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ULTRAFAST RECTIFIERS

Surface-Mount and Through-Hole Ultrafast Rectifiers, AEC-Q101 Qualified Available

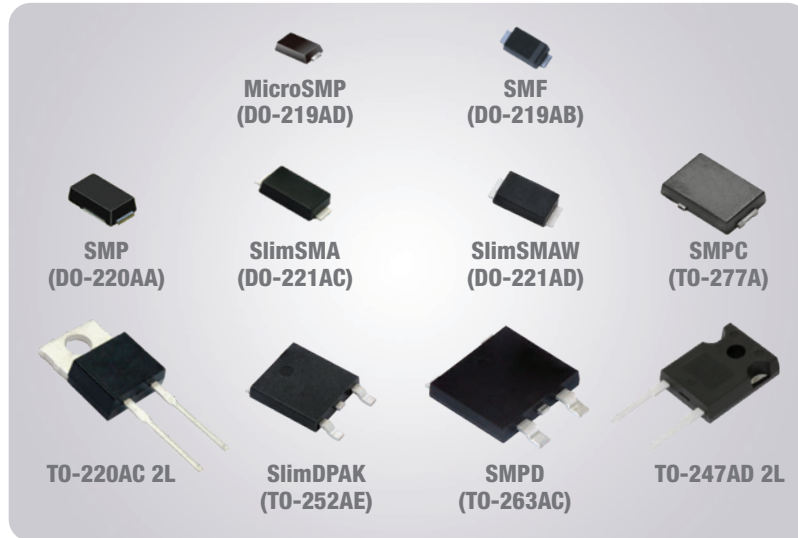


TABLE OF CONTENTS

FRED Pt® AEC-Q101 Qualified Products [2](#)

FRED Pt® Standard Products [8](#)

HEXFRED® AEC-Q101 Qualified Products [16](#)

HEXFRED® Standard Products [17](#)

Ultrafast Recovery Rectifiers [18](#)

Ultrafast Recovery Avalanche Rectifiers [21](#)

Ultrafast Recovery Avalanche-Rated Sinterglass Diodes [22](#)



ULTRAFAST RECOVERY RECTIFIERS

FRED Pt®

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Fast recovery epitaxial diodes (FRED Pt®) are based on Pt doping technology that allows maximum junction temperatures up to 175 °C. By providing a high level of flexibility in the device's V_F/Q_{rr} ratio, FRED Pt® devices in plastic packages can be used in all major applications from 1 A up to 175 A. All the assembled parts use chips that can be offered as bare die. A full range of halogen-free components are also offered.

FRED Pt® AEC-Q101 qualified products have undergone part average testing (PAT) and statistical yield limit (SYL) analysis to ensure their electrical parameters meet the highest quality level for automotive applications. The parts use a dedicated die in the front-end operation and a dedicated part number at the back end, both selected with PAT and SYL statistical criteria, and are suitable for battery charging systems, EV / HEV vehicles, HID lighting, and other automotive applications.

FRED Pt® AEC-Q101 Qualified Products

$I_{F(AV)}$ (A)	Device ⁽¹⁾	Package Type	V_{RRM} (V)	V_F at I_F		I_R at V_{RRM} (μ A)	t_{rr} (ns) ⁽²⁾	I_{FSM} (A)	T_J Max. (°C)
				(V)	(A)				
$V_{RRM} = 100$ V									
1	VS-1EFH01HM3/I	SMF (DO-219AB)	100	0.74	1	2	25	35	175
1	VS-1EMH01HM3/5AT	SMA (DO-214AC)	100	0.68	1	2	25	50	175
1	VS-1ENH01HM3/85A	SMP (DO-220AA)	100	0.69	1	2	14	40	175
1	VS-1EQH01HM3/H	MicroSMP (DO-219AD)	100	0.72	1	1	13	30	175
2	VS-2EFH01HM3/I	SMF (DO-219AB)	100	0.75	2	2	25	50	175
2	VS-2EJH01HM3/6A	SlimSMA (DO-221AC)	100	0.72	2	2	25	65	175
2	VS-2EMH01HM3/5AT	SMA (DO-214AC)	100	0.75	2	2	25	50	175
2	VS-2EYH01HM3/I	SlimSMAW (DO-221AD)	100	0.69	2	2	22	60	175
2	VS-2ENH01HM3/85A	SMP (DO-220AA)	100	0.79	2	2	16	40	175
2	VS-2EQH01HM3/H	MicroSMP (DO-219AD)	100	0.82	2	1	19	30	175
3	VS-3ECH01HM3/9AT	SMC (DO-214AB)	100	0.69	3	2	25	130	175
3	VS-3EJH01HM3/6A	SlimSMA (DO-221AC)	100	0.74	3	2	30	85	175
3	VS-3EYH01HM3/I	SlimSMAW (DO-221AD)	100	0.71	3	2	22	70	175
4	VS-4CSH01HM3/86A	SMPC (TO-277A)	100	0.75	2	2	24	90	175
4	VS-4ESH01HM3/86A	SMPC (TO-277A)	100	0.73	4	2	27	130	175
4	VS-4EVH01HM3/I	SlimDPAK (TO-252AE)	100	0.71	4	3	16	100	175
6	VS-6CSH01HM3/86A	SMPC (TO-277A)	100	0.75	3	2	27	150	175
6	VS-6ESH01HM3/86A	SMPC (TO-277A)	100	0.74	6	2	28	150	175
6	VS-6CVH01HM3/I	SlimDPAK (TO-252AE)	100	0.75	3	5	20	140	175
8	VS-8CSH01HM3/86A	SMPC (TO-277A)	100	0.72	4	2	25	130	175
8	VS-8CVH01HM3/I	SlimDPAK (TO-252AE)	100	0.71	4	4	16	100	175
10	VS-10CSH01HM3/86A	SMPC (TO-277A)	100	0.75	5	2	25	130	175
10	VS-10CVH01HM3/I	SlimDPAK (TO-252AE)	100	0.74	5	4	16	200	175
$V_{RRM} = 200$ V									
1	VS-1EFH02HM3/I	SMF (DO-219AB)	200	0.74	1	2	25	35	175
1	VS-1EMH02HM3/5AT	SMA (DO-214AC)	200	0.68	1	2	25	50	175
1	VS-1ENH02HM3/85A	SMP (DO-220AA)	200	0.69	1	2	14	40	175
1	VS-1EQH02HM3/H	MicroSMP (DO-219AD)	200	0.72	1	1	13	30	175
2	VS-2EFH02HM3/I	SMF (DO-219AB)	200	0.75	2	2	25	50	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
2	VS-2EGH02HM3_A/I	SMB (DO-214AA)	200	0.66	2	2	24	70	175
2	VS-2EJH02HM3/6A	SlimSMA (DO-221AC)	200	0.72	2	2	25	65	175
2	VS-2EMH02HM3/5AT	SMA (DO-214AC)	200	0.75	2	2	25	50	175
2	VS-2EYH02HM3/I	SlimSMAW (DO-221AD)	200	0.69	2	2	22	60	175
2	VS-2ENH02HM3/85A	SMP (DO-220AA)	200	0.79	2	2	16	40	175
2	VS-2EQH02HM3/H	MicroSMP (DO-219AD)	200	0.82	2	1	19	30	175
3	VS-3ECH02HM3/9AT	SMC (DO-214AB)	200	0.69	3	2	25	130	175
3	VS-3EJH02HM3/6A	SlimSMA (DO-221AC)	200	0.74	3	2	30	85	175
3	VS-3EYH02HM3/I	SlimSMAW (DO-221AD)	200	0.71	3	2	22	70	175
4	VS-4CSH02HM3/86A	SMPC (TO-277A)	200	0.75	2	2	24	90	175
4	VS-4ESH02HM3/86A	SMPC (TO-277A)	200	0.73	4	2	27	130	175
4	VS-4EWH02FNHM3	DPAK (TO-252AA)	200	0.71	4	3	23	80	175
4	VS-4EVH02HM3/I	SlimDPAK (TO-252AE)	200	0.71	4	3	16	100	175
6	VS-6CSH02HM3/86A	SMPC (TO-277A)	200	0.75	3	2	27	150	175
6	VS-6CWH02FNHM3	DPAK (TO-252AA)	200	0.9	3	5	20	50	175
6	VS-6ESH02HM3/86A	SMPC (TO-277A)	200	0.74	6	2	28	150	175
6	VS-MURD620CTHM3	DPAK (TO-252AA)	200	0.78	3	5	20	50	175
6	VS-6DKH02HM3/H	FlatPAK 5 x 6	200	0.71	3	2	25	173	175
6	VS-6CVH02HM3/I	SlimDPAK (TO-252AE)	200	0.75	3	5	20	140	175
8	VS-8DKH02HM3/H	FlatPAK 5 x 6	200	0.7	4	2	25	173	175
8	VS-8CSH02HM3/86A	SMPC (TO-277A)	200	0.72	4	2	25	130	175
8	VS-8CWH02FNHM3	DPAK (TO-252AA)	200	0.81	4	4	23	80	175
8	VS-MURB820-1HM3	TO-262AA	200	0.75	8	5	19	100	175
8	VS-MURB820HM3	D ² PAK (TO-263AB)	200	0.75	8	5	19	100	175
8	VS-8CVH02HM3/I	SlimDPAK (TO-252AE)	200	0.71	4	4	16	100	175
10	VS-10CSH02HM3/86A	SMPC (TO-277A)	200	0.75	5	2	25	130	175
10	VS-MURB1020CT-1HM3	TO-262AA	200	0.87	5	10	19	50	175
10	VS-MURB1020CTHM3	D ² PAK (TO-263AB)	200	0.87	5	10	19	50	175
10	VS-10CVH02HM3/I	SlimDPAK (TO-252AE)	200	0.74	5	4	16	200	175
16	VS-16CDH02HM3/I	SMPD (TO-263AC)	200	0.77	8	2	27	190	175
16	VS-16EDH02HM3/I	SMPD (TO-263AC)	200	0.75	16	5	32	250	175
16	VS-MURB1620CT-1HM3	TO-262AA	200	0.91	16	15	55	160	175
16	VS-MURB1620CTHM3	D ² PAK (TO-263AB)	200	0.895	8	5	19	100	175
20	VS-20CDH02HM3/I	SMPD (TO-263AC)	200	0.77	10	2	25	210	175
20	VS-MURB2020CT-1HM3	TO-262AA	200	0.85	10	5	19	100	175
20	VS-MURB2020CTHM3	D ² PAK (TO-263AB)	200	0.85	10	5	19	100	175
30	VS-30CTH02SHM3	D ² PAK (TO-263AB)	200	0.78	15	10	30	200	175
80	VS-80EBU02HF4	PowerTab®	200	0.77	80	50	32	800	175
150	VS-150EBU02HF4	PowerTab®	200	0.77	150	50	34	1600	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



