

RECTIFIERS



Designers Selection Guide

USE IN LIFE SUPPORT DEVICES OR SYSTEMS MUST BE EXPRESSLY AUTHORIZED.

STMicroelectronics PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF STMicroelectronics. As used herein:

1. Life support devices or systems are those which (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided with the product, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can reasonably be expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

DESIGNER'S SELECTION GUIDE

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PRODUCT REFERENCES

From Power Schottky to Damper diodes

The intention of this selector guide is to provide the latest information about STMicroelectronics Power Rectifiers' families. For fast and easy selection, each product family has been organized by voltage and current.

POWER SCHOTTKY DIODES					
STPS uu X yy zz					
uu	Current rating	30 = 30 Amps or 2 x 15 Amps			
X	Complement of information	H = High Tj, L = Low Vf			
yy	Voltage rating	45 = 45 Volts			
zz	Package code	A B/CB * CF * CFP * CP * CPI * CT * CW * D F FP	SMA DPAK ISOWATT220AB TO-220FPAB SOT-93 TOP3 (Insulated) TO-220AB TO-247 TO-220AC ISOWATT220AC ISOWATT220AC	G/CG * M O R/CR * S TV U Y/CY * Z Blank	D ² PAK Stmite DO-15 I ² PAK SMC ISOTOP SMB Max247 SOD-123 Axial

*: C in package code indicates center tap configuration

TURBOSWITCH™ DIODES, TURBO2 AND ULTRAFAST DIODES					
STTA uu yy zz/STTH uu X yy zz					
uu	Current rating	20 = 20 Amps or 2 x 10 Amps			
X	Complement of information	L = Low Vf, R = Rapid			
yy	Voltage rating	06 = 600 Volts			
zz	Package code	B CF * CW * D DI F FP G P	DPAK ISOWATT220AB TO-247 TO-220AC TO-220AC (Insulated) ISOWATT220AC TO-220FPAC D ² PAK SOD-93	PI R S TPI TTI TV1/TV2 U Blank	DOP3 Insulated I ² PAK SMC TOP3 (Insulated) Tandem (TO-220 Insulated) ISOTOP SMB Axial

*: C in package code indicates center tap configuration

OTHER ULTRAFAST DIODES					
STPR xx yy zz/BYW pp z - yyy/BYT pp z - yyy/SMBYT xx - yyy/SMBYW xx - yyy					
xx	Current rating	30 = 30 Amps or 2 x 15 Amps			
pp	Pro-electron code				
yy	Voltage rating	200 = 200 Volts			
zz	Package code	A CB * CF * CFP * CT * D F FP C/CG *	SMA DPAK ISOWATT220AB TO-220FPAB TO-220AB TO-220AC ISOWATT220AC TO-220FPAC D ² PAK	P PI PIV/V/TV1 R/CR * W/CW * Y/CY * Blank	TO-220AB/TO-220AC/SOD-93/SOT-93 TO-220AC (Insulated) /DOP3 ISOTOP I ² PAK TO-247 Max247 Axial or SMA/SMB/SMC (SMBYT xxyyy, SMBYW xxyyy)

*: C in package code indicates center tap configuration

VIDEO DEFLECTION DIODES FOR TVs AND MONITORS					
DTV1500 xx zz/DMV 1500 xx					
xx	Deflection frequency	L = Low frequency M = Medium frequency	H = High frequency* UH = Ultra high frequency*		
zz	Package code	D FP	TO-220AC TO-220FPAC	F Blank	ISOWATT220AC TO-220AB (DMV1500 xx)

*: DTV1500 only

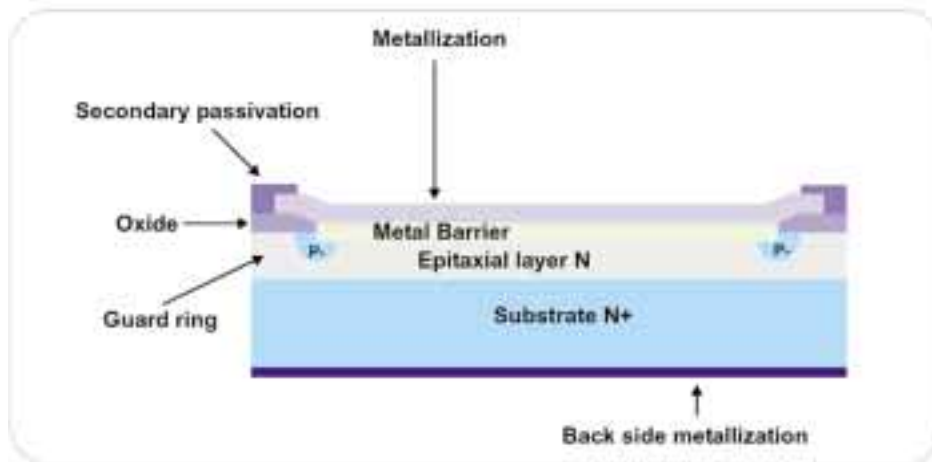
RF DIODES					
BAR63 zz/BAS xx - yy zz/STDD xx - yy zz/STDV901 zz					
xx	Voltage rating	15 = 15 Volts			
yy	Configuration				
zz	Package code	S W J	SOT323-6L SOT-323 SOD-323		

BRIDGES DIODES					
STBR xx yy/BF xx yy zz					
xx	Current rating	4 = 4 Amps			
yy	Voltage rating	06 = 600 Volts			
zz	Package code	TV Blank	ISOTOP GBU (STBR xx yy)		

