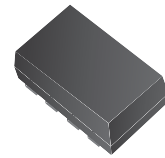


CPDVR083V3U RoHS Device



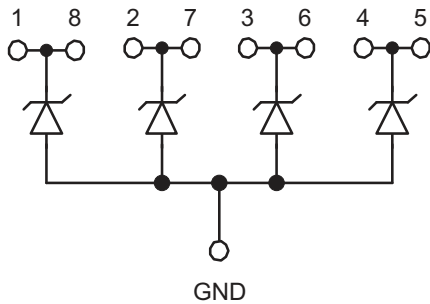
Features

- IEC61000-4-2 (ESD) ± 15 kV(Contact), ± 20 kV(Air).
- Working voltage: 3.3V
- Low leakage current.
- Low operating and clamping voltages.

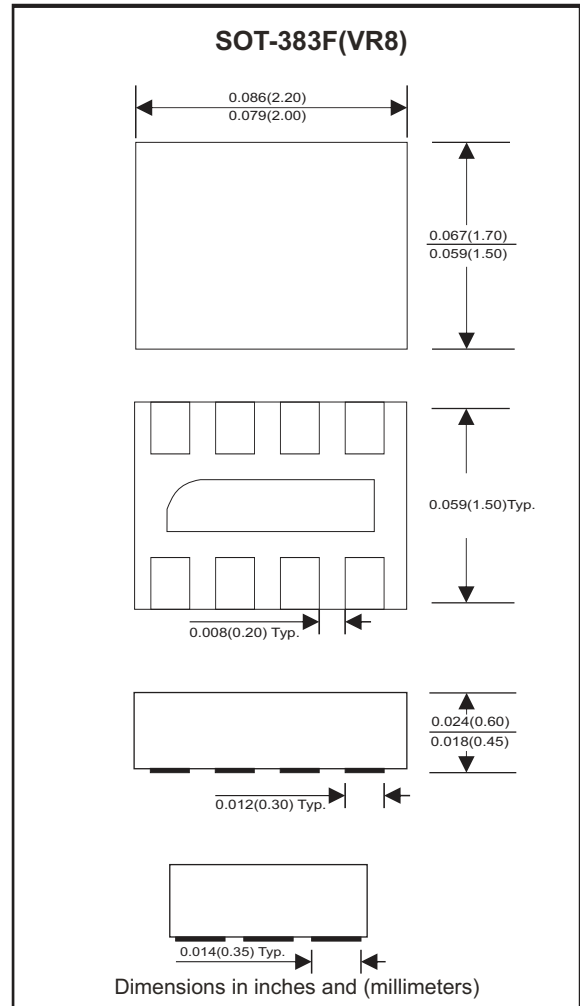
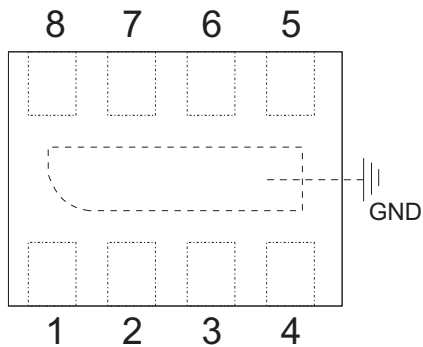
Mechanical data

- Case: SOT-383F standard package, molded plastic.
- Terminals: Nipd, solderable per MIL-STD-750, method 2026.
- Mounting position: Any

Circuit Diagram



Package



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

Parameter	Symbol	Value	Unit
Peak pulse power ($t_p = 8/20 \text{ us}$)	PPP	40	W
Peak pulse current ($t_p = 8/20 \text{ us}$)	IPP	5	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	ESD	± 20 ± 15	kV
Operating temperature	TJ	-55 to +125	°C
Storage temperature	TSTG	-55 to +125	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V_{RWM}			3.3	V
Punch-through voltage	$I_{PT} = 2\mu A$	V_{PT}	3.5			V
Snap-back voltage	$I_{SB} = 50\text{mA}$	V_{SB}	2.8			V
Leakage current	$V_R = 3.3\text{V}$	I_L		0.05	0.5	μA
Clamping voltage	$I_{PP} = 1 \text{ A}$, $T_p=8/20\text{us}$, Any Channel Pin to Ground	V_C			5.5	V
	$I_{PP} = 5 \text{ A}$, $T_p=8/20\text{us}$, Any Channel Pin to Ground	V_C			8.0	V
Reverse clamping voltage	$I_{PPR} = 1 \text{ A}$, $T_p=8/20\text{us}$, Ground to Any Channel Pin	V_{CR}			2.4	V
Junction capacitance	$V_R = 0 \text{ V}$, $f = 1\text{MHz}$ Any Channel Pin to Ground	C_j		25	30	pF
	$V_R = 3.3 \text{ V}$, $f = 1\text{MHz}$ Any Channel Pin to Ground	C_j		14		pF