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FRED Pt® AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
V_{RRM} = 300 V									
8	VS-8ETH03SHM3	D ² PAK (TO-263AB)	300	0.83	8	20	27	100	175
8	VS-8ETH03-1HM3	TO-262AA	300	0.83	8	20	27	100	175
15	VS-15ETH03SHM3	D ² PAK (TO-263AB)	300	0.85	15	40	40	140	175
20	VS-20CTH03-1HM3	TO-262AA	300	0.85	10		20	23	120
20	VS-20CTH03SHM3	D ² PAK (TO-263AB)	300	0.85	10	20	23	120	175
V_{RRM} = 400 V									
8	VS-8ETU04-1HM3	TO-262AA	400	0.94	8	10	35	100	175
8	VS-8ETU04HN3	TO-220AC	400	0.94	8	10	35	100	175
8	VS-8ETU04SHM3	D ² PAK (TO-263AB)	400	0.94	8	10	35	100	175
30	VS-30CPU04LHN3	TO-247AD 3L	400	0.93	15	10	46	200	175
60	VS-60EPU04LHN3	TO-247AD 2L	400	0.87	60	50	85	600	175
60	VS-60APU04LHN3	TO-247AD 3L	400	0.87	60	50	85	600	175
80	VS-80EBU04HF4	PowerTab®	400	0.92	80	50	50	800	175
150	VS-150EBU04HF4	PowerTab®	400	0.9	150	50	60	1500	175
V_{RRM} = 600 V									
1	VS-1EFU06HM3/I	SMF (DO-219AB)	600	0.83	1	3	55	30	175
2	VS-2EFU06HM3/I	SMF (DO-219AB)	600	0.95	2	3	55	30	175
3	VS-3EGU06WHM3/5BT	SMB (DO-214AA)	600	0.99	3	3	41	55	175
3	VS-3EJU06HM3/6A	SlimSMA (DO-221AC)	600	0.99	3	3	45	43	175
5	VS-5EWH06FNHM3	DPAK (TO-252AA)	600	1.3	5	5	18	70	175
6	VS-6ESH06HM3/86A	SMPC (TO-277A)	600	1.05	6	50	33	90	175
6	VS-6ESU06HM3/86A	SMPC (TO-277A)	600	0.95	6	50	42	120	175
6	VS-6EWH06FNHM3	DPAK (TO-252AA)	600	1.26	6	50	18	70	175
6	VS-6EWX06FNHM3	DPAK (TO-252AA)	600	1.65	6	20	14	50	175
6	VS-6EVH06HM3/I	SlimDPAK (TO-252AE)	600	1.26	6	5	16	70	175
6	VS-6EVL06HM3/I	SlimDPAK (TO-252AE)	600	0.98	6	5	34	80	175
6	VS-6EVX06HM3/I	SlimDPAK (TO-252AE)	600	1.65	6	5	14	50	175
8	VS-8ETH06-1HM3	TO-262AA	600	1.3	8	50	18	90	175
8	VS-8ETL06SHM3	D ² PAK (TO-263AB)	600	0.81	8	5	60	175	175
8	VS-8ETH06HN3	TO-220AC	600	1.3	8	50	18	90	175
8	VS-8ETH06SHM3	D ² PAK (TO-263AB)	600	1.3	8	10	35	100	175
8	VS-8EWH06FNHM3	DPAK (TO-252AA)	600	1.3	8	50	18	90	175
8	VS-8EVH06HM3/I	SlimDPAK (TO-252AE)	600	1.3	8	20	16	90	175
8	VS-8EVL06HM3/I	SlimDPAK (TO-252AE)	600	0.98	8	20	34	130	175
8	VS-8EVX06HM3/I	SlimDPAK (TO-252AE)	600	1.4	8	20	14	80	175
8	VS-8ETL06S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	0.81	8	8	170	175	175
10	VS-10CDU06HM3/I	SMPD (TO-263AC)	600	1	5	3	35	110	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
12	VS-12CDU06HM3/I	SMPD (TO-263AC)	600	0.89	6	5	45	200	175
15	VS-15ETH06HN3	TO-220AC	600	1.3	15	50	22	120	175
15	VS-15ETL06HN3	TO-220AC	600	0.85	15	10	60	250	175
15	VS-ETH1506-1HM3	TO-262AA	600	1.25	15	15	21	160	175
15	VS-ETH1506SHM3	D ² PAK (TO-263AB)	600	1.25	15	15	21	160	175
15	VS-ETL1506-1HM3	TO-262AA	600	0.85	15	15	60	200	175
15	VS-ETL1506SHM3	D ² PAK (TO-263AB)	600	0.85	15	15	60	200	175
15	VS-ETU1506-1HM3	TO-262AA	600	1.1	15	15	24	160	175
15	VS-ETU1506SHM3	D ² PAK (TO-263AB)	600	1.1	15	15	24	160	175
15	VS-ETU1506S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.1	15	15	40	160	175
15	VS-15EVH06HM3/I	SlimDPAK (TO-252AE)	600	1.2	15	20	20	120	175
15	VS-15EVL06HM3/I	SlimDPAK (TO-252AE)	600	0.98	15	10	38	180	175
15	VS-15EVU06HM3/I	SlimDPAK (TO-252AE)	600	1.1	15	20	26	160	175
16	VS-16CDU06HM3/I	SMPD (TO-263AC)	600	0.94	8	5	45	200	175
16	VS-16EDU06HM3/I	SMPD (TO-263AC)	600	0.91	16	15	55	160	175
20	VS-ETU2006S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.2	20	5	42	180	175
30	VS-30CDU06HM3/I	SMPD (TO-263AC)	600	0.9	15	15	55	300	175
30	VS-30EPH06HN3	TO-247AC modified (2 pins)	600	1.34	30	50	28	300	175
30	VS-APH3006HN3	TO-247AC	600	1.4	30	30	27	220	175
30	VS-APU3006HN3	TO-247AC	600	1.15	30	30	30	220	175
30	VS-EPH3006HN3	TO-247AC modified (2 pins)	600	1.4	30	30	27	220	175
30	VS-EPU3006HN3	TO-247AC modified (2 pins)	600	1.15	30	30	30	220	175
30	VS-ETH3006-1HM3	TO-262AA	600	1.4	30	30	27	180	175
30	VS-ETH3006SHM3	D ² PAK (TO-263AB)	600	1.4	30	30	27	180	175
30	VS-ETU3006-1HM3	TO-262AA	600	1.15	30	30	30	200	175
30	VS-ETU3006SHM3	D ² PAK (TO-263AB)	600	1.15	30	30	30	200	175
30	VS-ETL3006S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	0.9	30	30	134	280	175
30	VS-ETU3006S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.15	30	30	45	200	175
30	VS-APH3006LHN3	TO-247AD 3L	600	1.4	30	30	26	240	175
30	VS-EPH3006LHN3	TO-247AD 2L	600	1.4	30	30	26	240	175
30	VS-C4PU3006LHN3	TO-247AD 3L	600	1.17	15	15	60	200	175
30	VS-C4PH3006LHN3	TO-247AD 3L	600	1.35	15	15	50	200	175
30	VS-E4PH3006LHN3	TO-247AD 2L	600	1.4	30	50	55	240	175
30	VS-E4PU3006LHN3	TO-247AD 2L	600	1.2	30	50	65	240	175
30	VS-APU3006LHN3	TO-247AD 3L	600	1.15	30	30	30	250	175
30	VS-EPU3006LHN3	TO-247AD 2L	600	1.4	30	30	30	220	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