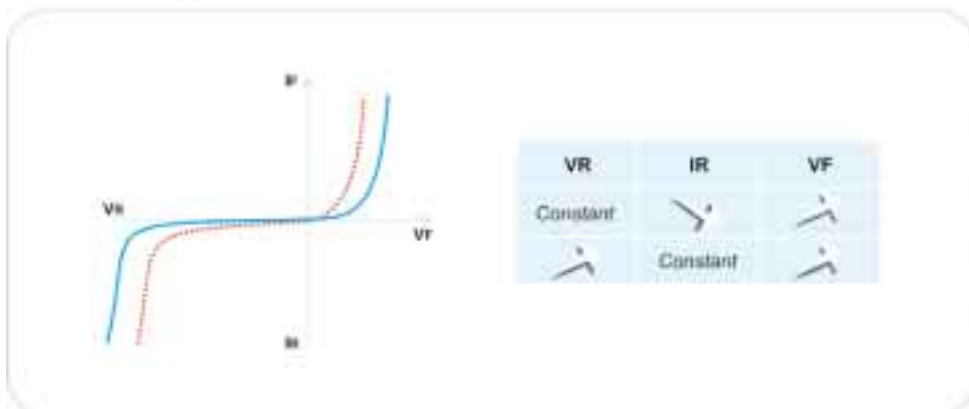
INTRODUCTION TO TECHNOLOGY

POWER SCHOTTKY DIODES

Technology



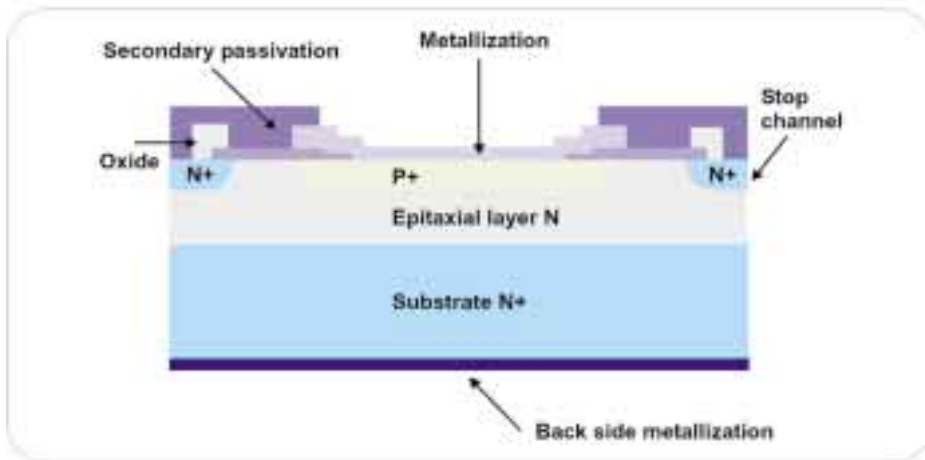
Characteristics - Parameter trade-offs



INTRODUCTION TO TECHNOLOGY

ULTRAFAST DIODES

Technology



Characteristics - Parameter trade-offs



MAIN APPLICATIONS

POWER SCHOTTKY and ULTRAFAST DIODES

Power Schottky Application Range



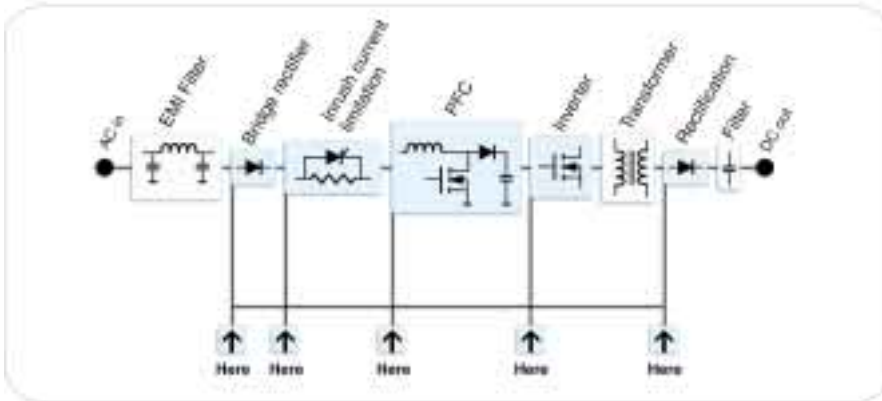
Ultrafast Application Range



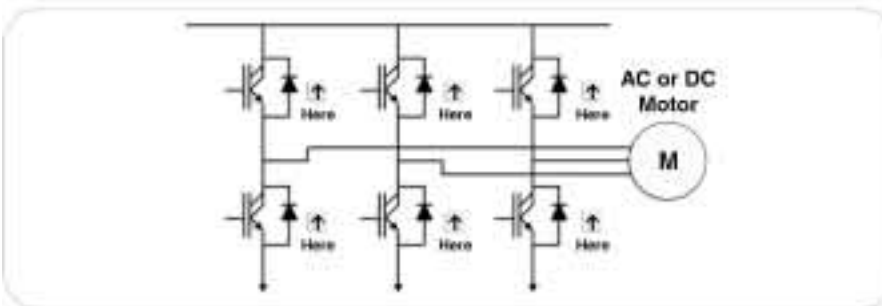
MAIN APPLICATIONS

ST Rectifiers are Everywhere

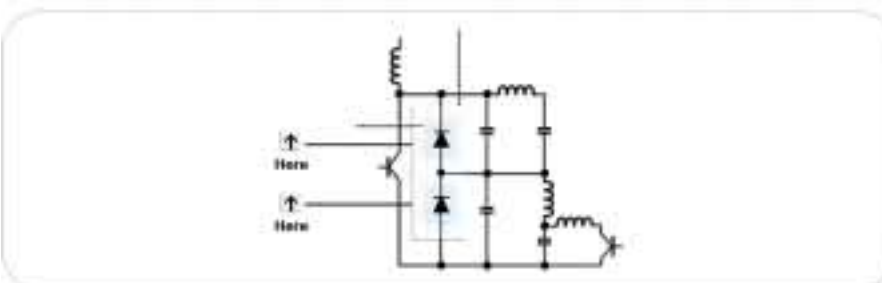
Rectifiers in an SMPS block diagram



Diodes for Freewheeling in Motor Control



Damper and Modulation diodes in a Monitor deflection circuit



SIGNAL SCHOTTKY DIODES

PACKAGES

SMD PACKAGES



MELF



SOT-323



MINIMELF



SOT-23



SOD-323

INSERTION PACKAGES



DO-35



DO-41

SIGNAL SCHOTTKY DIODES

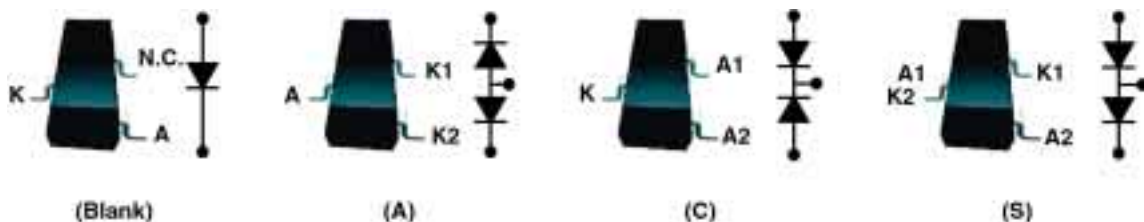
Low Power in Ever Smaller Package

They are general purpose Schottky barrier diodes featuring very low turn-on voltage and fast switching. The products are encapsulated in various axial or SMD packages and are intended for use in portable equipment, DC to DC converters, step-up conversion, power management... Most of them integrate protection against excessive voltage such as electrostatic discharges. Double diodes with different pin-out configurations are available.

10V, 20V, 30V and 40V								
Voltage (V)	Current (mA)	Part Number	V _F (max) @ I _F		I _R (max)@ 25°C, V _{RRM} (μA)	C (typ) @1MHz, 1V ⁽¹⁾ (pF)	trr (ns)	Package
			(V)	(mA)				
10	3000	BAT60JFILM	0.32	10	6	60	-	SOD-323
20	350	BAT47	1.00	30	10	12	10	DO-35
30	100	BAR42FILM	0.40	10	0.5	7	5	SOT-23
		BAR43AFILM	0.33	2				SOT-23
		BAR43CFILM						SOT-23
		BAR43FILM						SOT-23
		BAR43SFILM						SOT-23
	200	BAT42	0.40	10	0.5	7	5	DO-35
		BAT43	0.33	2				DO-35
		TMMBAT42FILM	0.40	10				MiniMELF
		TMMBAT43FILM	0.33	2				MiniMELF
	300	BAT54AFILM	0.90	100	1	7	5	SOT-23
		BAT54AWFILM						SOT-323
		BAT54CFILM						SOT-23
		BAT54CWFILM						SOT-323
		BAT54FILM						SOT-23
		BAT54JFILM						SOD-323
		BAT54SFILM						SOT-23
BAT54SWFILM		SOT-323						
BAT54WFILM	SOT-323							
350	BAT48	0.75	200	25	12	10	DO-35	
40	350	TMMBAT48FILM	0.75	200	25	12	10	MiniMELF
	1000	BYV10-40	0.55	1000	500	220 (@ 0V)	-	DO-41
		TMBYV10-40FILM						MELF

(1) Or at specified value

NEW PRODUCT



SIGNAL SCHOTTKY DIODES

Low Power in Ever Smaller Package

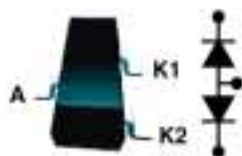
60V, 70V, 80V and 100V									
Voltage (V)	Current (mA)	Part Number	V _F (max) @ I _F		I _R (max) @ 25°C, V _{RRM} (1) (μA)	C (typ) @ 1MHz, 0V (pF)	Dynamic parameter	Package	
			(V)	(mA)					
60	15	1N6263	0.41	1	0.2 (@ 50V)	2.2	t < 100 ps / 5mA	DO-35	
		TMM6263FILM						MiniMELF	
	1000	BYV10-60	0.70	1000	500	150	-	DO-41	
		TMBYV10-60FILM						MELF	
70	15	1N5711	0.41	1	0.2 (@ 50V)	2	t < 100 ps / 5mA	DO-35	
		BAR18FILM						SOT-23	
		BAR28						DO-35	
		BAS70-04FILM						SOT-23	
		BAS70-04WFILM						SOT-323	
		BAS70-05FILM						SOT-23	
		BAS70-05WFILM						SOT-323	
		BAS70-06FILM						SOT-23	
		BAS70-06WFILM						SOT-323	
		BAS70JFILM						SOD-323	
BAS70WFILM	SOT-323								
80	500	BAT49	0.32	10	200	120	-	DO-41	
		TMBAT49FILM						MELF	
100	100	BAT41	0.45	1	0.1	2	-	DO-35	
		TMMBAT41FILM						MiniMELF	
		BAR46FILM						SOT-23	
	150	150	BAR46AFILM	0.25	0.10	5 (@ 75V)	10	-	SOT-23
			BAR46CWFILM						SOT-23
			BAT46						DO-35
			BAT46AWFILM						SOT-323
			BAT46JFILM						SOD-323
			BAT46WFILM						SOT-323
			TMMBAT46FILM						MiniMELF

(1) Or at specified value

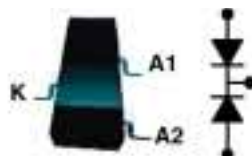
NEW PRODUCT



(Blank)



(A or 06)



(C or 05)



(S or 04)

POWER SCHOTTKY DIODES

PACKAGES

SMD PACKAGES

NEW



SMC



SMB



SMA



ST Mite



SOD-123



DPAK



DPAK

INSERTION PACKAGES



DO-15



DO-41



DO-201AD



TO-220AB



TO-220AC



Max247



TO-247



TO-220FPAB



TO-220FPAC



ISOWATT220AB



ISOWATT220AC



IPAK



TOP3 Ins.



SOT-93



ISOTOP

POWER SCHOTTKY DIODES

A Technology for Every Application

The 15V products use proprietary barrier technology and are especially intended for use as OR-ing diode in fault tolerant Switch Mode Power Supplies. The 20, 25 and 30V products are single or dual center tap Schottky rectifiers suited to low voltage SMPS, high frequency DC to DC power converters, high frequency inverters, free wheeling, polarity protection and battery chargers. The 30V products are also intended for use in parallel with MOSFETs in synchronous rectification. The products are available in various power through-hole and SMD packages.

15V, 20V, 25V and 30V									
Voltage (V)	Current (A)	Part Number	V_F (max) @ I_F (A)		I_R (max) @ 25°C (μA)	I_{FSM} (A)	T_j max (°C)	Package	
15	20	STPS20L15D	0.33	19	6000	310	125	TO-220AC	
		STPS20L15G						D ² PAK	
	2 x 20	STPS40L15CT	0.33	19	6000	310	125	TO-220AB	
		STPS40L15CW						TO-247	
	2 x 40	STPS80L15CY	0.33	40	16000	600	125	Max247	
		STPS80L15TV				700		ISOTOP	
2 x 60	STPS120L15TV	0.31	60	22000	1200	125	ISOTOP		
20	0.5	STPS0520M	0.30	0.5	50	50	150	STmite	
	0.5	STPS0520Z	0.32	0.5	150	5.5	125	SOD-123	
	1	1N5817	0.45	1	1000	25	150	DO-41	
		STPS120M	0.41		3.9	50		STmite	
		STPS1L20M	0.37		75	50		STmite	
	3	1N5820	0.48	3	2000	80	150	DO-201AD	
25	2	STPS2L25U	0.38	2	90	75	150	SMB	
	3	STPS3L25S	0.44	3	90	75	150	SMC	
	5	STPS5L25B	0.35	5	350	75	150	DPAK	
	10	STPS10L25D	0.35	10	800	200	150	TO-220AC	
		STPS10L25G						D ² PAK	
	15	STPS15L25D	0.35	15	1300	250	150	TO-220AC	
STPS15L25G		D ² PAK							
2 x 10	STPS20L25CG	0.35	10	800	220	150	D ² PAK		
	STPS20L25CT						TO-220AB		
30	1	1N5818	0.55	1	1000	25	150	DO-41	
		STPS130A	0.46		10	45		SMA	
		STPS130U	0.46		10	45		SMB	
		STPS1L30A	0.30		200	75		SMA	
		STPS1L30M	0.34		390	50		STmite	
		STPS1L30U	0.30		200	75		SMB	
	2	STPS2L30A	0.38	2	200	75	150	SMA	
	3	1N5821	0.50	3	2000	80	150	DO-201AD	
	8	STPS8L30B	0.40	8	1000	75	150	DPAK	
	2 x 7.5	STPS15L30CB	0.39	7.5	1000	75	150	DPAK	
		STPS2030CG	0.42					D ² PAK	
	2 x 10	STPS2030CR	0.42	10	1000	180	150	I ² PAK	
		STPS2030CT	0.42					1000	TO-220AB
		STPS3030CG	0.42					1000	D ² PAK
	2 x 15	STPS3030CR	0.42	15	1000	220	150	I ² PAK	
		STPS3030CT	0.42					1000	TO-220AB
		STPS30L30CG	0.37					1500	D ² PAK
		STPS30L30CR	0.37					1500	I ² PAK
STPS30L30CT		0.37	1500					TO-220AB	
STPS4030CG		0.40	750					D ² PAK	
2 x 20	STPS4030CR	0.40	20	750	220	150	I ² PAK		
	STPS4030CT	0.40					750	TO-220AB	
	STPS41L30CG	0.38					1500	D ² PAK	
2 x 30	STPS6030CW	0.41	30	1000	600	150	TO-247		
	STPS60L30CW	0.38	30	4000	600	150	TO-247		
2 x 40	STPS80L30CY	0.38	40	4000	400	150	Max247		

NEW PRODUCT

POWER SCHOTTKY DIODES

A Technology for Every Application

With their current rating ranging from 500mA through to 2 x 3A, the 40V products feature very low switching losses, low thermal resistance and low forward voltage drop. Available in dual center tap configuration for 3A and higher current ratings, they are intended for use in low voltage, high frequency inverters, free-wheeling and polarity protection applications.

