

Rectifiers

Quick reference guide



July 2005

Signal schottky diodes

20V, 30V and 40V					Part number	DO-35	MiniMELF	SOD-323	SOT-23	SOT-323
Voltage max [V]	Current [mA]	V _F max @ I _F		C typ @ 1MHz 1V* [pF]						
		[V]	[mA]							
10	3000	0.32	10	60	BAT60JFILM			■		
20	350	1	300	12	BAT47	■				
23	1000	0.62	1000	30	BAT20JFILM			■		
30	100	0.4	10	7	BAR42FILM				■	
30	100	0.33	2	7	BAR43AFILM - BAR43CFILM BAR43SFILM				■	
30	200	0.4	10	7	BAT42	■				
30	200	0.33	2	7	BAT43	■				
30	200	0.4	10	7	TMMBAT42FILM		■			
30	200	0.33	2	7	TMMBAT43FILM		■			
30	300	0.9	100	7	BAT54JFILM - BAT54CFILM BAT54FILM - BAT54SFILM BAT54AWFILM - BAT54CWFILM BAT54WFILM			■	■	■
40	350	0.75	200	12	BAT48	■				
40	350	0.75	200	12	TMMBAT48FILM		■			

Signal schottky diodes

60V, 70V, 80V and 100V					Part number	DO-35	DO-41	MELF	MiniMELF	SOD-323	SOT-23	SOT-323
Voltage max [V]	Current [mA]	V _F max @ I _F		C typ @ 1MHz 0V [pF]								
		[V]	[mA]									
60	15	0.41	1	2.2	1N6263	■						
60	15	0.41	1	2.2	TMM6263FILM				■			
70	15	0.41	1	2	1N5711	■						
70	15	0.41	1	2	BAR18FILM						■	
70	15	0.41	1	2	BAR28	■						
70	15	0.41	1	2	BAS70-04FILM - BAS70-04WFILM						■	■
70	15	0.41	1	2	BAS70-05FILM - BAS70-05WFILM						■	■
70	15	0.41	1	2	BAS70-06FILM - BAS70-06WFILM						■	■
80	500	0.32	10	120	BAT49		■					
80	500	0.32	10	120	TMBAT49FILM			■				
100	100	0.45	1	2	BAT41	■						
100	100	0.45	1	2	TMMBAT41FILM				■			
100	150	0.25	0.1	10	BAR46FILM - BAR46AFILM						■	
100	150	0.25	0.1	10	BAT46	■						
100	150	0.25	0.1	10	BAT46JFILM - BAT46AWFILM BAT46CWFILM - BAT46WFILM					■		■
100	150	0.25	0.1	10	TMMBAT46FILM				■			