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FRED Pt® AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
60	VS-60APU06HN3	TO-247AC	600	1.2	60	50	50	600	175
60	VS-60EPU06HN3	TO-247AC	600	1.2	30	50	55	480	175
60	VS-C4PH6006LHN3	TO-247AD 3L	600	1.44	30	50	65	480	175
60	VS-C4PU6006LHN3	TO-247AD 3L	600	1.23	30	30	26	240	175
60	VS-CPU6006LHN3	TO-247AD 3L	600	1.1	60	50	68	250	175
60	VS-E4PH6006LHN3	TO-247AD 2L	600	1.4	60	50	68	425	175
60	VS-E4PU6006LHN3	TO-247AD 2L	600	1.33	60	50	74	450	175
60	VS-EPU6006LHN3	TO-247AD 2L	600	1.1	60	30	32	600	175
80	VS-EBU8006HF4	PowerTab®	600	1.13	80	8	46	750	175
150	VS-EBU15006HF4	PowerTab®	600	1.08	150	8	50	1200	175
V_{RRM} = 600 V (Generation 5)									
15	VS-E5TH1506S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.15	15	10	31	200	175
15	VS-E5TX1506S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.3	15	10	23	185	175
20	VS-E5TH2106S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.23	20	10	39	200	175
20	VS-E5TX2106S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.4	20	10	33	185	175
30	VS-E5TH3006S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.15	30	10	41	330	175
30	VS-E5TX3006S2LHM3	D ² PAK 2L (TO-263AB 2L)	600	1.3	30	10	39	310	175
15	VS-E5TH1506THN3	TO-220AC 2L	600	1.15	15	10	31	200	175
15	VS-E5TX1506THN3	TO-220AC 2L	600	1.3	15	10	23	185	175
30	VS-E5TH3006THN3	TO-220AC 2L	600	1.15	30	20	41	330	175
30	VS-E5TX3006THN3	TO-220AC 2L	600	1.3	30	20	39	310	175
30	VS-E5PH3006LHN3	TO-247AD 2L	600	1.15	30	20	41	330	175
30	VS-A5PH3006LHN3	TO-247AD 3L	600	1.15	30	20	41	330	175
30	VS-E5PX3006LHN3	TO-247AD 2L	600	1.3	30	20	39	310	175
30	VS-A5PX3006LHN3	TO-247AD 3L	600	1.3	30	20	39	310	175
60	VS-E5PH6006LHN3	TO-247AD 2L	600	1.2	60	25	49	500	175
60	VS-A5PH6006LHN3	TO-247AD 3L	600	1.2	60	25	49	500	175
60	VS-E5PX6006LHN3	TO-247AD 2L	600	1.4	60	25	44	480	175
60	VS-A5PX6006LHN3	TO-247AD 3L	600	1.4	60	25	44	480	175
75	VS-E5PH7506LHN3	TO-247AD 2L	600	1.2	75	25	52	615	175
75	VS-E5PX7506LHN3	TO-247AD 2L	600	1.4	75	25	44	565	175
V_{RRM} = 650 V									
30	VS-ETH3007THN3	TO-220AC 2L	650	1.4	30	30	37	210	175
30	VS-ETX3007THN3	TO-220AC 2L	650	1.6	30	30	27	210	175
V_{RRM} = 1200 V									
8	VS-8ETU12HN3	TO-220AC	1200	1.95	8	55	42	80	175
15	VS-15ETU12HN3	TO-220AC	1200	2.25	15	80	44	150	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