40V									
Voltage (V)	Current (A)	Part Number	V _F (max) @ I _F		I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j (max) (°C)	Package	
			(V)	(A)					
40	0.5	STPS0540Z	0.40	0.5	40	5.5	150	SOD-123	
	1	1N5819	1N5819	0.60	1	1000	25	150	DO-41
			STPS140A	0.35	1	12	60	150	SMA
		STPS140U	SMB						
		STPS140Z	0.51	1	10	5.5	150	SOD-123	
		STPS1L40A	0.42	1	35	60	150	SMA	
		STPS1L40M	0.40	1	63	50	150	STmite	
		STPS1L40U	0.42	1	35	60	150	SMB	
	2	STPS2L40U	0.34	2	220	75	150	SMB	
	3	1N5822	1N5822	0.53	3	2000	80	150	DO-201AD
			STPS340B	0.57	3	20	75	150	DPAK
		STPS340S	SMC						
		STPS340U	SMB						
		STPS3L40S	0.44	3	100	75	150	SMC	
	5	STPS5L40	0.48	5	200	150	150	DO-201AD	
	2 x 3	STPS640CB	STPS640CB	0.57	3	100	75	150	DPAK
			STPS640CF						ISOWATT220AC

NEW PRODUCT

The STPSxxL40Cy have been replaced by the L45 series.

POWER SCHOTTKY DIODES

A Technology for Every Application

The 45V products feature very low conduction, negligible switching losses and low forward voltage drop. They range from 7.5A through to 2 x 120A and are available in a wide variety of packages including Full Pack, Max247 and ISOTOP™. Most of them are available in single diode or dual center tap configuration. These products are especially intended for use in low voltage, high frequency inverters, free-wheeling and polarity protection applications.

45V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ I _F (V)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j max (°C)	Package	
45	7.5	STPS745D	0.57	7.5	100	150	TO-220AC	
		STPS745F					ISOWATT220AC	
		STPS745FP					TO-220FPAC	
		STPS745G					D ² PAK	
	10	STPS1045B	0.57	7.5	100	75	175	D ² PAK
		STPS1045D				TO-220AC		
		STPS1045F				ISOWATT220AB		
		STPS1045FP				TO-220FPAC		
	2 x 5	STPS10L45CF	0.46	5	150	150	150	ISOWATT220AB
		STPS10L45CFP						TO-220FPAB
		STPS10L45CG						I ² PAK
		STPS10L45CT						TO-220AB
	2 x 7.5	STPS1545CF	0.57	7.5	100	150	175	ISOWATT220AB
		STPS1545CFP						TO-220FPAB
		STPS1545CG						D ² PAK
		STPS1545CR						I ² PAK
		STPS1545CT	TO-220AB					
		STPS15L45CB	0.46	7.5	1000	75	150	D ² PAK
	15	STPS1545D	0.57	7.5	200	220	175	TO-220AC
		STPS1545F						ISOWATT220AC
		STPS1545FP						TO-220FPAC
	2 x 8	STPS16L45CFP	0.45	8	200	180	150	TO-220FPAB
		STPS16L45CT						TO-220AB
	2 X 10	STPS2045CF	0.57	10	100	180	175	ISOWATT220AB
		STPS2045CFP						TO-220FPAB
		STPS2045CG						D ² PAK
		STPS2045CT						TO-220AB
		STPS20L45CF	0.50	10	200	180	150	ISOWATT220AB
		STPS20L45CFP						TO-220FPAB
		STPS20L45CG						D ² PAK
		STPS20L45CR						I ² PAK
		STPS20L45CT						TO-220AB
		STPS20L45CW						TO-247
	2 x 15	STPS3045CG	0.57	15	200	220	175	D ² PAK
		STPS3045CP						SOT-93
		STPS3045CPI						TOP3 Ins.
		STPS3045CR						I ² PAK
		STPS3045CT	TO-220AB					
		STPS3045CW	TO-247					
		STPS30L45CG	0.50	15	400	220	150	D ² PAK
STPS30L45CR	I ² PAK							
STPS30L45CT	TO-220AB							
	STPS30L45CW						TO-247	
2 x 20	STPS4045CP	0.63	20	200	220	175	SOT-93	
	STPS4045CW						TO-247	
	STPS40L45CG	0.49	20	600	230	150	D ² PAK	
	STPS40L45CT						TO-220AB	
	STPS40L45CW						TO-247	
	STPS41L45CG	0.47	20	1200	220	150	D ² PAK	
2 x 30	STPS6045CP	0.63	30	1500	400	175	SOT-93	
	STPS6045CPI					150	TOP3 Ins.	
	STPS6045CW	0.50	30	1500	600	175	TO-247	
	STPS60L45CW					175	TO-247	
2 x 60	STPS12045TV	0.67	60	1000	700	175	ISOTOP	
2 x 80	STPS16045TV	0.69	80	1000	900	175	ISOTOP	
2 x 120	STPS24045TV	0.67	120	2000	1500	175	ISOTOP	

NEW PRODUCT



POWER SCHOTTKY DIODES

A Technology for Every Application

The 60V Schottky diodes range from 1A through to 2 x 40A. They are available in dual center tap configuration for 10A rating and higher and are suited to high frequency DC to DC converters and high frequency inverters. Low power products are available in axial and small power SMD packages and are intended for use in DC/DC chargers. They feature very low conduction and switching losses, extremely fast switching, low forward voltage drop and low thermal resistance.

60V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ I _F (A)		I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j (max) (°C)	Package
60	0.5	STPS0560Z	0.50	0.5	50	5.5	150	SOD-123
	1	STPS160A	0.57	1	4	75	150	SMA
		STPS160U	0.57	1	4	75	150	SMB
		STPS1L60	0.56	1	50	40	150	DO-41
		STPS3L60	0.61	3	150	100	150	DO-201AD
	3	STPS3L60Q	0.61	3	150	100	150	DO-15
		STPS3L60S	0.65	3	55	75	150	SMC
		STPS5L60	0.53	5	220	150	150	DO-201AD
	2 x 5	STPS10L60CF	0.52	5	220	180	150	ISOWATT220AB
		STPS10L60CFP	0.52	5	220	180	150	TO-220FPAB
		STPS10L60CT	0.52	5	220	180	150	TO-220AB
	10	STPS10L60D	0.56	10	350	220	150	TO-220AC
		STPS10L60FP	0.56	10	350	220	150	TO-220FPAC
	2 x 7.5	STPS15L60CB	0.52	7.5	200	75	150	DPAK
	2 x 10	STPS20L60CG	0.56	10	350	220	150	D ² PAK
		STPS20L60CR	0.56	10	350	220	150	I ² PAK
		STPS20L60CT	0.56	10	350	220	150	TO-220AB
	2 x 15	STPS30L60CR	0.56	15	480	220	150	I ² PAK
		STPS30L60CT	0.56	15	480	220	150	TO-220AB
		STPS30L60CW	0.56	15	480	230	150	TO-247
	2 x 20	STPS41L60CG	0.56	20	240	220	150	D ² PAK
	2 x 40	STPS80L60CY	0.56	15	1800	400	150	Max247

NEW PRODUCT

POWER SCHOTTKY DIODES

A Technology for Every Application

The 100V and 150V Schottky diodes are good trade-offs between leakage current and forward voltage drop. As a result of the high voltage Schottky barrier, they feature low static and dynamic losses, high junction temperature capability and low leakage current. High power products are well suited to high frequency telecom and computer SMPS as well as for high frequency DC to DC converters. The 150V products lately introduced are intended for use in power conversion systems - adaptors, desktop or server SMPS - with an output from 12V up to 24V or even higher, to optimize the performance of these applications.

100V and 150V								
Voltage (V)	Current (A)	Part Number	V_F (max) @ I_F (V) (A)		I_R (max) @ 25°C (μ A)	I_{FSM} (A)	T_j (max) (°C)	Package
100	1	STPS1H100A	0.62	1	1	50	175	SMA
		STPS1H100U						SMB
	2	STPS2H100A	0.65	2	1	75	175	SMA
		STPS2H100U						SMB
	5	STPS5H100B	0.61	5	3.5	75	175	DPAK
	8	STPS8H100D	0.58	8	4.5	250	175	TO-220AC
		STPS8H100F						ISOWATT220AC
		STPS8H100FP						TO-220FPAC
		STPS8H100G						D ² PAK
		STPS8H100R						I ² PAK
	2 x 5	STPS10H100CFP	0.61	5	3.5	180	175	TO-220FPAB
		STPS10H100CT						TO-220AB
	2 x 7.5	STPS15H100CB	0.67	7.5	3	75	175	DPAK
	2 X 10	STPS20H100CF	0.64	10	4.5	250	175	ISOWATT220AB
		STPS20H100CFP						TO-220FPAB
		STPS20H100CG						D ² PAK
		STPS20H100CR						I ² PAK
		STPS20H100CT						TO-220AB
	2 x 15	STPS30H100CW	0.67	15	5	250	175	TO-247
	2 x 20	STPS40H100CW	0.61	20	10	300	175	TO-247
STPS41H100CG		0.67	20	10	220	175	D ² PAK	
2 x 40	STPS80H100CY	0.70	40	20	600	175	Max247	
	STPS80H100TV	0.65	40	20	700	150	ISOTOP	
2 x 80	STPS160H100TV	0.68	80	40	1000	150	ISOTOP	
150	2 x 5	STPS10150CG	0.75	5	2	120	175	D ² PAK
		STPS10150CT						TO-220AB
	2 x 8	STPS16150CG	0.75	8	3	150	175	D ² PAK
		STPS16150CR						I ² PAK
		STPS16150CT						TO-220AB
	2 x 10	STPS20150CG	0.75	10	5	180	175	D ² PAK
		STPS20150CR						I ² PAK
		STPS20150CT						TO-220AB
	2 x 15	STPS30150CG	0.75	15	6.5	220	175	D ² PAK
		STPS30150CFP						TO-220FPAB
		STPS30150CT						TO-220AB
		STPS30150CW						TO-247

NEW PRODUCT

ULTRAFAST DIODES

PACKAGES

SMD PACKAGES



SMC



SMB



SMA



D²PAK

INSERTION PACKAGES



DO-15



DO-201AD



TO-220AB



TO-220AC



Max247



TO-247



TO-220FPAB



TO-220FPAC



ISOWATT220AB



ISOWATT220AC



DOP3 Ins.



