



TVS for Mobile applications

Our PTVS Transient Voltage Suppressors portfolio consists of more than 20 types, addressing single-line protection needs from 5 V to 26 V reverse working voltage. All our PTVS solutions protect effectively single-line interfaces against 30 kV electrostatic discharge (IEC61000-4-2 standard).

Nexperia offers Mobile TVS solutions in ultra flat DSN1608-2, compact DFN2020-3 and ultra compact DFN1006-2 leadless packages, catering to diverse design needs while offering high surge robustness.

As the market leader in Protection, Nexperia keeps innovating and continuously adds more types that match the portable segment demand for high-robustness devices in small packages.

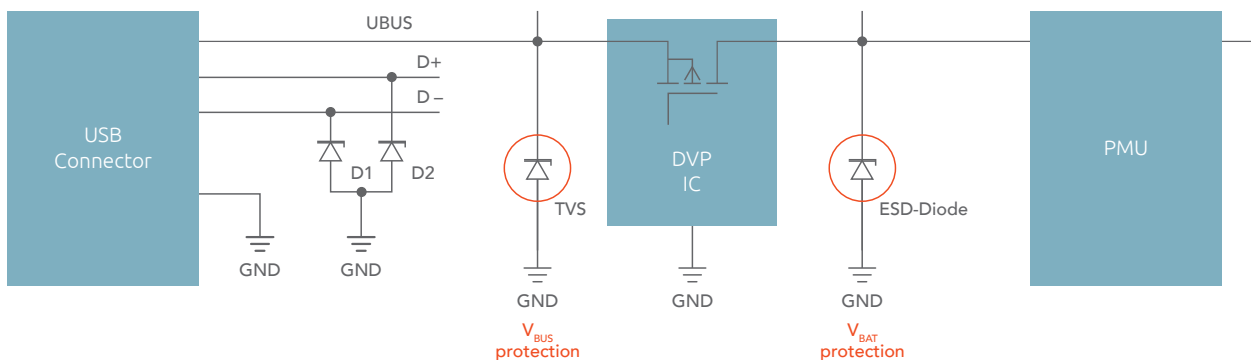
Features

- › High surge robustness: 32 A up to 178 A at 8/20 μ s pulse
- › Small packages: DSN1608-2, DFN2020-3 & DFN1006-2
- › Wide portfolio with over 20 different types available

Applications

- › USB-PD up to 20 V
- › Battery line / charger port
- › Supply line
- › Hard-disks & SSD
- › Audio interface

Application diagram



PTVSxV5D1BL & PTVSxU1UPA in DFN packages

Types in **bold** represent new products




Type	V_{RWM} (V)	$V_{BR\ min}$ (V)	$V_{BR\ max}$ (V)	$I_{ppm\ 8/20\mu s}$ (A)	$V_{cl\ 8/20\mu s}$ (V)	$I_{ppm\ 10/1000\mu s}$ (A)	$V_{cl\ 10/1000\mu s}$ (V)	Package
PTVS4V5D1BL	4.5	4.7	-	34	13.2	-	-	DFN1006-2
PTVS5V5D1BL	5.5	5.6	-	40	7.5	-	-	
PTVS7V5U1UPA	7.5	8.33	9.21	178	19.7	23.3	12.9	DFN2020-3
PTVS10VU1UPA	10	11.1	12.3	148	23	17.6	17	
PTVS12VU1UPA	12	13.3	14.7	131	25.2	15.1	19.9	
PTVS15VU1UPA	15	16.7	18.5	111	28.8	12.3	24.4	
PTVS18VU1UPA	18	20	22.1	97	32	10.3	29.2	
PTVS20VU1UPA	20	22.2	24.5	98.5	38.7	9.2	32.5	
PTVS22VU1UPA	22	24.4	26.9	88.5	41	8.4	35.5	
PTVS24VU1UPA	24	26.7	29.5	79	44.2	7.7	38.8	
PTVS26VU1UPA	26	28.9	31.9	69	43.5	7	43	

PTVSxZ1USK(P) in DSN packages

Types in **bold** represent new products

Type	V_{RWM} (V)	$V_{BR\ min}$ (V)	$V_{BR\ max}$ (V)	8/20 μs pulse		10/1000 μs pulse		$I_{rm\ typ\ @\ V_{RWM}}$ (nA)	$I_{rm\ max\ @\ V_{RWM}}$ (nA)	$R_{\theta jn}$ (TLP) - 8/20 μs	Package
				$V_{cl\ @\ I_{ppm\ 8/20\mu s}\ max}$ (V)	$I_{ppm\ 8/20\mu s}$ (A)	$V_{cl\ @\ I_{ppm\ 10/1000\mu s}\ max}$ (V)	$I_{ppm\ 10/1000\mu s}$ (A)				
PTVS5V0Z1USKP	5	6.4	7.8	19.4	100	12	20	25	1000	0.1	DSN1608-2
PTVS5V0Z1USK				18	80	12	20	25	1000	0.06	
PTVS7V5Z1USK	7.5	8.33	9.65	22	100	13.5	17	1	200	0.08	
PTVS10VZ1USK	10	11.1	12.9	27	75	18.2	12.5	0.1	200	0.11	
PTVS12VZ1USK	12	13.3	15.4	29	65	21.8	10.5	0.1	200	0.11	
PTVS15VZ1USK	15	16.7	19.4	36	52	27.4	7.5	0.1	200	0.13	
PTVS18VZ1USK	18	20	23.2	44	41	32.8	6.4	0.1	200	0.17	
PTVS20VZ1USK	20	22.2	25.4	48.3	41	36.9	6	1	200	0.2	
PTVS22VZ1USK	22	24.4	26.9	51	39	40	5	0.1	200	0.2	
PTVS26VZ1USK	26	28.9	33.4	57.5	32	46	4.5	0.1	200	0.15	

Packages

Name	Package family	Dimensions (W x L x H, in mm)	
SOD882	DFN1006-2	1.0 x 0.6 x 0.48	
SOT1061	DFN2020-3	2.0 x 2.0 x 0.62	
SOD964	DSN1608-2	1.6 x 0.8 x 0.28	

[Browse the mobile TVS portfolio](#)

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