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FRED Pt® AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
30	VS-30EPU12LHN3	TO-247AD 2L	1200	2.05	30	145	49	300	175
30	VS-30ETU12THN3	TO-220AC 2L	1200	2.05	30	145	57	400	175
50	VS-50EPU12LHN3	TO-247AD 2L	1200	1.95	60	330	50	600	175
75	VS-75EPU12LHN3	TO-247AD 2L	1200	1.95	75	420	62	700	175
V_{RRM} = 1200 V (Generation 5)									
8	VS-E5TH0812THN3	TO-220AC 2L	1200	1.8	8	50	100	65	175
8	VS-E5TX0812THN3	TO-220AC 2L	1200	2.1	8	50	87	60	175
15	VS-E5TH1512THN3	TO-220AC 2L	1200	1.5	15	50	95	125	175
15	VS-E5TX1512THN3	TO-220AC 2L	1200	2.1	15	50	96	110	175
15	VS-E5TH1512S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	1.7	15	50	95	125	175
15	VS-E5TX1512S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	2.1	15	50	96	110	175
20	VS-E5TH2112S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	1.88	20	50	125	125	175
20	VS-E5TX2112S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	2.4	20	50	115	110	175
30	VS-E5TH3012S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	1.7	30	50	113	240	175
30	VS-E5TX3012S2LHM3	D ² PAK 2L (TO-263AB 2L)	1200	2.1	30	50	100	190	175
30	VS-E5TH3012THN3	TO-220AC 2L	1200	1.7	30	50	113	240	175
30	VS-E5TX3012THN3	TO-220AC 2L	1200	2.1	30	50	100	190	175
30	VS-C5PH3012LHN3	TO-247AD 3L	1200	1.7	15	50	95	125	175
30	VS-C5PX3012LHN3	TO-247AD 3L	1200	2.1	15	50	96	110	175
30	VS-E5PH3012LHN3	TO-247AD 2L	1200	1.7	30	50	113	240	175
30	VS-E5PX3012LHN3	TO-247AD 2L	1200	2.1	30	50	100	190	175
60	VS-E5PH6012LHN3	TO-247AD 2L	1200	1.7	60	50	130	425	175
60	VS-E5PX6012LHN3	TO-247AD 2L	1200	2.1	60	50	120	370	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
V_{RRM} = 100 V									
1	VS-1EFH01-M3/I	SMF (DO-219AB)	100	0.74	1	2	25	35	175
1	VS-1EMH01-M3/5AT	SMA (DO-214AC)	100	0.68	1	2	25	50	175
1	VS-1ENH01-M3/85A	SMP (DO-220AA)	100	0.69	1	2	14	40	175
1	VS-1EQH01-M3/H	MicroSMP (DO-219AD)	100	0.72	1	1	13	30	175
2	VS-2EQH01-M3/H	MicroSMP (DO-219AD)	100	0.82	2	1	19	30	175
2	VS-2EFH01-M3/I	SMF (DO-219AB)	100	0.75	2	2	25	50	175
2	VS-2EJH01-M3/6A	SIImSMA (DO-221AC)	100	0.72	2	2	25	65	175
2	VS-2EMH01-M3/5AT	SMA (DO-214AC)	100	0.75	2	2	25	50	175
2	VS-2EGH01-M3/5BT	SMB (DO-214AA)	100	0.66	2	2	24	70	175
2	VS-2EYH01-M3/I	SIImSAW (DO-221AD)	100	0.69	2	2	22	60	175
2	VS-2ENH01-M3/85A	SMP (DO-220AA)	100	0.79	2	2	16	40	175
3	VS-3ECH01-M3/9AT	SMC (DO-214AB)	100	0.69	3	2	25	130	175
3	VS-3EJH01-M3/6A	SlimSMA (DO-221AC)	100	0.74	3	2	30	85	175
3	VS-3EYH01-M3/I	SlimSAW (DO-221AD)	100	0.71	3	2	22	70	175
4	VS-4CSH01-M3/86A	SMPC (TO-277A)	100	0.75	2	2	24	90	175
4	VS-4ESH01-M3/86A	SMPC (TO-277A)	100	0.73	4	2	27	130	175
4	VS-4EVH01-M3/I	SlimDPAK (TO-252AE)	100	0.71	4	3	16	100	175
6	VS-6CSH01-M3/86A	SMPC (TO-277A)	100	0.75	3	2	27	150	175
6	VS-6ESH01-M3/86A	SMPC (TO-277A)	100	0.74	6	2	28	150	175
6	VS-6CVH01-M3/I	SlimDPAK (TO-252AE)	100	0.75	3	3	20	140	175
8	VS-8CSH01-M3/86A	SMPC (TO-277A)	100	0.72	4	2	25	130	175
8	VS-8CVH01-M3/I	SlimDPAK (TO-252AE)	100	0.71	4	4	16	100	175
10	VS-10CSH01-M3/86A	SMPC (TO-277A)	100	0.75	5	2	25	130	175
10	VS-10CVH01-M3/I	SlimDPAK (TO-252AE)	100	0.74	5	4	16	200	175
V_{RRM} = 200 V									
1	VS-1EFH02-M3/I	SMF (DO-219AB)	200	0.74	1	2	25	35	175
1	VS-1EMH02-M3/5AT	SMA (DO-214AC)	200	0.68	1	2	25	50	175
1	VS-1ENH02-M3/85A	SMP (DO-220AA)	200	0.69	1	2	14	40	175
1	VS-1EQH02-M3/H	MicroSMP (DO-219AD)	200	0.72	1	1	13	30	175
2	VS-2EQH02-M3/H	MicroSMP (DO-219AD)	200	0.82	2	1	19	30	175
2	VS-2EFH02-M3/I	SMF (DO-219AB)	200	0.75	2	2	25	50	175
2	VS-2EJH02-M3/6A	SIImSMA (DO-221AC)	200	0.72	2	2	25	65	175
2	VS-2EMH02-M3/5AT	SMA (DO-214AC)	200	0.75	2	2	25	50	175
2	VS-2EGH02-M3/5BT	SMB (DO-214AA)	200	0.66	2	2	24	70	175
2	VS-2EYH02-M3/I	SIImSAW (DO-221AD)	200	0.69	2	2	22	60	175
2	VS-2ENH02-M3/85A	SMP (DO-220AA)	200	0.79	2	2	16	40	175
3	VS-3ECH02-M3/9AT	SMC (DO-214AB)	200	0.69	3	2	25	130	175
3	VS-3EJH02-M3/6A	SlimSMA (DO-221AC)	200	0.74	3	2	30	85	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
3	VS-3EYH02-M3/I	SlimSMAW (DO-221AD)	200	0.71	3	2	22	70	175
4	VS-4CSH02-M3/86A	SMPC (TO-277A)	200	0.75	2	2	24	90	175
4	VS-4ESH02-M3/86A	SMPC (TO-277A)	200	0.73	4	2	27	130	175
4	VS-4EWH02FN-M3	DPAK (TO-252AA)	200	0.71	4	3	23	80	175
4	VS-4EVH02-M3/I	SlimDPAK (TO-252AE)	200	0.71	4	3	16	100	175
6	VS-6CSH02-M3/86A	SMPC (TO-277A)	200	0.75	3	2	27	150	175
6	VS-6CWH02FN-M3	DPAK (TO-252AA)	200	0.9	3	5	20	50	175
6	VS-6ESH02-M3/86A	SMPC (TO-277A)	200	0.74	6	2	28	150	175
6	VS-MURD620CT-M3	DPAK (TO-252AA)	200	0.78	3	5	20	50	175
6	VS-6DKH02-M3/H	FlatPAK 5 x 6	200	0.71	3	2	25	173	175
6	VS-6CVH02-M3/I	SlimDPAK (TO-252AE)	200	0.75	3	3	20	140	175
8	VS-8DKH02-M3/H	FlatPAK 5 x 6	200	0.7	4	2	25	173	175
8	VS-8CSH02-M3/86A	SMPC (TO-277A)	200	0.72	4	2	25	130	175
8	VS-8CWH02FN-M3	DPAK (TO-252AA)	200	0.71	4	4	23	80	175
8	VS-8EWH02FN-M3	DPAK (TO-252AA)	200	0.75	8	5	23	140	175
8	VS-8CVH02-M3/I	SlimDPAK (TO-252AE)	200	0.71	4	4	16	100	175
8	VS-MUR820-M3	TO-220AC 2L	200	0.8	8	5	19	100	175
8	VS-MURB820-1-M3	TO-262AA	200	0.8	8	5	19	100	175
8	VS-MURB820-M3	D ² PAK (TO-263AB)	200	0.8	8	5	19	100	175
10	VS-10CSH02-M3/86A	SMPC (TO-277A)	200	0.75	5	2	25	130	175
10	VS-MUR1020CT-M3	TO-220AB 3L	200	0.87	5	10	19	50	175
10	VS-MURB1020CT-1-M3	TO-262AA	200	0.87	5	5	19	50	175
10	VS-MURB1020CT-M3	D ² PAK (TO-263AB)	200	0.87	5	5	19	50	175
10	VS-10CVH02-M3/I	SlimDPAK (TO-252AE)	200	0.74	5	4	16	200	175
15	VS-MUR1520-M3	TO-220AC 2L	200	0.78	15	10	22	200	175
15	VS-MURB1520-1-M3	TO-262AA	200	0.78	15	10	22	200	175
15	VS-MURB1520-M3	D ² PAK (TO-263AB)	200	0.78	15	10	22	200	175
16	VS-16CDH02-M3/I	SMPD (TO-263AC)	200	0.77	8	2	27	190	175
16	VS-16EDH02-M3/I	SMPD (TO-263AC)	200	0.75	16	15	32	250	175
16	VS-MUR1620CT-M3	TO-220AB 3L	200	0.78	8	5	19	100	175
16	VS-MURB1620CT-M3	D ² PAK (TO-263AB)	200	0.78	8	5	19	100	175
20	VS-20CDH02-M3/I	SMPD (TO-263AC)	200	0.77	10	2	25	210	175
20	VS-MUR2020CT-M3	TO-220AB 3L	200	0.78	8	15	19	100	175
20	VS-MURB2020CT-1-M3	TO-262AA	200	0.78	8	15	19	100	175
20	VS-MURB2020CT-M3	D ² PAK (TO-263AB)	200	0.78	8	15	19	100	175
30	VS-30CTH02-1-M3	TO-262AA	200	0.78	15	10	30	200	175
30	VS-30CTH02-M3	TO-220AB 3L	200	0.78	15	10	30	200	175
30	VS-30CTH02FP-N3	TO-220 FullPAK 3L	200	0.78	15	10	30	200	175
30	VS-30CTH02S-M3	D ² PAK (TO-263AB)	200	0.78	15	10	30	200	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
30	VS-MUR3020WT-N3	TO-247AC 3L	200	0.85	15	10	22	200	175
