



RECTIFIERS AND TVS

SMP-Package DO-220AA



Miniature High-Power-Density Surface-Mount Rectifiers and Transient Voltage Suppressors

FEATURES

- Provides space savings with:
 - Rectifiers rated up to 3 A
 - TVS rated up to 400 W
- 1-mm device height
- Solder pad compatible with other SMD devices
- Low thermal resistance
- Wide product offering:
 - Schottky rectifiers (SS1P3L, SS1P4L, SS2P2L, SS2P3L, SS2P3, SS2P4, SS2P5, SS2P6, SS3P3, SS3P4, SS2PH9, SS2PH10)
 - Standard rectifiers (S1PA through S1PJ)
 - Fast recovery rectifiers (RS1PB through RS1PJ)
 - Ultrafast rectifiers (ES1PA through ES1PD, ESH1PA through ESH1PD)
 - TVS (TPSMP6.8 through TPSMP43)

For more information, visit our web site at www.vishay.com/ref/rectifiers

Or send E-mail to: PDD-Americas@vishay.com - Americas

PDD-Europe@vishay.com - Europe

PDD-Asia@vishay.com - Asia

Miniature High-Power-Density Surface-Mount Rectifiers and Transient Voltage Suppressors

APPLICATIONS

- **Schottky rectifiers**
 - Secondary rectification of ac-to-dc and dc-to-dc converters, freewheeling, and polarity protection
- **Standard rectifiers**
 - General purpose, polarity protection, and rail-to-rail protection in automotive applications
- **Ultrafast rectifiers**
 - ES1PA through ES1PD: Secondary rectification and freewheeling for ultrafast switching speeds of ac-to-dc and dc-to-dc converters used in computer and consumer end products
 - ESH1PA through ESH1PD: Secondary rectification and freewheeling for ultrafast switching speeds of ac-to-dc and dc-to-dc converters in high temperature conditions such as automotive applications
- **TVSs**
 - Protection for ICs, drive transistors, signal lines of sensor units, and electronic units in consumer, computer, industrial, and automotive applications

BENEFITS

- High power density in a small package save space in equipment design
- Low forward voltage drop of Schottky rectifiers improves power efficiency and generates less heat in end products

RECTIFIER SPECIFICATION TABLE

Product categories	Vishay PDD P/N	I_F (A)	V_{RRM} (V)	V_F at I_F (V)	T_J max (°C)	t_{rr} (ns)	I_{FSM} (A)
Schottky	SS1P3	1	30	0.50	150	~0	50
	SS1P3L and SS1P4L	1	30 / 40	0.48	150	~0	50
	SS2P2L and SS2P3L	2	20 / 30	0.50	150	~0	50
	SS2P2 and SS2P4	2	30 / 40	0.55	150	~0	50
	SS2P5 and SS2P6	2	50 / 60	0.70	150	~0	50
	SS3P3	3	30	0.58	150	~0	50
	SS2PH9 and SS2PH10	2	90 / 100	0.80	175	~0	50
Fast	RS1PB through RS1PJ	1	100 to 600	1.3	150	150 / 250	30
Standard	S1PA through S1PJ	1	50 to 600	1.10	150	1800	30
Ultrafast	ES1PA through ES1PD	1	50 to 200	0.92	150	15	30
	ESH1PA through ESH1PD	1	50 to 200	0.90	175	25	50

TVS SPECIFICATION TABLE

Vishay PDD P/N	P_{PPM} at 10/1000 μ s (W)	V_{BR} range (V)	T_J max (°C)	I_{FSM} (A)
TPSMP6.8A	250	6.8	185	40
TPSMP7.5 through TPSMP12A	300	7.5 to 12	185	40
TPSMP13 through TPSMP43A	400	13 to 43	185	40