* Or at specified value

Power schottky diodes

15V to 40V						DO-201AD	DO-41	DPAK	D ² PAK	I ² PAK	ISOTOP	Max247	SMA	SMB	SMC	SOD-123	STMite	TO-220AB	TO-220AC	TO-247			
Voltage max [V]	Current [A]	V _F max @ I _F		T _j max [°C]	Part number	Package suffixes																	
		[V]	[A]																				
15	20	0.33	19	125	STPS20L15																D		
15	2 x 20	0.33	19	125	STPS40L15																CT	CW	
15	2 x 30	0.33	19	125	STPS60L15																	CW	
15	2 x 40	0.33	40	125	STPS80L15							TV	CY										
15	2 x 60	0.31	60	125	STPS120L15							TV											
20	0.5	0.3	0.5	150	STPS0520																M		
20	0.5	0.32	0.5	125	STPS0520												Z						
20	1	0.45	1	150	1N5817		void																
20	1	0.41	1	150	STPS120																M		
20	1	0.37	1	150	STPS1L20																M		
20	3	0.48	3	150	1N5820		void																
25	2	0.38	2	150	STPS2L25										U								
25	3	0.44	3	150	STPS3L25											S							
25	5	0.35	5	150	STPS5L25																		
25	10	0.35	10	150	STPS10L25																D		
25	15	0.35	15	150	STPS15L25																D		
25	2 x 10	0.35	10	150	STPS20L25																CT		
30	0.5	0.3	0.5	150	STPS0530													Z					
30	1	0.55	1	150	1N5818		void																
30	1	0.46	1	150	STPS130										A	U							
30	1	0.3	1	150	STPS1L30										A	U							
30	1	0.34	1	150	STPS1L30																M		
30	2	0.38	2	150	STPS2L30										A								
30	3	0.5	3	150	1N5821		void																
30	8	0.4	8	150	STPS8L30																		
30	2 x 7.5	0.39	7.5	150	STPS15L30																		
30	2 x 10	0.4	10	150	STPS2030																		
30	2 x 20	0.45	20	150	STPS4030																CT		
30	2 x 30	0.45	30	150	STPS6030																	CW	
30	2 x 15	0.42	15	150	STPS3030																CT		
30	2 x 15	0.37	15	150	STPS30L30																CT		
30	2 x 20	0.38	20	150	STPS41L30																CT		
30	2 x 30	0.38	30	150	STPS60L30																CT		
30	2 x 40	0.38	40	150	STPS80L30																	CW	
40	0.5	0.4	0.5	150	STPS0540																Z		
40	1	0.6	1	150	1N5819		void																
40	1	0.5	1	150	STPS140																A	U	
40	1	0.51	1	150	STPS140																Z		
40	1	0.42	1	150	STPS1L40																A	U	
40	1	0.4	1	150	STPS1L40																	M	
40	2	0.34	2	150	STPS2L40																U		
40	3	0.53	3	150	1N5822		void																
40	3	0.57	3	150	STPS340																B	U	S
40	3	0.44	3	150	STPS3L40																	S	
40	5	0.48	5	150	STPS5L40		void																
40	2 x 3	0.57	3	150	STPS640																	CB	

Example: STPS20L15G, void when no suffix

Power schottky diodes

45V						DPAK	D ² PAK	IPAK	I ² PAK	ISOTOP	SOT-93	TOp3 Ins.	TO-220AB	TO-220AC	TO-220FPAB	TO-220FPAC	TO-247
Voltage max [V]	Current [A]	V _F max @ I _F		T _j max [°C]	Part number												
		[V]	[A]			Package suffixes											
45	7.5	0.57	7.5	175	STPS745		G							D		FP	
45	10	0.57	7.5	175	STPS1045	B		H						D		FP	
45	2 x 5	0.46	5	150	STPS10L45		CG						CT		CFP		
45	2 x 7.5	0.57	7.5	175	STPS1545		CG		CR				CT		CFP		
45	2 x 7.5	0.46	7.5	150	STPS15L45	CB											
45	15	0.57	7.5	175	STPS1545									D		FP	
45	16	0.57	16	175	STPS1645									D			
45	2 x 8	0.45	8	150	STPS16L45								CT		CFP		
45	2 x 10	0.57	10	175	STPS2045		CG		CR				CT		CFP		
45	2 x 10	0.5	10	150	STPS20L45		CG		CR				CT		CFP		CW
45	2 x 12.5	0.57	12.5	175	STPS2545		CG						CT		CFP		
45	2 x 15	0.57	15	175	STPS3045		CG		CR	CP	CPI	CT					CW
45	30	0.63	30	175	STPS3045		G										
45	2 x 15	0.57	15	175	STPS30L45		CG		CR	CP		CT		CFP			CW
45	2 x 20	0.63	20	175	STPS4045		CG			CP		CT					CW
45	2 x 20	0.49	20	150	STPS40L45		CG					CT					CW
45	2 x 20	0.47	20	150	STPS41L45		CG		CR			CT					
45	2 x 30	0.63	30	175	STPS6045					CP	CPI						CW
45	2 x 30	0.5	30	175	STPS60L45												CW
45	2 x 60	0.67	60	175	STPS12045					TV							
45	2 x 80	0.69	80	175	STPS16045					TV							
45	2 x 120	0.67	120	175	STPS24045					TV							

