

SMD ESD Protection Diode



SMD Diodes Specialist

CPDVR085V0UA-HF RoHS Device

Features

Halogen free.

Common anode ESD protection

IEC 61000-4-2 8kV(contact), 15kV(air).

Surface mount package.

High component density.



Mechanical data

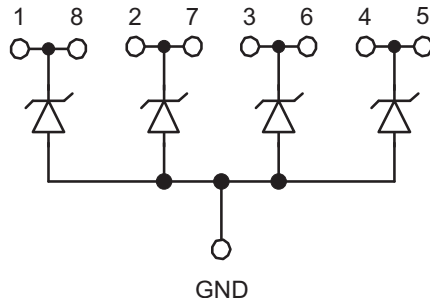
Case: SOT-383F Standard package ,
molded plastic.

Terminals: Gold plated, solderable per
MIL-STD-750, method 2026.

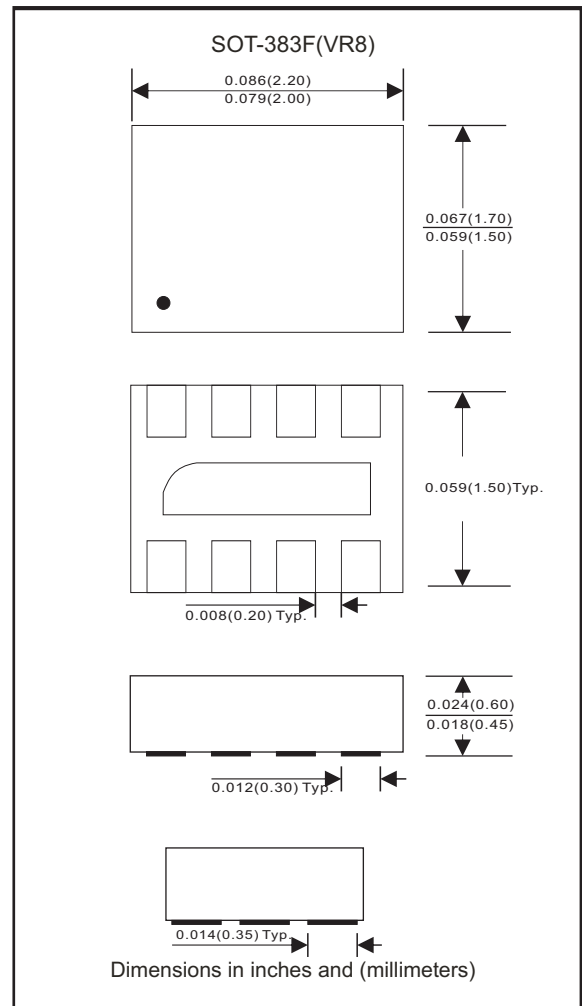
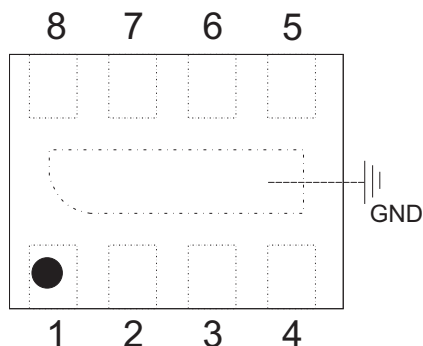
Marking Code: E5U

Mounting position: Any.

Circuit Diagram



Package



Maximum Rating and Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F = 10mA	V _F		0.8		V
Diode breakdown voltage	I _R = 1mA	V _{BD}	6			V
Leakage current	V _R = 5V	I _L		0.3	2.0	uA
Junction capacitance	V _R = 0V, f = 1MHz	C _T		90	120	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			20 15	kV
Clamping voltage	I _{PP} = 5A, T _P =8/20us I _{PP} = 16A, T _P =8/20us	V _C			9.8 12.5	V
Peak pulse power		P _{PP}			200	W
Operation temperature		T _J			125	°C
Storage temperature		T _{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (CPDVR085V0UA-HF)

Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

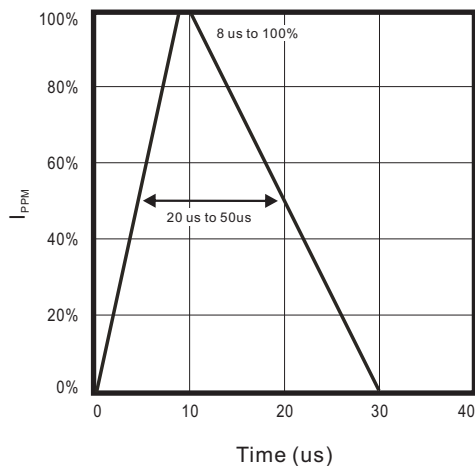


Fig. 2 - Power rating derating curve

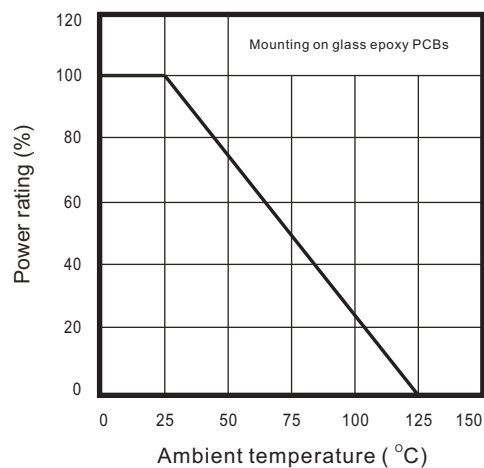


Fig. 3 - Clamping voltage vs. peak pulse current

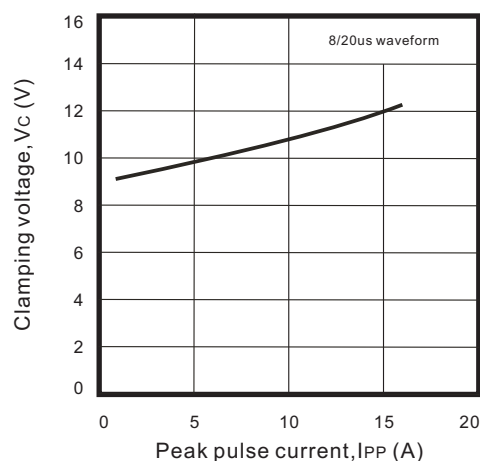


Fig. 4 - Forward voltage vs. forward current

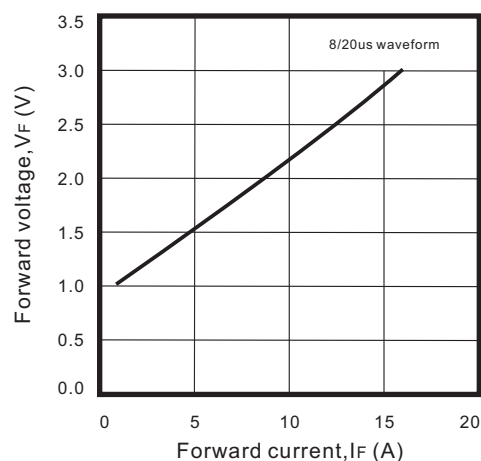
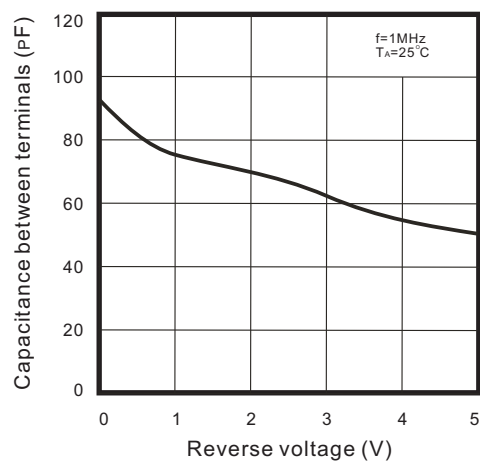
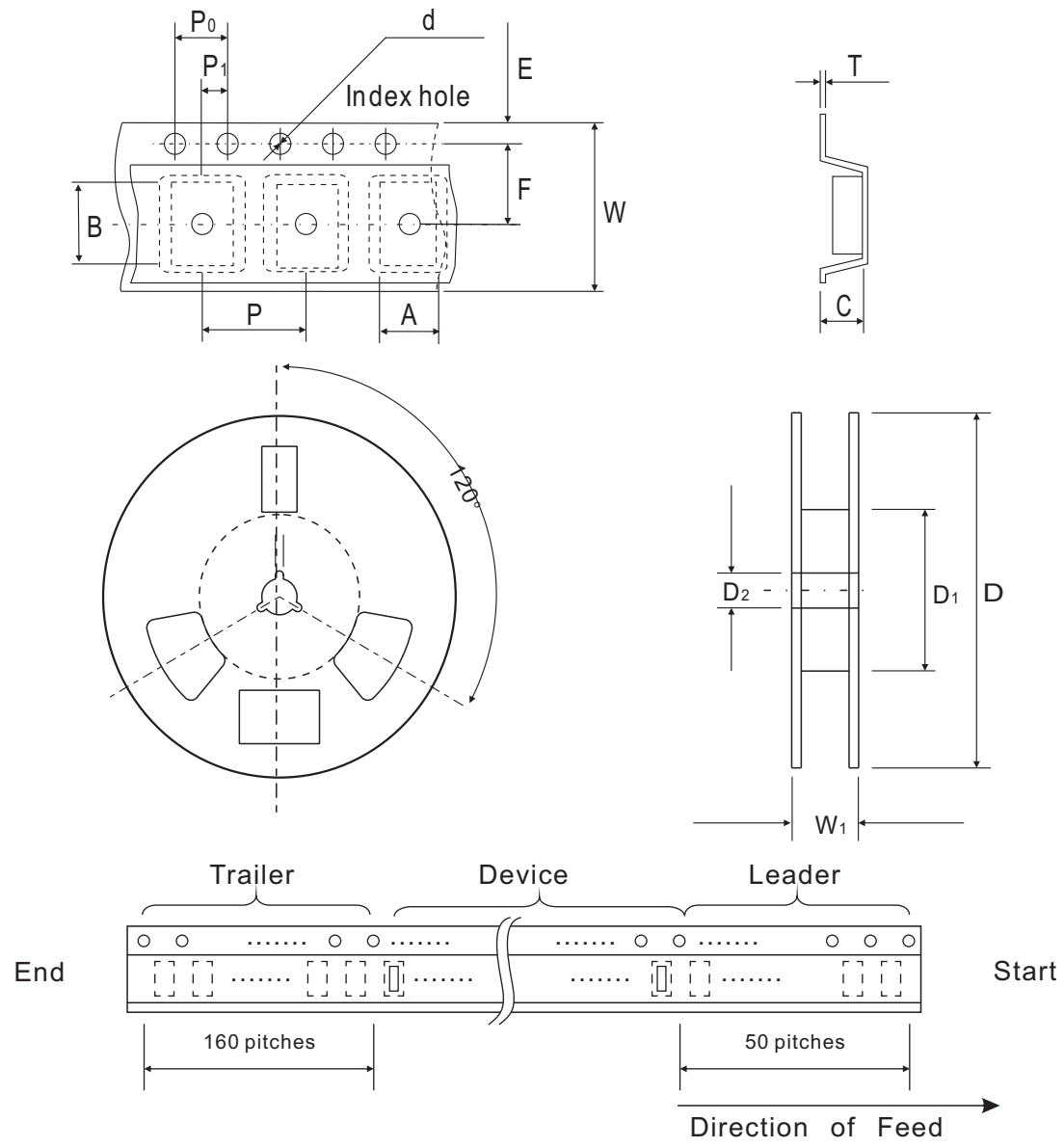


Fig. 5 - Capacitance between terminals characteristics



Reel Taping Specification



SOT-383F	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.96 ± 0.10	2.31 ± 0.10	0.74 ± 0.10	1.55 ± 0.10	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.077 ± 0.004	0.091 ± 0.004	0.029 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

SOT-383F	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.22 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

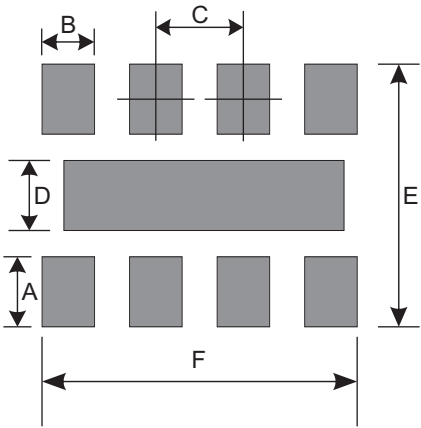
Marking Code

Part Number	Marking Code
CPDVR085V0UA-HF	E5U



Suggested PAD Layout

SIZE	SOT-383F(VR8)	
	(mm)	(inch)
A	0.630	0.025
B	0.300	0.012
C	0.500	0.020
D	0.450	0.018
E	2.150	0.085
F	1.800	0.071



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
SOT-383F(VR8)	3000	7