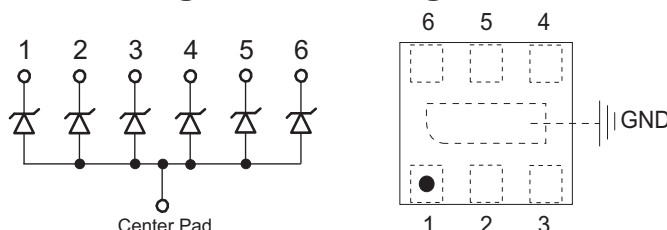
### Features

- Uni-directional ESD protection.
- Working voltage: 5V

### Mechanical data

- Case: SOT-363F Standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: E5U
- Mounting position: Any.

### Circuit Diagram & Package



### Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse current ( tp = 8/20 us)	I <sub>PPM</sub>	2	A
Peak pulse power ( tp = 8/20 us) to ground	P <sub>PP</sub>	26	W
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V <sub>ESD</sub>	±15	kV
Operating temperature (Junction temperature)	T <sub>J</sub>	-40 to +125	°C
Storage temperature	T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I <sub>F</sub> = 10mA	V <sub>F</sub>		0.8		V
Reverse current	V <sub>R</sub> = 5 V	I <sub>R</sub>		<0.01	0.1	uA
Reverse break down voltage	I <sub>R</sub> = 1 mA	V <sub>BR</sub>	6			V
Reverse Clamping voltage	I <sub>PP</sub> = 1 A , Tp=8/20us,Any Channel Pin to Ground	V <sub>C</sub>			11	V
	I <sub>PP</sub> = 2 A , Tp=8/20us,Any Channel Pin to Ground	V <sub>C</sub>			13	V
Forward Clamping voltage	I <sub>PP</sub> = 1 A , Tp=8/20us,Any Channel Pin to Ground	V <sub>CR</sub>		2	2.5	V
	I <sub>PP</sub> = 2.5 A , Tp=8/20us,Any Channel Pin to Ground	V <sub>CR</sub>		3.2	4	V
Junction capacitance	V <sub>R</sub> =0V, f = 1MHz,Any channel Pin to Ground	C <sub>T</sub>		11	15	pF

# SMD ESD Protection Diode



## RATING AND CHARACTERISTIC CURVES (CPDVR065V0U-HF)

Fig.1 - 8/20us Peak Pulse Current Wave Form acc. IEC 61000-4-5

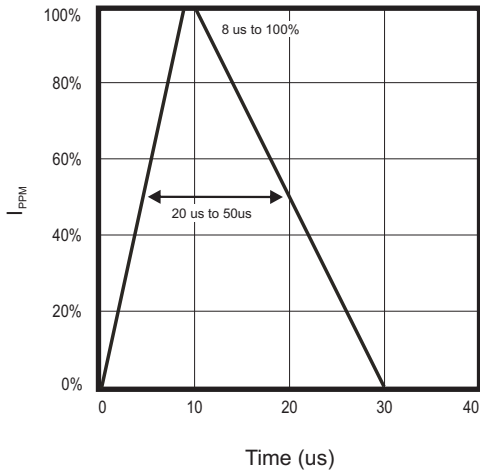


Fig.2 - ESD Discharge Current Wave Form acc.IEC 61000-4-2(330Ω/150pF)