Example: STPS745G, void when no suffix

Power schottky diodes

60V						SMA	SMB	SMC	SOD-123	DO-15	DO-41	DO-201AD	DPAK	D ² PAK	I ² PAK	TO-220AB	TO-220AC	TO-220FPAB	TO-220FPAC	TO-247	MAX-247
Voltage max [V]	Current [A]	V _F max @ I _F		T _j max [°C]	Part number																
		[V]	[A]			Package suffixes															
60	0.5	0.5	0.5	150	STPS0560				Z												
60	1	0.57	1	150	STPS160	A															
60	1	0.56	1	150	STPS1L60	A	U				void										
60	2	0.55	2	150	STPS2L60	A					void										
60	3	0.59	3	150	STPS3L60			S	Q		void										
60	5	0.53	5	150	STPS5L60						void										
60	2 x 5	0.52	5	150	STPS10L60											CT		CFP			
60	10	0.56	10	150	STPS10L60												D		FP		
60	2 x 7.5	0.52	7.5	150	STPS15L60								CB								
60	2 x 10	0.56	10	150	STPS20L60								CG	CR	CT						
60	2 x 15	0.75	15	150	STPS3060																CW
60	2 x 15	0.56	15	150	STPS30L60								CG	CR	CT						
60	2 x 20	0.56	20	150	STPS41L60								CG	CR	CT						
60	2 x 40	0.56	40	150	STPS80L60																CY

Example: STP0560Z, void when no suffix

Power schottky diodes

100 to 150V						DO-201AD	DO-15	DPAK	D ² PAK	I ² PAK	ISOTOP	SMA	SMB	TO-220AB	TO-220AC	TO-220FPAB	TO-220FPAC	TO-247	MAX-247
Voltage max [V]	Current [A]	V _F max @ I _F		T _j max [°C]	Part number	Package suffixes													
		[V]	[A]																
100	1	0.62	1	175	STPS1H100							A	U						
100	2	0.65	2	175	STPS2H100	void		B				A	U						
100	5	0.61	5	175	STPS5H100			B											
100	8	0.58	8	175	STPS8H100				G	R					D		FP		
100	2 x 5	0.61	5	175	STPS10H100				CG	CR				CT		CFP			
100	2 x 7.5	0.67	7.5	175	STPS15H100			CB											
100	2 x 8	0.64	8	175	STPS16H100				CG	CR				CT		CFP			
100	2 x 10	0.64	10	175	STPS20H100				CG	CR				CT		CFP			
100	2 x 15	0.67	15	175	STPS30H100									CT				CW	
100	2 x 20	0.61	20	175	STPS40H100									CT				CW	
100	2 x 20	0.67	20	175	STPS41H100				CG	CR				CT					
100	2 x 30	0.72	30	175	STPS60H100									CT					
100	2 x 30	0.67	30	175	STPS61H100													CW	
100	2 x 40	0.7	40	175	STPS80H100														CY
100	2 x 40	0.65	40	150	STPS80H100						TV								
100	2 x 80	0.68	80	150	STPS160H100						TV								
120	20	0.76	20	175	STPS20120											D			
120	2x10	0.74	10	175	STPS20120				CR					CT					
120	2x15	0.74	15	175	STPS30120									CT					
120	2x20	0.73	20	175	STPS40120									CT					
150	1	0.67	1	175	STPS1150		void					A							
150	2	0.67	2	175	STPS2150		void					A							
150	3	0.67	3	175	STPS3150		void						U						
150	2 x 5	0.75	5	175	STPS10150				CG					CT					
150	2 x 8	0.75	8	175	STPS16150				CG	CR				CT					
150	2 x 10	0.75	8	175	STPS20150				CG	CR				CT		CFP			
150	2 x 15	0.75	15	175	STPS30150									CT		CFP		CW	
150	2 x 20	0.75	20	175	STPS40150				CG					CT				CW	
150	2 x 30	0.76	30	175	STPS60150									CT					
150	2 x 30	0.67	30	175	STPS61150													CW	
150	2 x 40	0.74	40	175	STPS80150													CW	
170	2 x 10	0.75	10	175	STPS20170			CG						CT		CFP			