SOD-93



SOT-93



ISOTOP

ULTRAFAST DIODES

A Wide Range

The 200V ultrafast diodes suited for SMPS feature very low forward losses, negligible switching losses and high surge current capability. They are intended for use in high frequency inverters, in converters as free-wheeling and rectification function and in polarity protection applications. High current power products are especially suited to medium voltage high power applications such as telecom power supplies. They are available in a wide variety of packages.

200V								
Voltage (V)	Current (A)	Part Number	V_F (max) @ rated current (V)	t_{rr} (max) (ns)	I_R (max) @ 25°C (μ A)	I_{FSM} (A)	T_j max (°C)	Package
200	1	SMBYW01-200	0.71	35	3	60	150	SMB
		STPR120A	0.71	35	3	60	150	SMA
		STTH102	0.78	20	1	50	175	DO-41
		STTH102A	0.78	20	1	40	175	SMA
	1.5	BYW100-200	0.85	35	10	50	150	DO-15
		STTH152	0.75	32	1.5	80	175	DO-15
	2	SMBYW02-200	0.85	35	10	50	150	SMB
	3	BYW98-200	0.85	35	10	70	150	DO201-AD
		STTH302	0.75	35	3	130	175	DO201-AD
		STTH302S	0.75	35	3	100	175	SMC
	4	SMBYW04-200	0.85	35	10	70	150	SMC
	5	STPR520D	0.99	30	50	50	150	TO-220AC
		STPR520F						ISOWATT220AC
		STPR520FP						TO-220FPAC
	2 x 3	STPR620CT	0.99	30	50	30	150	TO-220AB
	8	BYW29-200	0.85	35	10	80	150	TO-220AC
		BYW29F-200						ISOWATT220AC
		BYW29FP-200						TO-220FPAC
		BYW29G-200	D ² PAK					
		STPR820D	0.99	30	50	80	150	TO-220AC
		STPR820F						ISOWATT220AC
	STPR820FP	TO-220FPAC						
	2 x 4	STTH802CB	0.95	20	4	50	175	DPAK
		STTH802CFP						TO-220FPAB
		STTH802CT						TO-220AB
	10	BYW80-200	0.85	35	10	100	150	TO-220AC
		BYW80F-200						ISOWATT220AC
		BYW80FP-200						TO-220FPAC
		BYW80PI-200						TO-220AC Ins.
	2 x 5	STPR1020CB	0.85	35	20	70	150	DPAK
		STPR1020CF						ISOWATT220AB
		STPR1020CFP						TO-220FPAB
		STPR1020CR						I ² PAK
		STPR1020CT						TO-220AB
	2 x 6.5	STTH1302CFP	0.95	25	6	70	175	TO-220FPAB
		STTH1302CG						D ² PAK
		STTH1302CT						TO-220AB
	15	BYW81P-200	0.85	40	20	200	150	TO-220AC
		BYW81PI-200						TO-220AC Ins.
		STPR1520D	0.99	30	50	150	150	TO-220AC
2 x 8	STPR1620CG	0.99	30	50	80	150	D ² PAK	
	STPR1620CR						I ² PAK	
	STPR1620CT						TO-220AB	

NEW PRODUCT

ULTRAFAST DIODES

A Wide Range

200V								
Voltage (V)	Current (A)	Part Number	V_F (max) @ rated current (V)	trr (max) (ns)	I_R (max) @ 25°C (μ A)	I_{FSM} (A)	Tj max (°C)	Package
200	2 x 10	BYW51-200	0.85	35	15	100	150	TO-220AB
		BYW51F-200						ISOWATT220AB
		BYW51FP-200						TO-220FPAB
		BYW51G-200						D ² PAK
		BYW51R-200						I ² PAK
	25	BYW77G-200	0.85	50	25	500	150	D ² PAK
		BYW51P-200						SOD-93
		BYW51PI-200						DOP3 Ins.
	2 x 15	BYW99P-200	0.85	40	20	200	150	SOT-93
		BYW99PI-200						TOP3 Ins.
		BYW99W-200						TO-247
	2 x 30	BYV52-200	0.85	50	25	500	150	SOT-93
		BYV52PI-200						TOP3 Ins.
	2 x 50	BYV541V-200	0.85	60	50	1000	150	ISOTOP
		BYV54V-200						ISOTOP
	2 x 100	BYV255V-200	0.85	80	100	1600	150	ISOTOP

NEW PRODUCT

ULTRAFAST DIODES

A Dedicated Technology

There are many power converters for which the reapplied voltage across the rectification diode is within the 200V-300V range. In such cases, designers can use a 200V diode with a large snubber circuit or a 400V diode that increases the losses in the diode. The optimized solution to make an efficient converter is the use of a 300V diode with recovery characteristics maintained at the level of a 200V product while the forward voltage drop is increased by a mere 100mV (at 1V). These products range from 8 through to 2 x 100A mainly intended for use in output rectification of telecom SMPS.

300V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	t _{rr} (max) (ns)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _J (max) (°C)	Package
300	8	STTH803D	1	35	20	100	175	TO-220AC
		STTH803G						D ² PAK
		STTH8R03D	1.3	30	10	100	150	TO-220AC
		STTH8R03G						D ² PAK
	2 x 10	STTH2003CF	1	35	20	110	175	ISOWATT220AB
		STTH2003CG						D ² PAK
		STTH2003CR						I ² PAK
		STTH2003CT						TO-220AB
	2 x 15	STTH3003CW	1	40	40	140	175	TO-247
		STTH30R03CG	1.4	30	20	140	150	D ² PAK
		STTH30R03CW						TO-247
	2 x 30	STTH6003CW	1	55	60	300	175	TO-247
		STTH6003TV1				400	150	ISOTOP
	2 x 40	STTH8003CY	1	60	80	400	150	Max247
	2 x 60	STTH12003TV1	1	70	120	60	150	ISOTOP
	2 x 80	STTH16003TV1	0.95	80	200	800	150	ISOTOP
2 x 100	STTH20003TV1	0.95	90	200	1000	150	ISOTOP	

ULTRAFAST DIODES

Towards Higher Voltages

These ultrafast diodes feature very low forward losses, negligible switching losses and high surge current capability. They are intended for use in high frequency inverters, in converters as free-wheeling and rectification function and also in motor control circuits. High current power products are especially suited to medium voltage high power applications such as welding equipment and telecom supplies. They are available in a wide variety of packages including the Max247 and the ISOTOP.

400V and 1000V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	t _{rr} (max) (ns)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _J (max) (°C)	Package
400	1	BYT01-400	1.4	55	10	30	150	DO-15
		SMBYT01-400		60				SMB
	3	BYT03-400	1.4	55	20	60	150	DO201-AD
		SMBYT03-400		60				SMC
	8	BYT08P-400	1.4	75	15	100	150	TO-220AC
		BYT08PI-400						TO-220AC Ins.
	2 x 8	BYT16P-400	1.4	75	15	100	150	TO-220AB
	30	BYT30G-400	1.4	100	30	350	150	D ² PAK
		BYT30P-400						SOD-93
		BYT30PI-400						DOP3 Ins.
	2 x 30	BYT230PIV-400	1.4	100	35	350	150	ISOTOP
		BYT230Y-400				300		Max247
		BYT231PIV-400				350		ISOTOP
	60	BYT60P-400	1.4	100	60	550	150	SOD-93
2 x 60	BYT261PIV-400	1.4	100	60	600	150	ISOTOP	
2 x 100	BYT200PIV-400	1.4	100	120	600	150	ISOTOP	
1000	8	BYT08P-1000	1.8	155	35	50	150	TO-220AC
	12	BYT12P-1000	1.8	155	50	75	150	TO-220AC
		BYT12PI-1000						TO-220AC Ins.
	30	BYT30P-1000	1.8	165	100	200	150	SOD-93
		BYT30PI-1000						DOP3 Ins.
	2 x 30	BYT230PIV-1000	1.8	165	100	200	150	ISOTOP
		BYT231PIV-1000						ISOTOP
	60	BYT60P-1000	1.8	170	120	400	150	SOD-93
2 x 60	BYT261PIV-1000	1.8	170	60	400	150	ISOTOP	

TURBOSWITCH™ DIODES

PACKAGES

SMD PACKAGES



SMC



SMB



D²PAK



DPAK

INSERTION PACKAGES



DO-15



DO-201AD



DO-41



TO-220AB



TO-220AC



TO-247



TO-220FPAC



ISOWATT220AB



ISOWATT220AC



I²PAK



SOD-93



DOP3 Ins



ISOTOP

TURBOSWITCH™ DIODES

A Specific technology

The 600V and 1200V Turboswitch products are high performance high voltage power diodes designed to drastically cut losses in both the diode and the associated switching IGBT or MOSFET in all "freewheel mode" operations. They are particularly suitable and efficient in freewheel applications, in motor control circuitry and in boost diode applications for power factor correctors. Ranging from 1A through to 2 x 60A and encapsulated in various packages, they are particularly intended for use on 240V domestic mains. 1200V Turboswitch diodes are also used as high voltage snubber, clamping, secondary rectification or demagnetizing diodes.