RATING AND CHARACTERISTIC CURVES (CPDVR083V3U)

Fig. 1 - Non-repetitive max. peak pulse power vs. pulse time

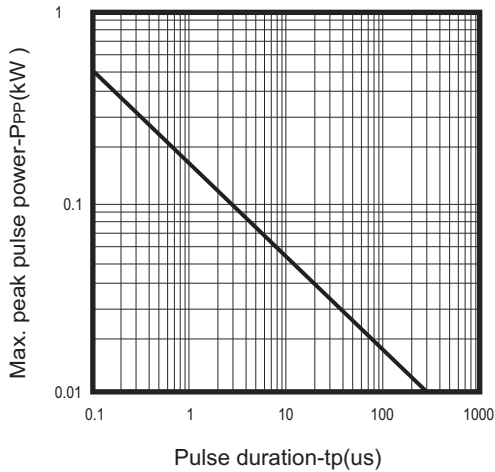


Fig. 2 - Power rating derating curve

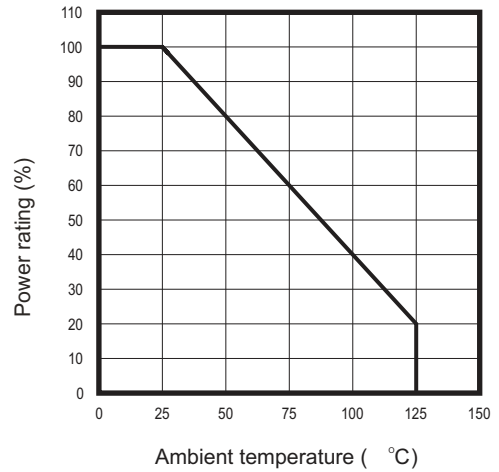


Fig.3 - Clamping voltage vs. peak pulse current

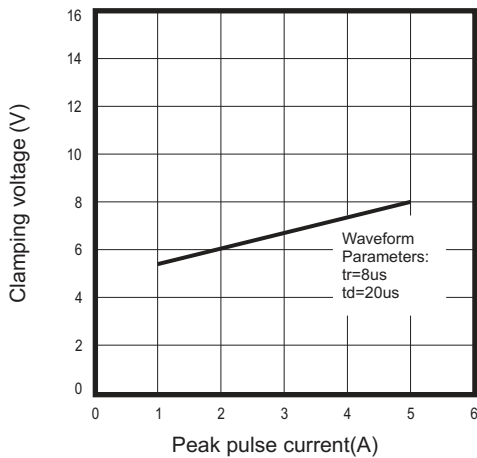


Fig.4 - Forward voltage vs. Forward current

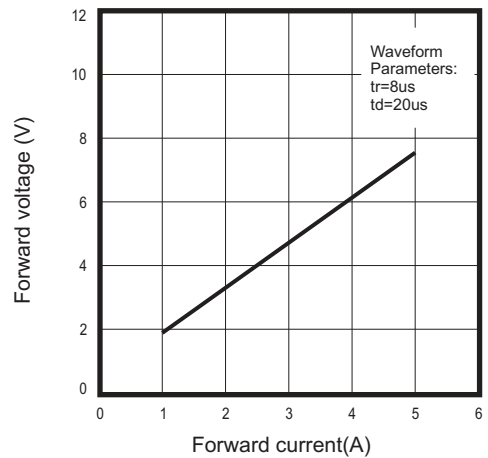
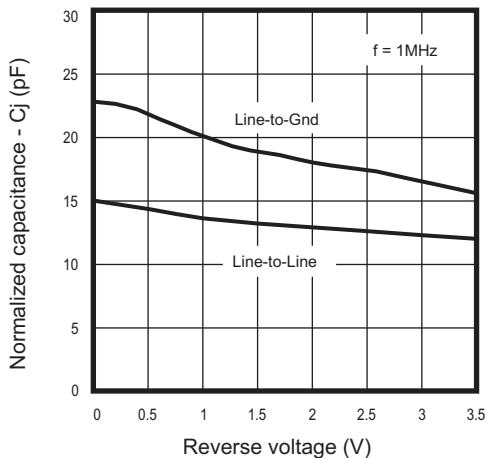
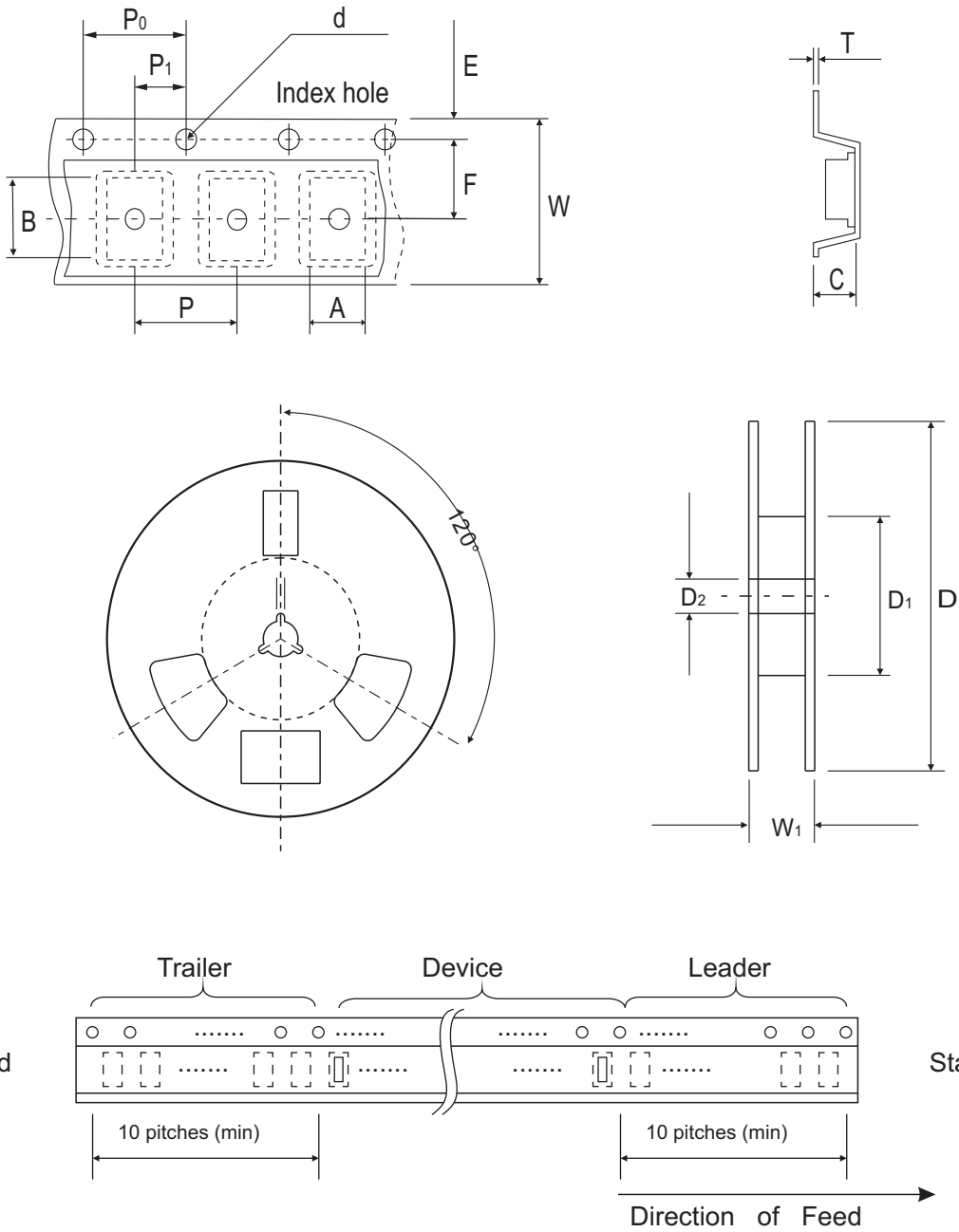


Fig.5 - Junction capacitance vs. reverse voltage



Reel Taping Specification



	SYMBOL	A	B	C	d	D	D ₁	D ₂
SOT-383F	(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

	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
SOT-383F	(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.

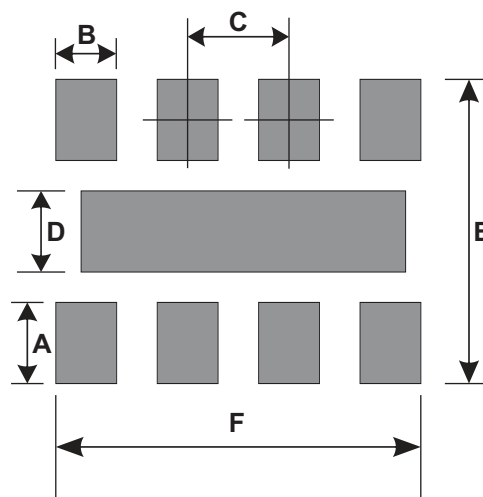
Marking Code

Part Number	Marking Code
CPDVR083V3U	E3V3



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 Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-383F (VR8)	3,000	7