Example: STPS1H100A, void when no suffix

Bipolar ultrafast diodes

200 and 300V						DO-201AD	DO-15	DO-41	DOP3 Ins.	DPAK	D ² PAK	I ² PAK	ISOTOP	Max247	SMA	SMB	SMC	TO-220AB	TO-220AC	TO-220FPAB	TO-220FPAC	TO-247	
Voltage max [V]	Current [A]	V _F max @ rated current [V]	t _{rr} max [ns]	T _j max [°C]	Part number	Package suffixes																	
200	1	0.78	20	175	STTH102		void								A								
200	1.5	0.75	32	175	STTH152		void																
200	3	0.75	35	175	STTH302		void										S						
200	2 x 4	0.95	20	175	STTH802				CB										CT		CFP		
200	2 x 5	0.89	25	175	STTH1002				CB	CG	CR								CT				
200	2 x 6.5	0.95	25	175	STTH1302					CG									CT		CFP		
200	2 x 8	0.89	26	175	STTH1602					CG	CR								CT		CFP		
200	2 x 10	0.89	27	175	STTH2002					CG	CR								CT				
200	2 x 15	0.84	27	175	STTH3002					CG	CR								CT			CW	
200	2 x 30	0.84	27	175	STTH6002																	CW	
200	2 x 30	0.81	30	150	STTH6102							TV1											
200	2 x 60	0.82	43	150	STTH12002							TV1											
200	2 x 100	0.81	63	150	STTH20002							TV1											
300	8	1	35	175	STTH803				G											D			

Example: STTH102A, void when no suffix

Bipolar ultrafast diodes cont'd.

200 and 300V						DO-201AD	DO-15	DO-41	DOP3 Ins.	DPAK	DPAK	IPAK	ISOTOP	Max247	SMA	SMB	SMC	TO-220AB	TO-220AC	TO-220FPAB	TO-220FPAC	TO-247
Voltage max [V]	Current [A]	V _r max @ rated current [V]	t _r max [ns]	T _j max [°C]	Part number	Package suffixes																
300	8	1.3	30	150	STTH8R03						G										D	
300	2 x 10	1	35	175	STTH2003					CG	CR								CT		CFP	
300	2 x 15	1	40	175	STTH3003																	
300	2 x 15	1.4	30	150	STTH30R03					CG												CW
300	2 x 30	1	55	175	STTH6003																	CW
300	2 x 30	1	55	150	STTH6003							TV1										CW
300	2 x 40	1	60	150	STTH8003								CY									
300	2 x 60	1	70	150	STTH12003							TV1										
300	2 x 80	0.95	80	150	STTH16003							TV1										
300	2 x 100	0.95	90	150	STTH20003							TV1										
300	2 x 120	1	90	150	STTH24003							TV										
400	1	1.4	55	150	BYT01-400	void																
400	1	1.4	60	150	SMBYT01-400											void						
400	3	1.4	55	150	BYT03-400	void																
400	3	1.4	60	150	SMBYT03-400											void						
400	8	1.4	75	150	BYT08PI-400			void														
400	8	1.4	75	150	BYT08P-400																void	
400	2 x 8	1.4	75	150	BYT16P-400																void	
400	30	1.4	100	150	BYT30PI-400			void														
400	30	1.4	100	150	BYT30G-400					void												
400	30	1.4	100	150	BYT30P-400																	
400	2 x 30	1.4	100	150	BYT230PIV-400							void								void		
400	2 x 30	1.4	100	150	BYT230Y-400								void									
400	2 x 30	1.4	100	150	BYT231PIV-400								void									
400	60	1.4	100	150	BYT60P-400														void			
400	2 x 60	1.4	100	150	BYT261PIV-400							void										
400	2 x 100	1.4	100	150	BYT200PIV-400							void										