60	VS-60APU02-N3	TO-247AC 3L	200	0.81	60	50	28	800	175
60	VS-60CPU02-N3	TO-247AC 3L	200	0.75	30	50	30	300	175
60	VS-60EPU02-N3	TO-247AC 2L	200	0.81	60	50	28	800	175
80	VS-80CPU02-N3	TO-247AC 3L	200	0.8	40	5	34	330	175
80	VS-80EBU02	PowerTab®	200	0.79	80	50	32	800	175
150	VS-150EBU02	PowerTab®	200	0.79	150	50	34	1600	175
V_{RRM} = 300 V									
8	VS-8ETH03-1-M3	TO-262AA	300	0.83	8	20	35	100	175
8	VS-8ETH03-M3	TO-220AC 2L	300	0.83	8	20	27	100	175
8	VS-8ETH03S-M3	D ² PAK (TO-263AB)	300	0.83	8	20	27	100	175
15	VS-15ETH03-1-M3	TO-262AA	300	0.85	15	40	40	140	175
15	VS-15ETH03-M3	TO-220AC 2L	300	0.85	15	40	32	140	175
15	VS-15ETH03S-M3	D ² PAK (TO-263AB)	300	0.85	15	40	40	140	175
20	VS-20CTH03-1-M3	TO-262AA	300	0.85	10	20	35	120	175
20	VS-20CTH03-M3	TO-220AC 3L	300	0.85	10	20	31	120	175
20	VS-20CTH03FP-N3	TO-220 FullPAK 3L	300	0.85	10	20	31	120	175
20	VS-20CTH03S-M3	D ² PAK (TO-263AB)	300	0.85	10	20	35	120	175
30	VS-30CPH03-N3	TO-247AC 3L	300	0.85	15	40	32	140	175
30	VS-30CTH03-M3	TO-220AB 3L	300	0.85	15	40	32	150	175
30	VS-30EPH03-N3	TO-247AC 2L	300	0.9	30	60	38	300	175
60	VS-60APH03-N3	TO-247AC 3L	300	0.85	60	10	28	450	175
60	VS-60CPH03-N3	TO-247AC 3L	300	0.92	30	60	39	300	175
60	VS-60CPU03W-N3	TO-247AC 3L	300	0.9	30	5	50	300	175
80	VS-80CPH03-N3	TO-247AC 3L	300	0.94	40	10	34	320	175
V_{RRM} = 400 V									
8	VS-8ETU04-1-M3	TO-262AA	400	0.94	8	10	35	100	175
8	VS-8ETU04-M3	TO-220AC 2L	400	0.94	8	10	35	100	175
8	VS-8ETU04S-M3	D ² PAK (TO-263AB)	400	0.94	8	10	35	100	175
16	VS-16CTU04-1-M3	TO-262AA	400	0.94	8	10	35	100	175
16	VS-16CTU04-M3	TO-220AB 3L	400	0.94	8	10	35	100	175
16	VS-16CTU04S-M3	D ² PAK (TO-263AB)	400	0.94	8	10	35	100	175
30	VS-30CPU04-N3	TO-247AC 3L	400	0.93	15	10	36	200	175
60	VS-60APU04-N3	TO-247AC 3L	400	0.87	60	50	50	600	175
60	VS-60CPU04-N3	TO-247AC 3L	400	0.92	30	10	37	300	175
60	VS-60EPU04-N3	TO-247AC 2L	400	0.87	60	50	50	600	175
80	VS-80EBU04	PowerTab®	400	0.92	80	50	50	800	175
150	VS-150EBU04	PowerTab®	400	0.9	150	50	60	1500	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
V_{RRM} = 500 V									
8	VS-ETU0805-M3	TO-220AC 2L	500	0.9	8	9	28	110	175
V_{RRM} = 600 V									
1	VS-1EFU06-M3/I	SMF (DO-219AB)	600	0.83	1	3	55	30	175
2	VS-2EFU06-M3/I	SMF (DO-219AB)	600	0.95	2	3	55	30	175
3	VS-3EGH06-M3/5BT	SMB (DO-214AA)	600	1.2	3	3	35	55	175
3	VS-3EGU06-M3/5BT	SMB (DO-214AA)	600	0.99	3	3	41	55	175
3	VS-3EMH06-M3/5AT	SMA (DO-214AC)	600	1.2	3	3	35	50	175
3	VS-3EMU06-M3/5AT	SMA (DO-214AC)	600	0.99	3	3	41	55	175
3	VS-3EJU06-M3/6A	SlimSMA (DO-221AC)	600	0.99	3	3	45	43	175
4	VS-4ECH06-M3/9AT	SMC (DO-214AB)	600	1.15	4	3	30	90	175
4	VS-4ECU06-M3/9AT	SMC (DO-214AB)	600	0.88	4	3	45	120	175
4	VS-4EGH06-M35BT	SMB (DO-214AA)	600	1.2	4	3	30	55	175
4	VS-4EGU06-M3/5BT	SMB (DO-214AA)	600	0.94	4	3	45	100	175
5	VS-5ECH06-M3/9AT	SMC (DO-214AB)	600	1.2	5	3	30	110	175
5	VS-5ECU06-M3/9AT	SMC (DO-214AB)	600	0.92	5	3	45	130	175
5	VS-5EWH06FN-M3	DPAK (TO-252AA)	600	1.2	5	5	18	70	175
5	VS-5EWL06FN-M3	DPAK (TO-252AA)	600	0.85	5	5	59	80	175
5	VS-5EWX06FN-M3	DPAK (TO-252AA)	600	1.55	5	20	14	50	175
6	VS-6ESH06-M3/86A	SMPC (TO-277A)	600	1.05	6	5	33	90	175
6	VS-6ESU06-M3/86A	SMPC (TO-277A)	600	0.95	6	5	42	120	175
6	VS-6EWH06FN-M3	DPAK (TO-252AA)	600	1.26	6	5	18	70	175
6	VS-6EWL06FN-M3	DPAK (TO-252AA)	600	0.87	6	5	59	80	175
6	VS-6EWX06FN-M3	DPAK (TO-252AA)	600	1.65	6	20	14	50	175
6	VS-6EVH06-M3/I	SlimDPAK (TO-252AE)	600	1.26	6	5	16	70	175
6	VS-6EVL06-M3/I	SlimDPAK (TO-252AE)	600	0.98	6	5	34	80	175
6	VS-6EVX06-M3/I	SlimDPAK (TO-252AE)	600	1.65	6	5	14	50	175
8	VS-8ETH06-1-M3	TO-262AA	600	1.3	8	50	18	90	175
8	VS-8ETH06-M3	TO-220AC 2L	600	1.3	8	50	18	90	175
8	VS-8ETH06S-M3	D ² PAK (TO-263AB)	600	1.3	8	50	18	90	175
8	VS-8ETH06FP-N3	TO-220 FullPAK 2L	600	1.3	8	50	18	90	175
8	VS-8ETL06-1-M3	TO-262AA	600	0.81	8	5	60	175	175
8	VS-8ETL06-M3	TO-220AC 2L	600	0.81	8	5	60	175	175
8	VS-8ETL06FP-N3	TO-220 FullPAK 2L	600	0.81	8	5	60	175	175
8	VS-8ETL06S-M3	D ² PAK (TO-263AB)	600	0.81	8	5	60	175	175
8	VS-8ETX06-1-M3	TO-262AA	600	1.4	8	50	15	110	175
8	VS-8ETX06-M3	TO-220AC 2L	600	1.4	8	50	15	110	175
8	VS-8ETX06FP-N3	TO-220 FullPAK 2L	600	1.4	8	50	15	110	175
8	VS-8ETX06S-M3	D ² PAK (TO-263AB)	600	1.4	8	50	15	110	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
8	VS-8EWH06FN-M3	DPAK (TO-252AA)	600	1.3	8	50	18	90	175
8	VS-8EWL06FN-M3	DPAK (TO-252AA)	600	0.81	8	5	60	140	175
8	VS-8EWX06FN-M3	DPAK (TO-252AA)	600	1.4	8	50	15	90	175
8	VS-8EVH06-M3/I	SlimDPAK (TO-252AE)	600	0.98	8	5	16	90	175
8	VS-8EVL06-M3/I	SlimDPAK (TO-252AE)	600	0.98	8	5	34	130	175
8	VS-8EVX06-M3/I	SlimDPAK (TO-252AE)	600	1.4	8	20	14	80	175
8	VS-ETH0806-M3	TO-220AC 2L	600	1.3	8	12	16	80	175
8	VS-ETH0806FP-M3	TO-220 FullPAK 2L	600	1.3	8	12	16	80	175
8	VS-ETL0806-M3	TO-220AC 2L	600	0.84	8	9	65	120	175
8	VS-ETL0806FP-M3	TO-220 FullPAK 2L	600	0.84	8	9	65	120	175
8	VS-ETX0806-M3	TO-220AC 2L	600	1.5	8	30	14	80	175
8	VS-ETX0806FP-M3	TO-220 FullPAK 2L	600	1.5	8	30	14	80	175
12	VS-12CDU06-M3/I	SMPD (TO-263AC)	600	0.89	6	5	45	200	175
12	VS-12EWH06FN-M3	DPAK (TO-252AA)	600	1.34	12	10	18	110	175
15	VS-15AWL06FN-M3	DPAK (TO-252AA)	600	0.85	15	10	60	180	175
15	VS-15ETH06-1-M3	TO-262AA	600	1.3	15	40	22	120	175
15	VS-15ETH06-M3	TO-220AC 2L	600	1.3	15	50	22	120	175
15	VS-15ETH06FP-N3	TO-220 FullPAK 2L	600	1.3	15	50	22	120	175
15	VS-15ETH06S-M3	D ² PAK (TO-263AB)	600	1.3	15	50	22	120	175
15	VS-15ETL06-1-M3	TO-262AA	600	0.85	15	10	60	250	175
15	VS-15ETL06-M3	TO-220AC 2L	600	0.85	15	10	60	250	175
15	VS-15ETL06FP-N3	TO-220 FullPAK 2L	600	0.85	15	10	60	250	175
15	VS-15ETL06S-M3	D ² PAK (TO-263AB)	600	0.85	15	10	60	250	175
15	VS-15ETX06-1-M3	TO-262AA	600	1.5	15	50	18	170	175
15	VS-15ETX06-M3	TO-220AC 2L	600	1.5	15	50	18	170	175
15	VS-15ETX06FP-N3	TO-220 FullPAK 2L	600	1.5	15	50	18	170	175
15	VS-15ETX06S-M3	D ² PAK (TO-263AB)	600	1.5	15		18	170	175
15	VS-15EWH06FN-M3	DPAK (TO-252AA)	600	1.2	15	50	22	120	175
15	VS-15EWL06FN-M3	DPAK (TO-252AA)	600	0.85	15	10	60	180	175
15	VS-15EWX06FN-M3	DPAK (TO-252AA)	600	1.5	15	50	18	120	175
15	VS-ETH1506-1-M3	TO-262AA	600	1.25	15	15	21	160	175
15	VS-ETH1506-M3	TO-220AC 2L	600	1.25	15	15	21	160	175
15	VS-ETH1506FP-M3	TO-220 FullPAK 2L	600	1.25	15	15	21	160	175
15	VS-ETH1506S-M3	D ² PAK (TO-263AB)	600	1.25	15	15	21	160	175
15	VS-ETL1506-1-M3	TO-262AA	600	0.85	15	15	60	200	175
15	VS-ETL1506-M3	TO-220AC 2L	600	0.85	15	15	60	200	175
15	VS-ETL1506FP-M3	TO-220 FullPAK 2L	600	0.85	15	15	60	200	175