600V and 1200V									
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	t _{rr} (max) (ns)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j (max) (°C)	Package	
600	1	STTA106U	1.5	20	10	25	125	SMB	
	2	STTA206S	1.5	20	20	35	125	SMC	
	3	STTA306B	1.65	20	20	35	125	DPAK	
	4	STTA406	1.5	25	50	80	125	DO-201AD	
	5		STTA506B	1.5	20	100	55	150	DPAK
			STTA506D						TO-220AC
			STTA506F						ISOWATT220AC
	8		STTA806D	1.5	25	100	90	150	TO-220AC
			STTA806DI						TO-220AC Ins.
			STTA806G						D ² PAK
	12		STTA1206D	1.5	28	100	110	150	TO-220AC
			STTA1206DI						TO-220AC Ins.
	20		STTA2006P	1.5	30	100	180	150	SOD-93
			STTA2006PI						DOP3 Ins.
	2 x 15		STTA3006CW	1.6	35	100	230	150	TO-247
	30		STTA3006P	1.5	35	150	230	150	SOD-93
STTA3006PI			DOP3 Ins.						
2 x 30		STTA6006TV1	1.5	35	150	230	150	ISOTOP	
		STTA6006TV2						ISOTOP	
2 x 60		STTA12006TV1	1.5	45	200	500	150	ISOTOP	
1200	1	STTA112U	1.5	65	10	10	125	SMB	
	2	STTA212S	1.5	65	20	20	125	SMC	
	3	STTA312B	1.7	65	20	25	125	DPAK	
	5		STTA512B	2	45	100	45	150	DPAK
			STTA512D						TO-220AC
	8		STTA812D	2	50	100	70	150	TO-220AC
			STTA812DI						TO-220AC Ins.
	12		STTA1212D	2	50	100	70	150	TO-220AC
	15		STTA1512P	1.9	55	100	150	150	SOD-93
			STTA1512PI						DOP3 Ins.
	25		STTA2512P	1.9	150	100	220	150	SOD-93

TURBO2 DIODES

NEW

TURBO2: 600V PFC dedicated Diodes

The STTHxx06yy series use ST's Turbo2 600V technology which is specially suited for boost diodes used in continuous and discontinuous mode power factor correctors. The devices are also intended for use as free wheeling diode, clamping diode, snubber diode..., in power supplies and other hard power switching conditions. Available in a wide range of packages, TURBO2 diodes can handle currents from 1A through to 2x15A and feature a Tjmax of 175 °C. Three differentiated families based on different V_F and trr trade-offs are available to fit the various applications.

600V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	trr (max) (ns)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j (max) (°C)	Package
600	1	STTH106	1.25	25	1	25	175	DO-41
		STTH1L06	1.05	80	1	30		DO-41
		STTH1L06U						SMB
	3	STTH306	1.25	30	3	55	175	DO-201AD
		STTH3L06	1.05	85	3	80		DO-201AD
	5	STTH5L06	1.05	95	5	110	175	DO-201AD
		STTH5L06B				90		DPAK
		STTH5L06D				90		TO-220AC
		STTH5R06B	1.8	40	20	50		DPAK
		STTH5R06D						TO-220AC
	STTH5R06FP	TO-220FPAC						
	8	STTH8L06D	1.05	105	8	120	175	TO-220AC
		STTH8L06FP						TO-220FPAC
		STTH8R06D	1.8	45	30	80		TO-220AC
		STTH8R06FP						TO-220FPAC
		STTH8R06G						D ² PAK
	STTH8R06R	I ² PAK						
	12	STTH12R06D	1.8	45	45	100	175	TO-220AC
		STTH12R06FP						TO-220FPAC
	15	STTH15R06D	1.8	50	60	120	175	TO-220AC
		STTH15R06FP						TO-220FPAC
	2 x 15	STTH30R06CW	1.8	50	60	120	175	TO-247

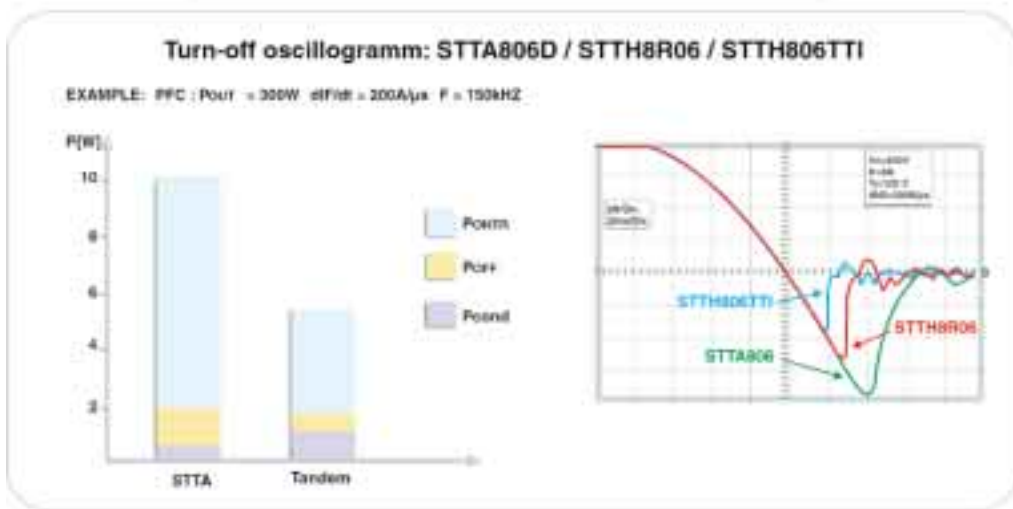
NEW PRODUCT

TANDEM DIODES

The Fastest 600V Diodes

In a power factor corrector converter, the 600V boost diode is a key element, especially in a PFC working in continuous mode and hard switching conditions. For instance, at each switching period the recovery current of the diode flows through the Power MOSFET inducing high “switching-on” power losses in the switch. For this application, designers need an extremely fast 600V diode. The 600V Tandem is made of two 300V diodes connected in series in a single package.

600V Boost Tandem diode



600V								
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	t _{rr} (max) (ns)	I _R (max) @ 25°C (µA)	I _{FSM} (A)	T _j (max) (°C)	Package
600	8	STTH806TTI	2.6	30	10	80	150	TO-220AB Ins.
	15	STTH1506TPI	2.6	35	20	120	150	TOP3 Ins.

NEW PRODUCT

DAMPER DIODES

The easy choice

Damper diodes are high voltage products especially designed for horizontal deflection stage in standard and high resolution displays for TV's and monitors. In a deflection design it is important to have a negligible switching-off energy to keep the junction temperature under control. This is the reason why ST has developed Damper diodes in planar technology with a low reverse recovery time allowing high frequency operation. The products also feature high breakdown voltage capability and low static and peak forward voltage drop.



TO-220AC



TO-220FPAC



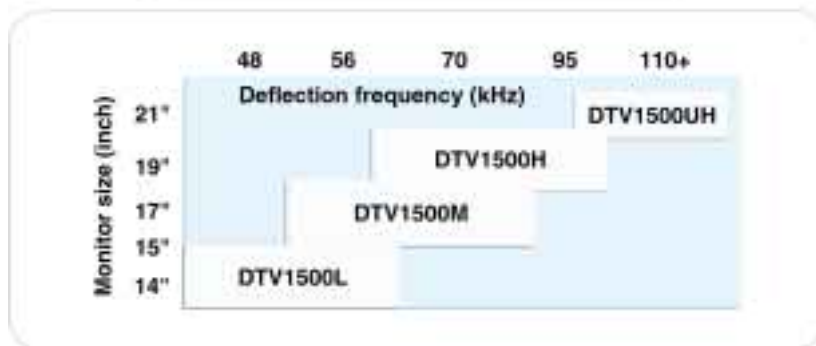
ISOWATT220AC

NEW

DAMPER DIODES								
Voltage (V)	Current (A)	Part Number	Monitor Freq.	V_F (max) @ rated current (V)	t_{rr} (max) (ns)	I_R (max) @ 25°C (μA)	T_J (max) (°C)	Package
1500	4	DTV1500LFP	Low freq.	1.5 @ 4 A	170	100	150	TO-220FPAC
	6	DTV1500MD	Medium freq.	1.65 @ 6 A	135	100	150	TO-220AC
		DTV1500MF						ISOWATT220AC
		DTV1500MFP						TO-220FPAC
		DTV1500HD						TO-220AC
		DTV1500HF	High freq.	1.7 @ 6 A	125	100	150	ISOWATT220AC
		DTV1500HFP						TO-220FPAC
		DTV1500UHF	Ultra High freq.	1.3 @ 6 A	125	100	150	ISOWATT220AC
		DTV1500UHFP	Ultra High freq.	1.3 @ 6 A	125	100	150	TO-220FPAC

NEW PRODUCT

Damper diodes - The range



DAMPER + MODULATION DIODES

Two functions in one package

In addition to the horizontal deflection achieved by the DTVxxx series, the DMVxxx series achieve the East-West correction at the same time. Electrical parameters of the Damper diode are the same as the DTVxxx products while the Modulation diode is a 600V device with optimized dynamic parameters (low trr and V_{FP}). As a result of its high technological know-how in designing power diodes and its experience in the field of TV and Monitor applications, ST wide range of Damper and Modulation diodes allows the designer to choose the most appropriate performance-cost solution.



TO-220AB
Insulated

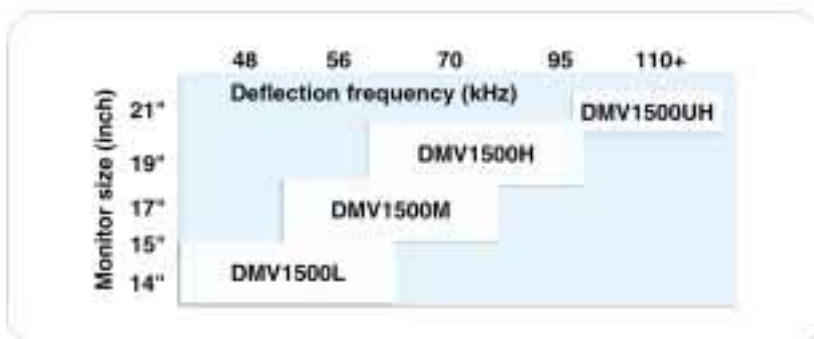
NEW

DAMPER + MODULATION DIODE (MONOPACKAGE)								
Voltage (V) (Damper/mod.)	Current (A)	Part Number	Monitor Freq.	V_F (max) @ rated current (V)	trr (max) (ns)	I_R (max) @ 25°C (μA)	Tj (max) (°C)	Package
1500 600 (*)	4 / 3 (*)	DMV1500L	Low freq.	1.5 @ 4 A 1.4 @ 3A (*)	170 / 50 (*)	100 / 20 (*)	150	TO-220AB Ins.
	6 / 3 (*)	DMV1500M	Medium freq.	1.65 @ 6 A 1.4 @ 3A (*)	135 / 50 (*)			
		DMV1500H	High freq.	1.7 @ 6 A 1.4 @ 3A (*)	125 / 50 (*)			