Example: STTH8R03G, void when no suffix

Bipolar ultrafast diodes

800, 1000 and 1200V						DO-201AD	DO-15	DO-41	DOP3 Ins.	DPAK	ISOTOP	SOD-88	SMA	SMB	SMC	TO-220AC	TO-220AC Ins.		
Voltage max [V]	Current [A]	V _r max @ rated current [V]	t _r max [ns]	T _j max [°C]	Part number	Package suffixes													
800	1	1.25	200	175	STTH108									A					
800	2	1.25	200	175	STTH208		void								U				
1000	1	1.42	300	175	STTH110									A					
1000	3	1.42	300	175	STTH310	void										S			
1000	8	1.8	155	150	BYT08P-1000												void		
1000	30	1.8	165	150	BYT30PI-1000					void									
1000	30	1.8	165	150	BYT30P-1000								void						
1000	2 x 30	1.8	165	150	BYT230PIV-1000							void							
1000	2 x 30	1.8	165	150	BYT231PIV-1000							void							
1000	60	1.8	170	150	BYT60P-1000							void							
1000	2 x 60	1.8	170	150	BYT261PIV-1000							void							
1200	1	1.65	500	175	STTH112			void						A	U				
1200	5	2	45	150	STTA512														
1200	8	2	50	150	STTA812					B								D	
1200	12	2	50	150	STTA1212													D	DI
1200	15	1.9	55	150	STTA1512					PI								D	
1200	25	1.9	55	150	STTA2512								P						
1200	90	1.85	115	150	STTA9012							TV							

Example: STTH108A, void when no suffix

Turbo 2 diodes

600V							DO-201AD	DO-41	DO-247	DOP3 Ins.	D ² PAK	IPAK	ISOTOP	SOD-93	SMA	SMB	SMC	TO-220FPAB	TO-220FPAC	TO-220AB	TO-220AC	TO-220AC Ins.	TO-247
Voltage max [V]	Current [A]	V _F max @ rated current [V]	t _{rr} max [ns]	IFSM [A]	T _j max [°C]	Part number	Package suffixes																
600	1	1.05	80	30	175	STTH1L06	void								A	U							
600	1	1.25	25	25	175	STTH1R06	void								A	U							
600	1	1.05	85	45	175	STTH2L06	void								A	U							
600	2	1.25	30	40	175	STTH2R06	void								A	U							
600	3	1.05	85	80	175	STTH3L06	void			B					U	S							
600	3	1.25	30	55	175	STTH3R06	void								U	S							
600	5	1.05	95	110	175	STTH5L06	void			B								FP					
600	5	1.8	40	50	175	STTH5R06				G	B							FP		D			
600	8	1.05	105	120	175	STTH8L06				G								FP		D	DI		
600	8	1.8	45	80	175	STTH8R06				G	R							FP		D	DI		
600	12	1.8	45	100	175	STTH12R06				G								FP		D	DI		
600	15	1.8	50	120	175	STTH15R06												FP		D			
600	15	1.2	85	130	175	STTH15L06				G								FP		D			
600	2 x 8	1.35	55	90	175	STTH16L06				CG							CFP		CT				
600	2 x 15	1.8	50	120	175	STTH30R06																	CW
600	2 x 15	1.45	85	130	175	STTH30L06				CG									CT				CW
600	30	1.25	90	160	175	STTH30L06		W	PI				P								D		
600	30	1.4	50	160	175	STTH30R06		W	PI				P								D		
600	2 x 30	1.55	90	210	175	STTH60L06																	CW
600	2 x 30	1.25	90	210	150	STTH60L06							TV1										
600	60	1.2	105	400	175	STTH60L06		W					TV1										
600	2 x 60	1.2	105	500	150	STTH120L06							TV1										
600	2 x 100	1.2	120	800	150	STTH200L06							TV1										