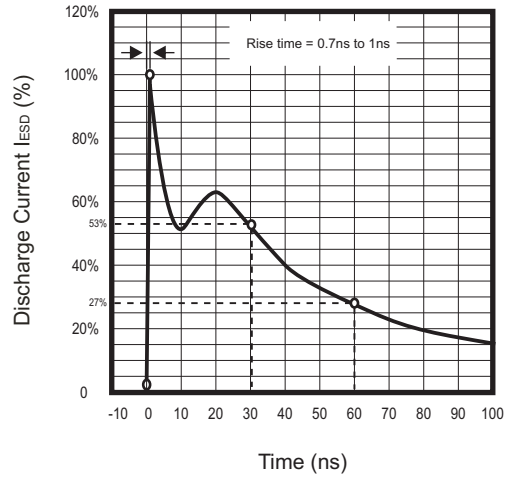


Fig.3 - Reverse Voltage  $V_R$  vs. Reverse Current  $I_R$

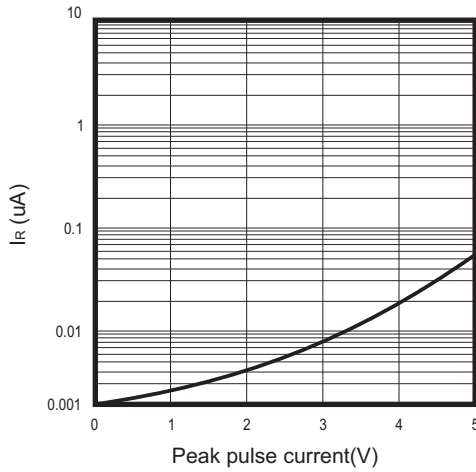


Fig.4 - Forward Voltage  $I_F$  vs. Forward current  $V_F$

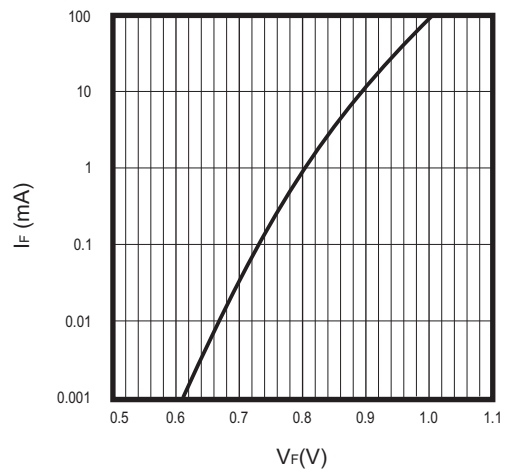


Fig.5 - Junction Capacitance vs. Reverse Voltage

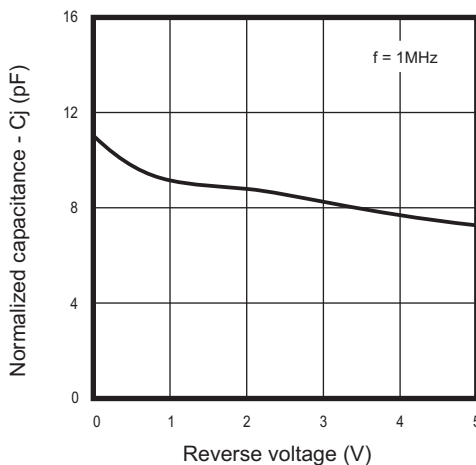
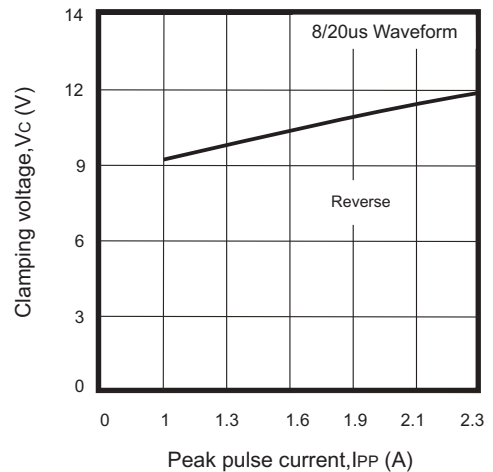


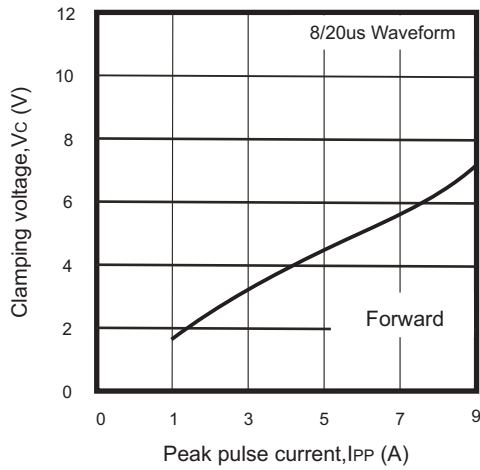
Fig.6 - Clamping Voltage vs. Peak Pulse Current  $I_{PP}$