(*) Xxx / yyy: Damper / Modulation parameter

NEW PRODUCT

Damper diodes - The range

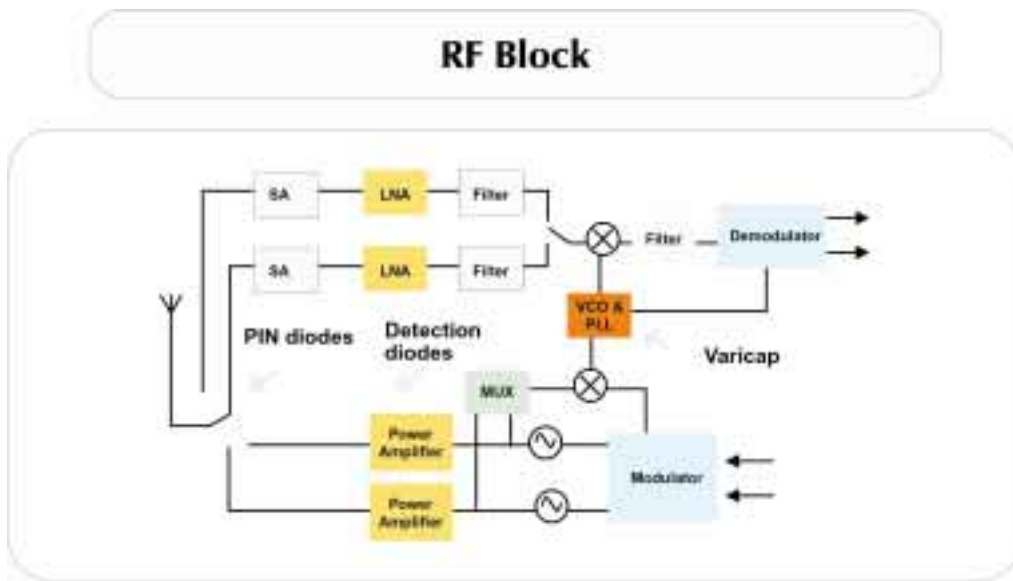


RF DIODES

For wireless connectivity

ST now offers three series of diodes for RF applications in micropackages:

- PIN diodes used to switch the RF signal between bands or between transmission and reception blocks. The BAR63x has very low forward resistance and capacitance to reduce the attenuation of the RF signal. The SOD-323 package will be used in applications where space is critical like cellular phones.
- Detection diodes used to manage the output signal of RF Power Amplifiers. The BAS70-0xS in SOT323-6L includes both detection and temperature compensation diodes in the same package. This configuration provides excellent temperature matching in a very small package.
- Varactor diodes dedicated to Voltage Control Oscillators. The STVD901, with a typical capacitance of 4 pF and a minimum capacitance ratio of 2 is especially suited for 900MHz oscillators.



SOT-23



SOT-323



SOD-323



SOT-323-6L

RF DIODES: Detection(*)								
Voltage max. (V)	Current (mA)	Part Number	V_F max @ I_F (V)	I_F (mA)	I_R (max) @ 25°C (μA)	C typ @ 1MHz, 0V (pF)	trr @ $I_F=25mA$ (ps)	Package
70	70	BAS70-07S	0.41	1	10	2	100 (typ)	SOT323-6L
		BAS70-08S						
15	-	STDD15-05WFILM	0.56	10	0.5	1	-	SOT-323
	-	STDD15-07SFILM						SOT323-6L

(*) See also the complete signal schottky range page 8 and 9.

NEW PRODUCT

RF DIODES

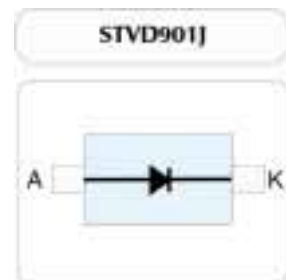
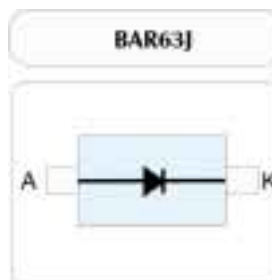
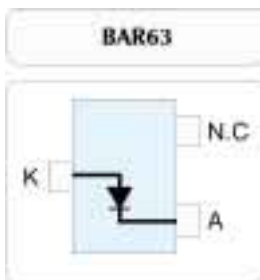
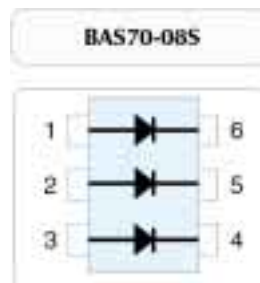
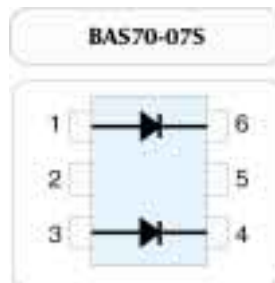
For wireless connectivity

RF DIODES: Pin								
Voltage max. (V)	Current (mA)	Part Number	V_F max @ I_F (V) (mA)		I_R (max) @ 25°C (μ A)	C typ @ 1MHz, 0V (pF)	trr @ $I_F=10$ mA (ps)	Package
50	100	BAR63FILM(*)	1.2	100	0.05	0.3	75 (typ)	SOT-23
		BAR63JFILM(*)						SOD-323

(*) Available in Q4-2002

RF DIODES: Varicap								
Voltage max. (V)	Current (A)	Part Number	C typ @ 1MHz, 0.25V (pF)	C ratio (0.25V/2.7V)	I_R max @ 25°C (μ A)	rf typ @ F=100MHz (Ω)	Ls typ @ F=100MHz (nH)	Package
6	20	STVD901J	4	2 (min)	0.01	1.2	1.8	SOD-323

NEW PRODUCT



BRIDGE DIODES & PEAK CLAMP

Addressing the SMPS Front-End

The Single-phase 4A and 6A Bridges in GBU package are especially suited for 50 & 60Hz rectification in Switch Mode Power Supplies used in Home Appliances, Automation and Telecommunication Equipment, PCs, Servers... Their main characteristics include dielectric resistance of 2000V, high surge overload rating and current capability. The Single phase and 3-phase high power 35A Bridge has been designed with the ISOTOP® package and offers the possibility to be mounted on a heat-sink with other components. It is aimed at applications such as power SMPS, UPS, Motor Drives and WELDING equipment for a compact design where high thermal dissipation is required.



ISOTOP



GBU

600V, 800V and 1000V Bridge Diodes								
Voltage (V)	Current (A)	Part Number	V _F (max) @ rated current (V)	t _{rr} (max) (ns)	I _R (max) @ 25°C (μA)	I _{FSM} (A)	T _j (max) (°C)	Package
600	4	STBR406	1.05	50 - 60	5	120	150	GBU
800	4	STBR408	1.05	50 - 60	5	175	150	GBU
600	6	STBR606	1.05	50 - 60	5	120	150	GBU
800	6	STBR608	1.05	50 - 60	5	175	150	GBU
1000	35	BF3510TV	1.3	50 - 60	10	300	150	ISOTOP

NEW PRODUCT

BRIDGE DIODES & PEAK CLAMP

Adressing the SMPS Front-End

The flyback converter is the most commonly used topology for small and medium size power supplies. The Peakclamp is a clamping circuit intended for protecting the primary switch against over-voltage spikes. It consists of a blocking 700V diode and a Transil™ with a breakdown voltage of 160V connected in series in a DO-15 axial package. With a maximum continuous power dissipation of 1.5W for a lead temperature of 90°C, the device is well suited for state-of-the-art power supplies up to 25W (battery chargers, low power opened frame converters and adapters). This range of applications can be extended with the use of transformers with very small leakage inductance.



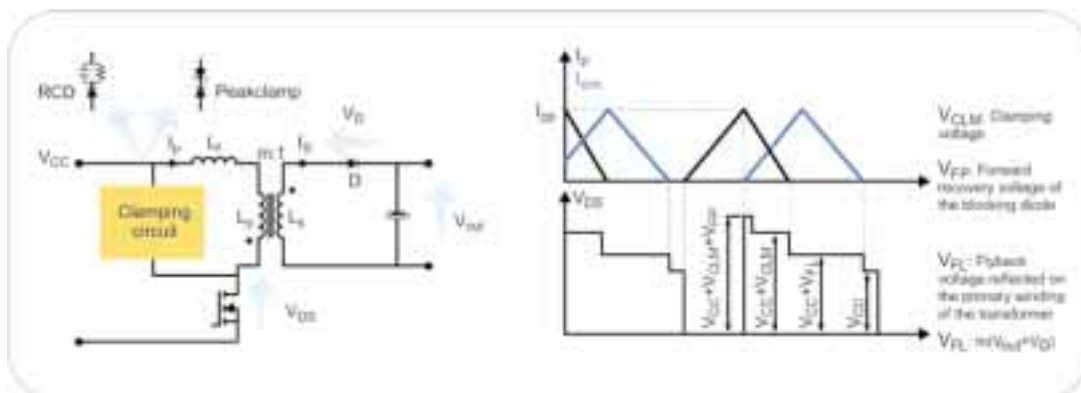
DO-15

NEW

Peakclamp: Mosfet Snubber								
V _{BR} @ 1 mA (V)	Voltage max (V)	Part Number	P _p (10/1000μs) (W)	R _d (max) @ 125°C (Ω)	I _R (max) @ 25°C (μA)	V _{FP} @ 125°C (V)	T _j (max) (°C)	Package
160	700	PKC-136	600	4	3	18	150	DO-15

NEW PRODUCT

Typical flyback converter



CROSS-REFERENCE

10BF10 to 32CTQ030

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
10BF10	SMBYW01-200	
10BF100	STTA112U	
10BF20	SMBYW01-200	
10BF40	SMBYT01-400	
10BF60	STTH1L06U	
10BF80	STTA112U	
10BQ015	STPS1L30U	
10BQ040	STPS1L40U	
10BQ060	STPS160U	
10BQ100	STPS1H100U	
10CTF30		BYT16P-400
10CTF40		BYT16P-400
10CTQ150	STPS10150CT	
10CTQ150	STPS10150CT	
10CTQ150-1		STPS10150CT
10CTQ150S	STPS10150CG	STPR1020CG
10CTQ150S	STPS10150CG	
10DL2C41A	STPR1020CT	
10DL2C47A	STPR1020CF	
10GWJ2CZ47C	STPS10L45CT	
10MF2	STPR120A	
10MQ040		STPS140A
10MQ060		STPS160A
10MQ100		STPS1H100A
10TQ035	STPS1045D	
10TQ045	STPS1045D	
11DF1	STTH102	
11DF2	STTH102	
11DF4	BYT01-400	
11DF6	STTH1L06	
11DQ03	1N5818	
11DQ04	1N5819	
11DQ05	BVY10-60	
11DQ06	BVY10-60	
12CTQ035		STPS1545CT
12CTQ035S		STPS1545CG
12CTQ040		
12CTQ045	STPS10L45CT	
12CTQ045S		STPS1545CT
12TQ035		STPS1545CG
12TQ045		STPS1545D
15CTQ035	STPS1545CT	
15CTQ035S	STPS1545CG	
15CTQ040	STPS16L45CT	
15CTQ045	STPS1545CT	
15CTQ045S	STPS1545CG	
15ETH06	STTH15R06D	
15ETH06-1		STTH15R06D
15ETH06S		
15MQ040		STPS340S
163CNQ100		
STPS160H100TV		
16CPF10		BYW99W-200
16CPF20		BYW99W-200
16CTQ100	STPS16H100CT	
16CTQ100S	STPS16H100CG	
16DL2CZ47A	STPR1620CF	
18TQ035S	STPS2030CG	
18TQ045		STPS2045CG
18TQ045S		STPS2045CT
19TQ015		STPS2045CG
19TQ015S	STPS20L15D	
1N4937	STPS20L15G	
1N4946GI	STTH1L06	
1N5711	STTH1L06	STTH106
1N5711	1N5711	
1N5717	1N5817	
1N5818	1N5818	
1N5819	1N5819	
1N5820	1N5820	