15	VS-ETL1506S-M3	D ² PAK (TO-263AB)	600	0.85	15	15	60	200	175
15	VS-ETU1506-1-M3	TO-262AA	600	1.1	15	9	24	160	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
15	VS-ETU1506-M3	TO-220AC 2L	600	1.1	15	15	24	160	175
15	VS-ETU1506FP-M3	TO-220 FullPAK 2L	600	1.1	15	15	24	160	175
15	VS-ETU1506S-M3	D ² PAK (TO-263AB)	600	1.1	15	15	24	160	175
15	VS-ETX1506-1-M3	TO-262AA	600	1.55	15	36	18	120	175
15	VS-ETX1506-M3	TO-220AC 2L	600	1.55	15	36	18	120	175
15	VS-ETX1506FP-M3	TO-220 FullPAK 2L	600	1.55	15	36	18	120	175
15	VS-ETX1506S-M3	D ² PAK (TO-263AB)	600	1.55	15	36	18	120	175
15	VS-15EVH06-M3/I	SlimDPAK (TO-252AE)	600	1.2	15	20	20	120	175
15	VS-15EVL06-M3/I	SlimDPAK (TO-252AE)	600	0.98	15	10	38	180	175
15	VS-15EVU06-M3/I	SlimDPAK (TO-252AE)	600	1.1	15	10	26	160	175
16	VS-16CDU06-M3/I	SMPD (TO-263AC)	600	0.94	8	5	45	200	175
16	VS-16EDU06-M3/I	SMPD (TO-263AC)	600	0.91	16	15	55	160	175
30	VS-30CDU06-M3/I	SMPD (TO-263AC)	600	0.9	15	15	55	300	175
30	VS-30EPH06-N3	TO-247AC 2L	600	1.34	30	50	28	300	175
30	VS-30ETH06-1-M3	TO-262AA	600	1.34	30	50	28	200	175
30	VS-30ETH06-M3	TO-220AC 2L	600	1.34	30	50		200	175
30	VS-30ETH06FP-N3	TO-220 FullPAK 2L	600	1.34	30	50	23	200	175
30	VS-30ETH06S-M3	D ² PAK (TO-263AB)	600	1.34	30	50	28	200	175
30	VS-APH3006-N3	TO-247AC 3L	600	1.4	30	30	27	220	175
30	VS-APU3006-N3	TO-247AC 3L	600	1.15	30	30	30	220	175
30	VS-EPH3006-N3	TO-247AC 2L	600	1.4	30	30	27	220	175
30	VS-EPH3006L-N3	TO-247AD 2L	600	1.4	30	30	27	220	175
30	VS-EPU3006-N3	TO-247AD 2L	600	1.15	30	30	30	220	175
30	VS-ETH3006-1-M3	TO-262AA	600	1.4	30	30	27	180	175
30	VS-ETH3006-M3	TO-220AC 2L	600	1.4	30	30	27	180	175
30	VS-ETH3006FP-M3	TO-220 FullPAK 2L	600	1.4	30	30	27	180	175
30	VS-ETH3006S-M3	D ² PAK (TO-263AB)	600	1.4	30	30	27	180	175
30	VS-ETU3006-1-M3	TO-262AA	600	1.15	30	30	30	200	175
30	VS-ETU3006-M3	TO-220AC 2L	600	1.15	30	30	30	200	175
30	VS-ETU3006FP-M3	TO-220 FullPAK 2L	600	1.15	30	30	30	200	175
30	VS-ETU3006S-M3	D ² PAK (TO-263AB)	600	1.15	30	30	30	200	175
30	VS-ETH3106FP-N3	TO-220 FullPAK 2L	600	1.4	30	10	90	280	175
30	VS-APH3006L-N3	TO-247AD 3L	600	1.4	30	15	26	240	175
30	VS-C4PU3006L-N3	TO-247AD 3L	600	1.17	15	15	60	200	175
30	VS-C4PH3006L-N3	TO-247AD 3L	600	1.35	15	15	50	200	175
30	VS-E4PH3006L-N3	TO-247AD 2L	600	1.4	30	50	55	240	175
30	VS-E4PU3006L-N3	TO-247AD 2L	600	1.2	30	50	65	240	175
30	VS-APU3006L-N3	TO-247AD 2L	600	1.15	30	30	30	250	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Standard Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
30	VS-EPU3006L-N3	TO-247AD 2L	600	1.15	30	30	30	220	175
30	VS-AZH3106FP-M3	TO-3PF	600	1.4	30	10	90	280	175
30	VS-C4ZU3006FP-M3	TO-3PF	600	1.32	30	15	73	180	175
60	VS-60APU06-N3	TO-247AC 3L	600	1.11	60	50	34	600	175
60	VS-60CPU06-N3	TO-247AC 3L	600	1.1	30	50	27	300	175
60	VS-60EPU06-N3	TO-247AC 2L	600	1.11	60	50	34	600	175
60	VS-APU6006-N3	TO-247AC 3L	600	1.05	60	30	32	600	175
60	VS-EPU6006-N3	TO-247AC 2L	600	1.05	60	30	32	600	175
60	VS-C4PH6006L-N3	TO-247AD 3L	600	1.44	30	50	55	600	175
60	VS-C4PU6006L-N3	TO-247AD 3L	600	1.23	30	50	65	480	175
60	VS-CPU6006L-N3	TO-247AD 3L	600	1.1	30	30	26	500	175
60	VS-E4PH6006L-N3	TO-247AD 2L	600	1.4	60	50	68	425	175
60	VS-E4PU6006L-N3	TO-247AD 2L	600	1.33	60	50	74	450	175
60	VS-EPU6006L-N3	TO-247AD 2L	600	1.1	60	30	32	600	175
60	VS-CZH6106FP-M3	TO-3PF	600	1.4	30	10	90	280	175
60	VS-C4ZU6006FP-M3	TO-3PF	600	1.2	30	50	70	255	175
150	VS-EBU15006-F4	PowerTab®	600	1.63	150	8	50	1200	175
V_{RRM} = 600 V (Generation 5)									
15	VS-E5TH1506-M3	TO-220AC 2L	600	1.15	15	10	31	200	175
15	VS-E5TX1506-M3	TO-220AC 2L	600	1.3	15	10	23	185	175
30	VS-E5TH3006-M3	TO-220AC 2L	600	1.15	30	20	41	330	175
30	VS-E5TX3006-M3	TO-220AC 2L	600	1.3	30	20	39	310	175
30	VS-E5PH3006L-N3	TO-247AD 2L	600	1.15	30	20	41	330	175
30	VS-A5PH3006L-N3	TO-247AD 3L	600	1.15	30	20	41	330	175
30	VS-E5PX3006L-N3	TO-247AD 2L	600	1.3	30	20	39	310	175
30	VS-A5PX3006L-N3	TO-247AD 3L	600	1.3	30	20	39	310	175
60	VS-E5PH6006L-N3	TO-247AD 2L	600	1.2	60	25	49	500	175
60	VS-A5PH6006L-N3	TO-247AD 3L	600	1.2	60	25	49	500	175
60	VS-E5PX6006L-N3	TO-247AD 2L	600	1.4	60	25	44	480	175
60	VS-A5PX6006L-N3	TO-247AD 3L	600	1.4	60	25	44	480	175
75	VS-E5PX7606L-N3	TO-247AD 2L	600	1.5	75	25	45	480	175
75	VS-E5PH7506L-N3	TO-247AD 2L	600	1.2	75	25	52	615	175
75	VS-E5PX7506L-N3	TO-247AD 2L	600	1.4	75	25	44	565	175
V_{RRM} = 650 V									
30	VS-ETH3007-M3	TO-220AC 2L	650	1.4	30	30	37		175
30	VS-ETX3007-M3	TO-220AC 2L	650	1.6	30	30	35	210	175
30	VS-EPH3007L-N3	TO-247AD 2L	650	1.4	30	30	33	195	175
30	VS-EPX3007L-N3	TO-247AD 2L	650	1.6	30	30	27	170	175
60	VS-EPH6007L-N3	TO-247AD 2L	650	1.4	60	30	65	520	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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FRED Pt® Gen 5, AEC-Q101 Qualified Products (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{RRM} (V)	V _F at I _F		I _R at V _{RRM} (μA)	t _{rr} (ns) ⁽²⁾	I _{FSM} (A)	T _J Max. (°C)
				(V)	(A)				
60	VS-EPX6007L-N3	TO-247AD 2L	650	1.6	60	30	40	500	175
V_{RRM} = 1200 V									
8	VS-8ETU12-M3	TO-220AC 2L	1200	1.95	8	55	42	80	175
15	VS-15ETU12-M3	TO-220AC 2L	1200	2.25	15	80	44	150	175
30	VS-30EPU12L-N3	TO-247AD 2L	1200	2.05	30	145	49	300	175
30	VS-30ETU12-M3	TO-220AC 2L	1200	2.05	30	145	49	240	175
50	VS-50EPU12L-N3	TO-247AD 2L	1200	1.95	50	330	57	400	175
75	VS-75EPU12L-N3	TO-247AD 2L	1200	1.95	75	420	62	700	175
V_{RRM} = 1200 V (Generation 5)									
8	VS-E5TH0812-M3	TO-220AC 2L	1200	1.8	8	50	100	65	175
8	VS-E5TX0812-M3	TO-220AC 2L	1200	2.1	8	50	87	60	175
15	VS-E5TH1512-M3	TO-220AC 2L	1200	1.7	15	50	95	125	175
15	VS-E5TX1512-M3	TO-220AC 2L	1200	2.1	15	50	96	110	175
30	VS-E5PX3012L-N3	TO-247AD 2L	1200	2.1	30	50	26	210	175
30	VS-E5PH3012L-N3	TO-247AD 2L	1200	1.7	30	50	32	250	175
30	VS-E5TH3012-M3	TO-220AC 2L	1200	1.7	30	50	113	240	175
30	VS-E5TX3012-M3	TO-220AC 2L	1200	2.1	30	50	100	190	175
30	VS-C5TH3012-M3	TO-220AB 3L	1200	1.7	30	50	95	125	175
30	VS-C5TX3012-M3	TO-220AB 3L	1200	2.1	30	50	96	110	175
30	VS-C5PH3012L-N3	TO-247AD 3L	1200	1.7	30	50	95	125	175
30	VS-C5PX3012L-N3	TO-247AD 3L	1200	2.1	30	50	96	110	175
60	VS-E5PX6012L-N3	TO-247AD 2L	1200	2.1	60	50	30	420	175
60	VS-E5PH6012L-N3	TO-247AD 2L	1200	1.7	60	50	38	460	175
60	VS-C5PH6012L-N3	TO-247AD 3L	1200	1.7	30	50	113	240	175
60	VS-C5PX6012L-N3	TO-247AD 3L	1200	2.1	30	50	100	190	175