## SMD ESD Protection Diode

### RATING AND CHARACTERISTIC CURVES (CPDVR065V0U-HF)

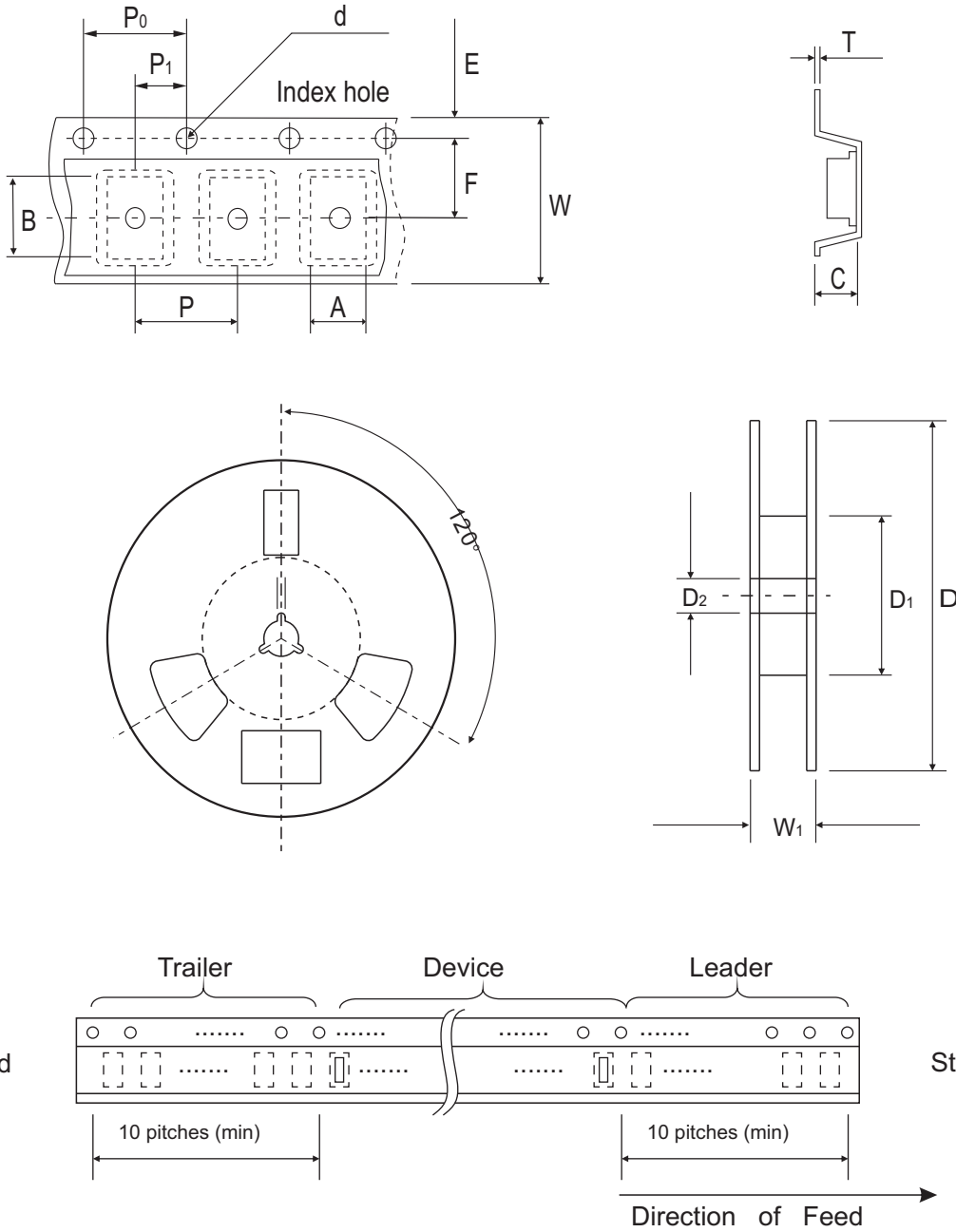
Fig.7 - Typical Clamping Voltage Vs Peak Pulse Current  $I_{PP}$



# SMD ESD Protection Diode



## Reel Taping Specification



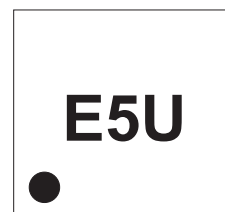
SOT-363F	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.78 ± 0.10	1.78 ± 0.10	0.62 ± 0.10	1.50 ± 0.10	178 ± 1.00	54.40 ± 0.40	12.30 ± 0.20
	(inch)	0.070 ± 0.004	0.070 ± 0.004	0.024 ± 0.004	0.059 ± 0.004	7.008 ± 0.039	2.142 ± 0.016	0.484 ± 0.008

SOT-363F	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 ± 0.30 / - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 ± 0.011 / - 0.004	0.374 ± 0.039

## SMD ESD Protection Diode

### Marking Code

Part Number	Marking Code
CPDVR065V0U-HF	E5U



### Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOT-363F (VR6)	3,000	7