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
1N5821	1N5821	
1N5822	1N5822	
1N5823	STPS5L25B	
1N6263	1N6263	
200CNQ035		STPS24045TV
200CNQ040		STPS24045TV
200CNQ045		STPS24045TV
20CTQ035		STPS2045CT
20CTQ035S		STPS2045CG
20CTQ040		
20CTQ045	STPS2030CT	
20CTQ045S	STPS2030CG	
20CTQ150	STPS2045CT	
20CTQ150-1	STPS2045CT	
20CTQ150S	STPS2045CG	
25CTQ035	STPS20150CT	STPS20150CT
25CTQ035S		
25CTQ045	STPS20150CG	STPS3045CT
25CTQ045S	STPS3030CG	STPS3045CG
25CTQ045	STPS3045CT	
25CTQ045S	STPS3045CT	
28CPQ035		STPS3045CG
28CPQ045	STPS3045CPI	
2SC2502C	STPS3045CPI	
2SC25M02C	STPR1020CT	
30BF10	STPR1020CF	
30BF100F	STTH302S	STTA212S
30BF20	SMBYT03-400	
30BF40	STTH3L06S	STTA206S
30BF60		STTA212S
30BF80F		STTA340S
30BQ015	STPS3L25S	
30BQ040	STPS340S	
30BQ060	STPS360B	
30CPQ035	STPS3045CW	STPS30L45CW
30CPQ040	STPS3045CW	STPS30L45CW
30CPQ045	STPS3045CW	
30CPQ060	STPS3060CW	
30CPQ100	STPS30H100CW	
30CPQ150	STPS30150CW	
30CPQ150	STPS30150CW	
30CTQ035	STPS3030CT	
30CTQ035S	STPS3030CG	
30CTQ040	STPS3045CT	STPS30L45CT
30CTQ045	STPS3045CT	
30CTQ045S	STPS3045CG	
30CTQ060		STPS3060CW
30DF6	STTH306	
30EPH06		STTH30R06CW
30ETH06		STTH30R06CW
30ETH06-1		STTH30R06CW
30ETH06S		
30GWJ2C42C	STPS30L45CW	
30WF10F		STTH302S
30WF20F		STTH302S
30WF30F		SMBYT03-400
30WF40F		SMBYT03-400
30WQ03F	STPS340B	
30WQ04F	STPS340B	
30WQ05F	STPS360B	
30WQ06F	STPS360B	
30WQ09F	STPS2H100U	STPS5H100B
30WQ10F	STPS2H100U	STPS5H100B
31DF1	STTH302	
31DF2	STTH302	
31DF4	STTH306	
31DF6	STTH306	
31DF6	STTH306	
31GF6	STTH306	
32CTQ030	STPS3030CT	

CROSS-REFERENCE

32CTQ030S to BYV133F-40

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
32CTQ030S	STPS3030CG	
3GU41	BYT03-400	STTH3L06
3JU41		
40CPQ035	STPS4045CW	
40CPQ040	STPS4045CW	
40CPQ045	STPS4045CW	
40CPQ060		STPS6045CW
40CPQ100	STPS40H100CW	
50WF10F		STTH302S
50WF20F		STTH302S
50WF30F		SMBYT03-400
50WF40F		SMBYT03-400
50WQ03F	STPS5L25B	
50WQ04F		STPS1045B
50WQ05F		STPS1045B
50WQ10F	STPS5H100B	
60CPQ150		
60CTQ150		STPR1020CB
6CWF10F		STPR1020CB
6CWF20F		
6CWQ03F	STPS640CB	
6CWQ04F	STPS640CB	
80CPQ150		
81CNQ045		STPS12045TV
83CNQ080		STPS80H100TV
83CNQ100		STPS80H100TV
85CNQ015		STPS80L15TV
8ETH06	STTH8R06D	
8ETH06-1		STTH8R06D
8ETH06S	STTH8R06G	
8TQ080	STPS8H100D	
8TQ100	STPS8H100D	
95HQ015		STPS80L15TV
95SQ015		STPS20L15D
APT15D100K		STTA1512P(I)
APT15D50K	STTH15R06D	STTA1206D(I)
APT15D60K	STTH15R06D	STTA1206D(I)
APT15D80K		STTA1512P(I)
APT15D560B	STTH1506TPI	
APT2X101D40J	BYT200PIV-400	
APT2X30D100J	STTA5012TV2	
APT2X30D50J	STTA6006TV2	
APT2X30D60J	STTA6006TV2	
APT2X30D80J	STTA5012TV2	
APT2X31D100J	STTA5012TV1	
APT2X31D50J	STTA6006TV1	
APT2X31D60J	STTA6006TV1	
APT2X31D80J	STTA5012TV1	
APT2X60D50J	STTA12006TV2	
APT2X60D60J	STTA12006TV2	
APT2X61D50J	STTA12006TV1	
APT2X61D60J	STTA12006TV1	
APT30D100B		STTA6006W
APT30D40B	STPS30150CW	STTH30R06CW
APT30D40B		STTH30R06CW
APT30D50B	STPS30150CW	STTH30R06CW
APT30D50B		STTH30R06CW
APT30D60B	STPS30150CW	
APT30D60B		STTH30R06CW
APT30D60B		STTH30R06CW
APT30DS60B		STTA5012TV1/2
APT60D100B	BYT60P-400	STTA6006W
APT60D40B		STTA6006W
APT60D50B	STTA6006	
APT60D60B		STTA5012TV1/2
APT60D80B		STTA5012TV1/2
APT60D90B		BAT42
BAS40.02		BAT42
BAS40.03		BAT42
BAS70-04	BAS70-04FILM	

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
BAS70-05	BAS70-05FILM	
BAS70-06	BAS70-06FILM	
BAS70-07	BAS70-07FILM	
BAT54		BAT54FILM
BAT54A		BAT54A
BAT54C		BAT54C
BAT54S		BAT54S
BAT74	BAT74FILM	
BAT81		1N6263
BAT82		1N6263
BAT83		1N6263
BAT85		BAT42
BY229-600		
BYC10-600	STTH8R06D	STTH8R06D
BYC10B-600		STTH8R06B
BYC5-600		
BYC5B-600	STTH5R06D	
BYC8-600	STTH5R06B	
BYC8B-600	STTH8R06D	
BYD33D	STTH8R06D	
BYD33G	STTH152	
BYD33J	STTH1L06	BYT03-400
BYD53J		STTH1L06
BYG26J		STTH106
BYG60J	STTH1L06A	
BYGR20J		STTH1L06A
BYP101	STTA1512P	
BYP102		STTA2512P
BYQ28-200	STPR1020CT	
BYQ28F-200	STPR1020CF	
BYR29-500	STTH8R06D	
BYR29-600	STTH8R06D	
BYR29-700		BYT08P-1000
BYR29-800		BYT08P-1000
BYR29F-600	STTH8R06FP	
BYR29F-700		BYT08PI-1000
BYR29F-800		BYT08PI-1000
BYR79-500		STTH15R06D
BYR79-600		STTH15R06D
BYS21		
BYT08P-600	BYV10-40	
BYT08P-800	STTH8R06D	
BYT12P-600	STTH8R06D	
BYT12P-800	BYT08P-1000	
BYT230PIV.10	STTH12R06D	
BYT230PIV-40	BYT12P-1000	
BYT230PIV-60	BYT230PIV-1000	
BYT230PIV-80	BYT230PIV-400	
BYT231PIV-80	STTA6006TV2	
BYT260PIV-80	BYT230PIV-1000	
BYT261PIV-60	BYT231PIV-1000	
BYT30P-600	BYT260PIV-1000	
BYT30P-800	STTA12006TV1	
BYT60P-600	STTA3006P	
BYT60P-800	BYT30P-1000	
BYT79-500	STTA6006P	
BYT85-1000	BYT60P-1000	
BYT85-600		STTH12R06D
BYT85-800		BYT08P-1000
BYV118-35	STTH5L06D	
BYV118-40		
BYV118-40F	STPS1545CT	
BYV118F-35	STPS10L45CT	
BYV118F-45	STPS10L45CT	
BYV133-35	STPS1045F	
BYV133-40	STPS1045F	
BYV133-45	STPS2030CT	
BYV133F-35	STPS2045CT	STPS2045CT
BYV133F-40	STPS2045CT	
	STPS2030CF	
	STPS2045CF	STPS2045CF

CROSS-REFERENCE

BYV133F-45 to FE2B

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
BYV133F-45	STPS2045CF	STPS3045CT
BYV143-35	STPS3030CT	
BYV143-40	STPS3045CT	
BYV143-45	STPS3045CT	
BYV143F-35		STPS3045CPI
BYV143F-40		STPS3045CPI
BYV143F-45		STPS3045CPI
BYV26B	BYT01-400	
BYV27-100		STTH302
BYV27-150		STTH302
BYV27-200		STTH302
BYV27-50		STTH302
BYV27-600	STTH1L06	STTH106
BYV28-100		STTH302
BYV28-150		STTH302
BYV28-200		STTH302
BYV28-50		STTH302
BYV29-300	BYT08-400	
BYV29-400	BYT08-400	
BYV29-500	STTH8R06D	
BYV29F-500	STTH8R06FP	
BYV32-100	BYW51-200	
BYV32-150	BYW51-200	
BYV32-200	BYW51-200	
BYV32-50	BYW51-200	
BYV34-300		BYT16P-400
BYV34-400		BYT16P-400
BYV42-100	BYW51-200	
BYV42-150	BYW51-200	
BYV42-200	BYW51-200	
BYV42-50	BYW51-200	
BYV72-100		BYW99P-200
BYV72-150		BYW99P-200
BYV72-200		BYW99P-200
BYV72-250		BYW99P-200
BYV74F-600		STTA2006PI
BYV79-100	BYW81P-200	
BYV79-150	BYW81P-200	
BYV79-200	BYW81P-200	
BYV79-50	BYW81P-200	
BYW29-100	BYW80-200	
BYW29-150	BYW80-200	
BYW29-200	BYW80-200	
BYW29-50	BYW80-200	
BYW51-100	BYW51-200	
BYW51-200	BYW51-200	
BYW51F-100	BYW51F-200	
BYW51F-200	BYW51F-200	
C6P40F		STTA506F
CTB24	STPS640CT	
CTB24L	STPS10L45CT	
CTB34		STPS1545CT
CTB34M	STPS30L45CW	
CTL22S	STPR620CF	
CTX12SL	STPR1020CT	
D10SC4M	STPS1545CT	
D20LC20	BYW51-200	
DSEI12-04A	BYT12P-400	
DSEI12-06A	STTH12R06D	
DSEI12-08A	BYT12P-1000	
DSEI12-10A	BYT12P-1000	
DSEI2x101-06A		BYT200PIV-400
DSEI2x121-02	BYT255V-200	
DSEI2x30-04C	BYT230PIV-400	
DSEI2x30-06B	STTA6006TV2	
DSEI2x30-06C	STTA6006TV2	
DSEI2x30-08B	BYT230PIV-1000	
DSEI2x30-10B	BYT230PIV-1000	
DSEI2x31-04C	BYT231PIV-400	