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

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HEXFRED® technology merges ultrafast planar technology with proprietary Schottky barrier construction to enable soft and fast recovery behavior at any di/dt condition. This makes Vishay HEXFRED® products the best choice for use as the antiparallel diode for IGBTs and for power supplies operating at high switching speeds. A full range of halogen-free components are also offered.

HEXFRED® AEC-Q101 qualified products have undergone part average testing (PAT) and statistical yield limit (SYL) analysis to ensure their electrical parameters meet the highest quality level for automotive applications. The parts use a dedicated die in the front-end operation and a dedicated part number at the back end, both selected with PAT and SYL statistical criteria, and are suitable for battery charging systems, EH / HEV vehicles, HID lighting, and other automotive applications.

HEXFRED® AEC-Q101 Qualified Products

$I_{F(AV)}$ (A)	Device ⁽¹⁾	Package Type	V_{BR} (V)
4	VS-HFA04SD60SHM3	D ² PAK (TO-263AB)	600
8	VS-HFA08TB60HN3	TO-220AC	600
25	VS-HFA25TB60SHM3	D ² PAK (TO-263AB)	600
25	VS-HFA25TB60HN3	TO-220AC	600
30	VS-HFA30TA60CHN3	TO-220AB	600
50	VS-HFA50PA60CHN3	TO-247AC	600
16	VS-HFA16PB120HN3	TO-247AC modified (2 pins)	1200
16	VS-HFA16TB120SHM3	D ² PAK (TO-263AB)	1200
30	VS-HFA30PB120HN3	TO-247AC modified (2 pins)	1200

**ULTRAFAST RECOVERY RECTIFIERS****HEXFRED®**

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HEXFRED® Standard Products

$I_{F(AV)}$ (A)	Device ⁽¹⁾	Package Type	V_{BR} (V)
4	VS-HFA04SD60S-M3	DPAK (TO-252AA)	600
4	VS-HFA04TB60-M3	TO-220AC 2L	600
4	VS-HFA04TB60S-M3	D ² PAK (TO-263AB)	600
8	VS-HFA08PB60-N3	TO-247AC 2L	600
8	VS-HFA08SD60S-M3	DPAK (TO-252AA)	600
8	VS-HFA08TA60C-M3	TO-220AB 3L	600
8	VS-HFA08TA60CS-M3	D ² PAK (TO-263AB)	600
8	VS-HFA08TB60-M3	TO-220AC 2L	600
8	VS-HFA08TB60S-M3	D ² PAK (TO-263AB)	600
15	VS-HFA15PB60-N3	TO-247AC 2L	600
15	VS-HFA15TB60-1-M3	TO-262AA	600
15	VS-HFA15TB60-M3	TO-220AC 2L	600
15	VS-HFA15TB60S-M3	D ² PAK (TO-263AB)	600
16	VS-HFA16PA60C-N3	TO-247AC 3L	600
16	VS-HFA16TA60C-M3	TO-220AB 3L	600
16	VS-HFA16TA60CS-M3	D ² PAK (TO-263AB)	600
25	VS-HFA25PB60-N3	TO-247AC 2L	600
25	VS-HFA25TB60-M3	TO-220AC 2L	600
25	VS-HFA25TB60S-M3	D ² PAK (TO-263AB)	600
30	VS-HFA30PA60C-N3	TO-247AC 3L	600
30	VS-HFA30TA60C-M3	TO-220AB 3L	600
30	VS-HFA25TB60S-M3	D ² PAK (TO-263AB)	600
50	VS-HFA50PA60C-N3	TO-247AC 3L	600
6	VS-HFA06PB120-N3	TO-247AC 2L	1200
6	VS-HFA06TB120-M3	TO-220AC 2L	1200
8	VS-HFA08PB120-N3	TO-247AC 2L	1200
8	VS-HFA08TB120S-M3	D ² PAK (TO-263AB)	1200
12	VS-HFA12PA120C-N3	TO-247AC 3L	1200
16	VS-HFA16PA120C-N3	TO-247AC 3L	1200
16	VS-HFA16PB120-N3	TO-247AC 2L	1200
16	VS-HFA16TB120-M3	TO-220AC 2L	1200
16	VS-HFA16TB120S-M3	D ² PAK (TO-263AB)	1200
30	VS-HFA30PB120-N3	TO-247AC 2L	1200
32	VS-HFA32PA120C-N3	TO-247AC 3L	1200



ULTRAFAST RECOVERY RECTIFIERS

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Ultrafast Recovery Rectifiers

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{BR} Range (V)	Max. V _F at I _F		t _{rr} (ns) ⁽²⁾
				(V)	(A)	
1	ES1A through ES1D	SMA (DO-214AC)	50 to 200	0.92	1	15
1	UG1A through UG1D	DO-41 (DO-204AL)	50 to 200	0.95	1	15
2	BYG22A through BYG22D	SMA (DO-214AC)	50 to 200	1.1	2	25
2	ES2A through ES2D	SMB (DO-214AA)	50 to 200	0.9	2	20
2	SBYV27-50 through SBYV27-200	DO-15 (DO-204AC)	50 to 200	1.07	3	15
2	UG2A through UG2D	DO-15 (DO-204AC)	50 to 200	0.95	2	15
3	ES3A through ES3D	SMC (DO-214AB)	50 to 200	0.9	3	20
3.5	SBYV28-50 through SBYV28-200	DO-201AD	50 to 200	1.1	3.5	20
4	UG4A through UG4D	DO-201AD	50 to 200	0.95	4	20
8	BYW29-50 through BYW29-200	TO-220AC	50 to 200	1.3	20	25
8	BYWB29-50 through BYWB29-200	D ² PAK (TO-263AB)	50 to 200	1.3	20	25
8	BYWF29-50 through BYWF29-200	ITO-220AC	50 to 200	1.3	20	25
8	GI1401 through GI1404	TO-220AC	50 to 200	0.975	8	35
8	GIB1401 through GIB1404	D ² PAK (TO-263AB)	50 to 200	0.975	8	35
8	UG8AT through UG8DT	TO-220AC	50 to 200	1	8	20
8	UGB8AT through UGB8DT	D ² PAK (TO-263AB)	50 to 200	1	8	20
8	UGF8AT through UGF8DT	ITO-220AC	50 to 200	1	8	20
16	GI2401 through GI2404	TO-220AB	50 to 200	0.975	8	35
16	GIB2401 through GIB2404	D ² PAK (TO-263AB)	50 to 200	0.975	8	35
18	BYV32-50 through BYV32-200	TO-220AB	50 to 200	1.15	20	25
18	BYVB32-50 through BYVB32-200	D ² PAK (TO-263AB)	50 to 200	1.15	20	25
18	BYVF32-50 through BYVF32-200	ITO-220AB	50 to 200	1.15	20	25
18	UG18ACT through UG18DCT	TO-220AB	50 to 200	1.1	9	20
18	UGB18ACT through UGB18DCT	D ² PAK (TO-263AB)	50 to 200	1.1	9	20
18	UGF18ACT through UGF18DCT	ITO-220AB	50 to 200	1.1	9	20
30	UG30APT through UG30DPT	TO-247AD	50 to 200	1	15	25
1	EGP10A through EGP10G	DO-41 (DO-204AL)	50 to 400	0.95 / 1.25	1	50
2	EGP20A through EGP20G	DO-15 (DO-204AC)	50 to 400	0.95 / 1.25	2	50
3	EGP31A through EGP31G	DO-201AD	50 to 400	0.95 / 1.25	3	50
5	EGP51A through EGP51G	DO-201AD	50 to 400	0.95 / 1.25	5	50
8	FES8AT through FES8JT	TO-220AC	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
8	FESB8AT through FESB8JT	D ² PAK (TO-263AB)	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
8	FESF8AT through FESF8JT	ITO-220AC	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
16	FEP16AT through FEP16JT	TO-220AB	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
16	FEPB16AT through FEPB16JT	D ² PAK (TO-263AB)	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
16	FEPF16AT through FEPF16JT	ITO-220AB	50 to 600	0.95 / 1.3 / 1.5	8	35 / 50
16	FES16AT through FES16JT	TO-220AC	50 to 600	0.975 / 1.30 / 1.5	16	35 / 50
16	FESB16AT through FESB16JT	D ² PAK (TO-263AB)	50 to 600	0.975 / 1.30 / 1.5	16	35 / 50
16	FESF16AT through FESF16JT	ITO-220AC	50 to 600	0.975 / 1.30 / 1.5	16	35 / 50
30	FEP30AP through FEP30JP	TO-247AD	50 to 600	0.95 / 1.3 / 1.5	15	35 / 50



ULTRAFAST RECOVERY RECTIFIERS

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Ultrafast Recovery Rectifiers (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{BR} Range (V)	Max. V _F at I _F		t _{rr} (ns) ⁽²⁾
				(V)	(A)	
8	UGF8HT and UGF8JT	ITO-220AC	500 to 600	1.75	8	25
1	UF4001 through UF4007	DO-41 (DO-204AL)	50 to 1000	1.0 / 1.7	1	50 / 75
1	US1A through US1M	SMA (DO-214AC)	50 to 1000	1.0 / 1.7	1	50 / 75
3	UF5400 through UF5408	DO-201AD	50 to 1000	1.0 / 1.7	3	50 / 75
1.2	ES07B	SMF (DO-219AB)	100	0.98	1	25
1	ES1PB, ES1PC, and ES1PD	SMP (DO-220AA)	100 to 200	0.865 / 0.92	0.6 / 1.0	15
1	ESH1B, ESH1C, and ESH1D	SMA (DO-214AC)	100 to 200	0.87 / 0.90	0.7 / 1.0	25
1	ESH1PB, ESH1PC, and ESH1PD	SMP (DO-220AA)	100 to 200	0.86 / 0.90	0.7 / 1.0	25
2	ESH2B, ESH2C, and ESH2D	SMB (DO-214AA)	100 to 200	0.93	2	25
2	ESH2PB, ESH2PC, and ESH2PD	SMP (DO-220AA)	100 to 200	0.98	2	25
2	U2B, U2C, and U2D	SMB (DO-214AA)	100 to 200	0.9	2	20
3	ESH3B, ESH3C, and ESH3D	SMC (DO-214AB)	100 to 200	0.9	3	25
3	U3B, U3C, and U3D	SMC (DO-214AB)	100 to 200	0.9	3	20
10	BYQ28E-100 through BYQ28E-200	TO-220AB	100 to 200	1.1	5	20
10	BYQ28EB-100 through BYQ28EB-200	D ² PAK (TO-263AB)	100 to 200	1.1	5	20
10	BYQ28EF-100 through BYQ28EF-200	ITO-220AB	100 to 200	1.1	5	20
10	UG10BCT through UG10DCT	TO-220AB	100 to 200	1.1	5	20
10	UGB10BCT through UGB10DCT	D ² PAK (TO-263AB)	100 to 200	1.1	5	20
10	UGF10BCT through UGF10DCT	ITO-220AB	100 to 200	1.1	5	20
1	MURS120	SMB (DO-214AA)	200	0.875	1	25
1.2	ES07D	SMF (DO-219AB)	200	0.98	1	25
3	MURS320	SMC (DO-214AB)	200	0.875	3	25
4	MUR420	DO-201AD	200	0.89	4	25
1.5	BYG20D through BYG20J	SMA (DO-214AC)	200 to 600	1.3	1	75
2	ES2F and ES2G	SMB (DO-214AA)	300 to 400	1.1	2	35
2	UG2F and UG2G	DO-15 (DO-204AC)	300 to 400	1.1	2	35
3	ES3F and ES3G	SMC (DO-214AB)	300 to 400	1.1	3	35
8	BYV29-300 and BYV29-400	TO-220AC	300 to 400	1.25	8	35
8	BYV29B-300 and BYV29B-400	D ² PAK (TO-263AB)	300 to 400	1.25	8	35
8	BYV29F-300 and BYV29F-400	ITO-220AC	300 to 400	1.25	8	35
8	UG8FT and UG8GT	TO-220AC	300 to 400	1.25	8	35
8	UGB8FT and UGB8GT	D ² PAK (TO-263AB)	300 to 400	1.25	8	35
8	UGF8FT and UGF8GT	ITO-220AC	300 to 400	1.25	8	35
10	BYT28-300 and BYT28-400	TO-220AB	300 to 400	1.3	5	35
10	BYT28B-300 and BYT28B-400	D ² PAK (TO-263AB)	300 to 400	1.3	5	35
10	BYT28F-300 and BYT28F-400	ITO-220AB	300 to 400	1.3	5	35
10	UG10FCT and UG10GCT	TO-220AB	300 to 400	1.3	5	35
10	UGB10FCT and UGB10GCT	D ² PAK (TO-263AB)	300 to 400	1.3	5	35
10	UGF10FCT and UGF10GCT	ITO-220AB	300 to 400	1.3	5	35