Example: STTH1L06A, void when no suffix

Tandem diodes

Tandem diodes							DOP3 Ins.	TO-220AC Ins.
Voltage max [V]	Current [A]	V _F max @ rated current [V]	t _{rr} max [ns]	IFSM [A]	T _j max [°C]	Part number	Package suffixes	
600	5	2.4	12	60	150	STTH506		DTI
600	8	2.4	13	80	150	STTH806		DTI
600	15	2.4	16	130	150	STTH1506	DPI	
600	30	2.4	25	180	150	STTH3006	DPI	

RF diodes

RF diodes detection							SO1-323	SO323-6L
Voltage max [V]	Current [mA]	V _F max @ I _F		I _r max @ 25°C [μA]	C typ @ 1 MHz, 0V [pF]	Part number		
		[V]	[mA]					
70	70	0.41	1	10	2	BAS70-07SFILM		■
70	70	0.41	1	10	2	BAS70-08SFILM		■
15	-	0.56	10	0.5	1	STDD15-05WFILM	■	■
15	-	0.56	10	0.5	1	STDD15-07SFILM		■

RF diodes

RF diodes pin							SO1-323	SOD-323
Voltage max [V]	Current [mA]	V _F max @ I _F		I _r max @ 25°C [μA]	C typ @ 1 MHz, 0V [pF]	Part number		
		[V]	[mA]					
50	100	1.2	100	0.05	0.3	BAR63FILM	■	■
50	100	1.2	100	0.05	0.3	BAR63JFILM		■

RF diodes

RF diodes varicap							SOD-323
Voltage max [V]	Current [mA]	C typ @ F = 1MHz 0.25V [pF]	C ratio [0.25V / 2.7V]	I _r max @ 25°C [μA]	C typ @ 1 MHz, 0V [pF]	Part number	
6	20	4	2 (min)	0.01	1.8	STVD901J	■

Damper diodes

Damper diodes						TO-220FPAC
Voltage max [V]	Current [A]	Application	V _F max [V]	t _{rr} max [ns]	Part number	
1500	4	Low Frequency Monitor	1.5 @ 4 A	170	DTV1500LFP	■
1500	6	Medium Frequency Monitor	1.65 @ 6 A	135	DTV1500MFP	■
1500	6	High Frequency Monitor	1.7 @ 6 A	125	DTV1500HFP	■
1500	6	Ultra High Frequency Monitor	1.3 @ 6 A	125	DTV1500UHFP	■
1500	6	100Hz TV	1.5 @ 6A	200	DTV1500SDFP	■
1500	6	High Definition TV	1.35 @ 6A	200	DTV1500HDFP	■

Damper diodes

Damper modulation diodes						TO-220FPAB
Voltage max [V]	Current [A]	Monitor frequency	V _F max [V]	t _{rr} max [ns]	Part number	
1500 / 600	4 / 3	Low Frequency Monitor	1.5 @ 4A / 1.4 @ 3A	170/50	DMV1500LFD	■
1500 / 600	6 / 3	Medium Frequency Monitor	1.65 @ 6A / 1.4 @ 3A	135/50	DMV1500MFD	■
1500 / 600	6 / 3	High Frequency Monitor	1.7 @ 6A / 1.4 @ 3A	125/50	DMV1500HFD	■
1500 / 600	6 / 6	50Hz / 100Hz TV	1.5 @ 6A / 1.3 @ 6A	250/85	DMV1500SDFD	■
1500 / 600	6 / 6	High Definition TV	1.35 @ 6A / 1.25 @ 6A	250/85	DMV1500HDFD	■

Bipolar ultrafast diodes

Peakclamp: MOSFET snubber						DO-15
V _{BR} @ 1mA [V]	Voltage [V]	P _p (10 / 1000ms) [W]	R _θ max @ 125°C [°C]	t _{rr} max [°C]	Part number	
160	700	600	4	150	PKC-136	■



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