ULTRAFAST RECOVERY RECTIFIERS

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Ultrafast Recovery Rectifiers (cont.)

I _{F(AV)} (A)	Device ⁽¹⁾	Package Type	V _{BR} Range (V)	Max. V _F at I _F		t _{rr} (ns) ⁽²⁾
				(V)	(A)	
3	31GF4	DO-201AD	400	1.25	3	30
3	MURS340 and MURS360	SMC (DO-214AB)	400 and 600	1.25 / 1.28	3.0 / 4.0	50
3	MURS340S and MURS360S	SMB (DO-214AA)	400 and 600	1.45	3	50
1	MURS140 and MURS160	SMB (DO-214AA)	400 to 600	1.25	1	50
2	MURS240 and MURS260	SMB (DO-214AA)	400 to 600	1.45	2	50
4	MUR440 and MUR460	DO-201AD	400 to 600	1.28	4	50
8	UG8HT and UG8JT	TO-220AC	500 to 600	1.75	8	25
8	UGB8HT and UGB8JT	D ² PAK (TO-263AB)	500 to 600	1.75	8	25
2	USB260	SMB (DO-214AA)	600	1.6	2	30
3	31GF6	DO-201AD	600	1.6	3	30
1.5	BYG23M	SMA (DO-214AC)	1000	1.7	1	75

Notes: (1) Bold = new products; (2) See datasheet for t_{rr} test conditions



ULTRAFAST RECOVERY RECTIFIERS

Avalanche

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Avalanche

$I_{F(AV)}$ (A)	Device	Package Type	V_R, V_{RRM}^* V_{RWM} (V)	V_F at 25 °C (V)	At I_F (A)	t_{rr} Max. (ns)	E_R (mJ)	At I_R (A)	$T_{J, T_{STG}}$ Max. (°C)
2	BYG22A	SMA (DO-214AC)	50	1.1	2	25	20	1	150
2	BYG22B	SMA (DO-214AC)	100	1.1	2	25	20	1	150
1	AU1PD	SMP (DO-220AA)	200	1.5	1	75	20	1	175
1.5	BYG20D	SMA (DO-214AC)	200	1.4	1.5	75	20	1	150
2	AU2PD	SMPC (TO-277A)	200	1.9	2	75	20	2.5	175
2	BYG22D	SMA (DO-214AC)	200	1.1	2	25	20	1	150
3	AU3PD	SMPC (TO-277A)	200	1.9	3	75	20	2.5	175
1	AU1PG	SMP (DO-220AA)	400	1.5	1	75	20	1	175
1.5	BYG20G	SMA (DO-214AC)	400	1.4	1.5	75	20	1	150
2	AU2PG	SMPC (TO-277A)	400	1.9	2	75	20	2.5	175
3	AU3PG	SMPC (TO-277A)	400	1.9	3	75	20	2.5	175
1	AU1PJ	SMP (DO-220AA)	600	1.5	1	75	20	1	175
1.5	BYG20J	SMA (DO-214AC)	600	1.4	1.5	75	20	1	150
2	AU2PJ	SMPC (TO-277A)	600	1.9	2	75	20	2.5	175
3	AU3PJ	SMPC (TO-277A)	600	1.9	3	75	20	2.5	175
1	AU1PK	SMP (DO-220AA)	800	1.85	1	75	20	1	175
2	AU2PK	SMPC (TO-277A)	800	2.5	2	75	20	2.5	175
3	AU3PK	SMPC (TO-277A)	800	2.5	3	75	20	2.5	175
1	AU1PM	SMP (DO-220AA)	1000	1.85	1	75	20	1	175
1.5	BYG23M	SMA (DO-214AC)	1000	1.7	1	75	20	1	150
2	AU2PM	SMPC (TO-277A)	1000	2.5	2	75	20	2.5	175
3	AU3PM	SMPC (TO-277A)	1000	2.5	3	75	20	2.5	175
1	BYG23T	SMA (DO-214AC)	1300	1.9	1	75	5	0.4	150



ULTRAFAST RECOVERY RECTIFIERS

Avalanche-Rated

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Avalanche-Rated Sinterglass Diodes

$I_{F(AV)}$ (A)	Device ⁽¹⁾	Package Type	$V_{R, V_{RRM}}, V_{RWM}$ (V)	V_F at 25 °C (V)	at I_F (A)	t_r Max. (ns)	E_R (mJ) ⁽²⁾	at I_R (A)
1	SF4001	SOD-57	50	1	1	50	10	0.4
1.9	BYT53A	SOD-57	50	1.1	1	50	20	1
2	BYV27-50	SOD-57	50	1.07	3	25	20	1
3	SF5400	SOD-64	50	1.1	3	50	10	0.4
3.5	BYV28-50	SOD-64	50	1.1	5	30	20	1
1	SF4002	SOD-57	100	1	1	50	10	0.4
1.9	BYT53B	SOD-57	100	1.1	1	50	20	1
2	BYV27-100	SOD-57	100	1.07	3	25	20	1
3	SF5401	SOD-64	100	1.1	3	50	10	0.4
3.5	BYV28-100	SOD-64	100	1.1	5	30	20	1
4	BYV98-50	SOD-64	100	1.1	5	35	20	1
1.9	BYT53C	SOD-57	150	1.1	1	50	20	1
2	BYV27-150	SOD-57	150	1.07	3	25	20	1
3.5	BYV28-150	SOD-64	150	1.1	5	30	20	1
4	BYV98-100	SOD-64	150	1.1	5	35	20	1
4	BYV98-150	SOD-64	150	1.1	5	35	20	1
1	BYV26A	SOD-57	200	2.5	1	30	10	1
1	SF4003	SOD-57	200	1	1	50	10	0.4
1.9	BYT53D	SOD-57	200	1.1	1	50	20	1
2	BYV27-200	SOD-57	200	1.07	3	25	20	1
3	SF5402	SOD-64	200	1.1	3	50	10	0.4
3.5	BYV28-200	SOD-64	200	1.1	5	30	20	1
4	BYV98-200	SOD-64	200	1.1	5	35	20	1
1.9	BYT53F	SOD-57	300	1.1	1	50	20	1
3	SF5403	SOD-64	300	1.1	3	50	10	0.4
1	BYV26B	SOD-57	400	2.5	1	30	10	1
1	SF4004	SOD-57	400	1	1	50	10	0.4
1.9	BYT53G	SOD-57	400	1.1	1	50	20	1
3	SF5404	SOD-64	400	1.1	3	50	10	0.4
3	SF5405	SOD-64	500	1.7	3	75	10	0.4
1	BYV26C	SOD-57	600	2.5	1	30	10	1
1	SF4005	SOD-57	600	1.7	1	75	10	0.4
2	BYV27-600	SOD-57	600	1.35	3	40	10	0.4
3	SF5406	SOD-64	600	1.7	3	75	10	0.4
3.5	BYV28-600	SOD-64	600	1.35	5	50	20	1
1	BYV26D	SOD-57	800	2.5	1	75	10	1
1	SF4006	SOD-57	800	1.7	1	75	10	0.4
3	BYW178	SOD-64	800	1.9	3	60	20	1

Notes: (1) Bold = new products; (2) E_R = pulse energy in avalanche mode



ULTRAFAST RECOVERY RECTIFIERS

Avalanche-Rated

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Avalanche-Rated Sinterglass Diodes (cont.)

$I_{F(AV)}$ (A)	Device ⁽¹⁾	Package Type	$V_R,$ V_{RRM}, V_{RWM} (V)	V_F at 25 °C (V)	at I_F (A)	t_r Max. (ns)	E_R (mJ) ⁽²⁾	at I_R (A)
3	SF5407	SOD-64	800	1.7	3	75	10	0.4
1	BYV26E	SOD-57	1000	2.5	1	75	10	1
1	SF4007	SOD-57	1000	1.7	1	75	10	0.4
3	SF5408	SOD-64	1000	1.7	3	75	10	0.4
1	SF1200	SOD-57	1200	3.4	1	75	10	0.4
1	SF1600	SOD-57	1600	3.4	1	75	10	0.4

Notes: (1) Bold = new products; (2) E_R = pulse energy in avalanche mode