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
DSEI2x31-06B	STTA6006TV1	
DSEI2x31-06C	STTA6006TV1	
DSEI2x31-08B	BYT231PIV-1000	
DSEI2x31-10B	BYT231PIV-1000	
DSEI2x61-04C	BYT261PIV-400	
DSEI2x61-06B	STTA12006TV1	
DSEI2x61-06C	STTA12006TV1	
DSEI2x61-08B	BYT261PIV-1000	
DSEI2x61-10B	BYT261PIV-1000	
DSEI30-04A	BYT30P-400	STTA3006P
DSEI30-06A		STTA3006P
DSEI30-06C		
DSEI30-08A	BYT30P-400	
DSEI30-10A	BYT30P-1000	
DSEI60-04A	BYT60P-1000	
DSEI60-06A	STTA6006P	
DSEI60-08A	BYT60P-1000	
DSEI60-10A	BYT60P-1000	
DSEI8-04A	BYT08P-400	
DSEI8-06A	STTH8R06D	
DSEK60-02A	BYV52PI-200	
DSF20L60U		
DSSK10-018A		STPS10150CT
DSSK20-015A	STPS20150CT	STPS30150CW
DSSK30-018A		
DSSK60-015A		
EGP10A	STTH102	
EGP10B	STTH102	
EGP10C	STTH102	
EGP10D	STTH102	
EGP10J	STTH1L06	
EGP20A		STTH302
EGP20B		STTH302
EGP20C		STTH302
EGP20D		STTH302
EGP20F		BYT03-400
EGP20G		BYT03-400
EGP20J		STTH3L06
EGP30A	STTH302	
EGP30B	STTH302	
EGP30C	STTH302	
EGP30D	STTH302	
EGP30F		BYT03-400
EGP30G		BYT03-400
EGP30J	STTH3L06	STTH306
EPG30B	STTH306	
ERA38-05	STTH1L06	STTH106
ERB44-06	STTH1L06	
ES1A	STTH102A	
ES1B	STTH102A	
ES1C	STTH102A	
ES1D	STTH102A	
ES2A	SMBYW02-200	
ES2B	SMBYW02-200	
ES2C	SMBYW02-200	
ES2D	SMBYW02-200	
ES3A	STTH302S	
ES3B	STTH302S	
ES3C	STTH302S	
ES3D	STTH302S	
ESAC82-004	STPS10L45CT	
ESAC82M-004	STPS10L45CF	
ESAD83-004	STPS30L45CW	
FE1A	STTH102	
FE1B	STTH102	
FE1C	STTH102	
FE1D	STTH102	
FE2A	STTH302	
FE2B	STTH302	

CROSS-REFERENCE

FE2C to MBR20200CT

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
FE2C	STTH302	
FE2D	STTH302	
FE3A	STTH302	
FE3B	STTH302	
FE3C	STTH302	
FE3D	STTH302	
FEP16AT	STPR1620CT	BYW51-200
FEP16BT	STPR1620CT	BYW51-200
FEP16CT	STPR1620CT	BYW51-200
FEP16DT	STPR1620CT	BYW51-200
FEP16JT		STTH15R06D
FEP30AP	BYW99P-200	
FEP30BP	BYW99P-200	
FEP30CP	BYW99P-200	
FEP30DP	BYW99P-200	
FEP30HP	STTA3006P	
FEP30JP	STTA3006P	
FEPB16JT		STTH15R06D
FEPF16JT		STTH15R06FP
FEPF30HP		
FEPF30JP	STTA3006PI	
FES16AT	STTA3006PI	
FES16BT	BYW81P-200	
FES16CT	BYW81P-200	
FES16DT	BYW81P-200	
FES16FT		BYT12P-400
FES16GT		BYT12P-400
FES16HT		STTA1506D
FES16HT		STTH15R06D
FES16JT		STTH15R06D
FES16JT		STTH15R06D
FES8AT	BYW80-200	
FES8BT	BYW80-200	
FES8CT	BYW80-200	
FES8DT	BYW80-200	
FES8FT	BYT08P-400	
FES8GT	BYT08P-400	
FES8HT	STTH8R06D	
FES8JT	STTH8R06D	
FESB16JT		STTH15R06D
FESF16HT		STTA2006PI
FESF16JT		STTA2006PI
FESF16JT		STTH15R06FP
FESF8HT	STTH8R06FP	
FESF8JT	STTH8R06FP	
FFP05U60D	STTH5L06D	
FFP05U60DN		STTH5L06D
FFP10U60DN		STTH8L06D
FFPF10U60DN		STTH8L06D
FMB-24L	STPS10L45CF	
FMG-G26S	STTA506D	
FR105	STTH1L06	
FR205		STTH3L06
FR305		STTH306
GI1001	STTH3L06	
GI1002	STTH102	
GI1003	STTH102	
GI1004	STTH102	
GI1101		STTH302
GI1102		STTH302
GI1103		STTH302
GI1104		STTH302
GI12401	BYW51-200	
GI12402	BYW51-200	
GI12403	BYW51-200	
GI12404	BYW51-200	
GI1401		BYW80-200
GI1402		BYW80-200
GI1403		BYW80-200

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
GI1404		BYW80-200
GI812	STTH102	
GI814		BYT01-400
GUR5H60	STTH5L06D	
GURB5H60		STTH5L06B
GURF5H60		STTH5L06D
HFA04TB60	STTA506D	
HFA04TB60S	STTA506B	
HFA08PB60		STTA806D
HFA08TB60	STTH8R06D	
HFA08TB60	STTA806D	
HFA08TB60S	STTA806G	
HFA120EA60	STTA6006TV1	
HFA120FA60	STTA6006TV2	
HFA15PB60	STTH15R06D	
HFA15PB60		STTA2006P
HFA15TB60	STTH15R06D	
HFA15TB60		STTA1206D
HFA15TB60-1		STTA2006P
HFA15TB60S		
HFA20PB120	STTA2512P	
HFA25PB60	STTH30R06CW	
HFA25PB60		STTA3006P
HFA25TB60		STTA3006P
HFA25TB60S		
HSCH1000	1N6263	
ISL9K1560G2		STTH15R06D
ISL9K1560G3		STTH15R06D
ISL9K3060G3	STTH30R06CW	
ISL9K460P3	STTH5R06D	
ISL9K860P3		STTH8R06D
ISL9R1560P2	STTH15R06D	
ISL9R1560S2		STTH15R06D
ISL9R1560S3		STTH5R06D
ISL9R3060G2		STTH30R06CW
ISL9R3060P2		STTH30R06CW
ISL9R460P2	STTH5R06B	
ISL9R460S2		STTH5R06D
ISL9R460S3S		STTH5R06B
ISL9R860P2	STTH8R06D	
ISL9R860S2	STTH8R06R	
ISL9R860S3S	STTH8R06G	
ITS5818		1N5818
ITS5819		1N5819
LL101A		TMM6263
MBD201		1N6263/BAT42
MBD301		1N6263/BAT42
MBD501		1N6263
MBD502		1N6263
MBR020		
MBR10100	BYV10-40	
MBR1035	STPS8H100D	
MBR1045	STPS1045D	
MBR1060	STPS1045D	
MBR12035CT	STPS10L60CT	
MBR12045CT		STPS12045TV
MBR120P		STPS12045TV
MBR130P	BYV10-40	
MBR140P	BYV10-40	
MBR1535CT	STPS1545CT	
MBR1545CT	STPS1545CT	
MBR1635	STPS1545D	
MBR1645	STPS1545D	
MBR20035CT		STPS24045TV
MBR20045CT		STPS24045TV
MBR20100CT	STPS20H100CT	
MBR2015CTL		STPS20L15D
MBR20200CT	STPS20150CT	
MBR20200CTP	STPS20150CT	

CROSS-REFERENCE

MBR20200CTP to MURH840CT

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
MBR2030CTL	STPS2030CT	STPS20L25CT
MBR2035CT	STPS2030CT	STPS2045CT
MBR2045CT	STPS2045CT	
MBR240100V	STPS80H100TV	
MBR25060V	STPS80H100TV	
MBR2515L	STPS20L15D	
MBR2535CT	STPS3030CT	STPS3045CT
MBR2535CTL	STPS30L30CT	STPS30L45CT
MBR2545CT	STPS2545CT	STPS3045CT
MBR28035CT	STPS16045TV	
MBR28045CT	STPS16045TV	
MBR28045V	STPS16045TV	
MBR3035PT	STPS3045CP	
MBR3045CT	STPS3045CT	
MBR3045PT	STPS3045CP	
MBR3045WT	STPS3045CW	
MBR4015LWT	STPS40L15CW	
MBR4045PT	STPS4045CP	
MBR4045WT	STPS4045CW	
MBR6015LWT	STPS60L15CW	
MBR6045PT	STPS6045CP	
MBR6045WT	STPS6045CW	
MBR735	STPS745D	
MBR745	STPS745D	
MBRB1545CT	STPS1545CG	
MBRB20100CT	STPS20H100CT	
MBRB20200CT		STPS20150CT
MBRB20200CT		STPS30L45CG
MBRB2035CTL	STPS20150CG	
MBRB2060CT	STPS30L30CG	STPS30L45CG
MBRB2515L	STPS20L60CG	
MBRB2535CTL	STPS20L15G	STPS3030CG
MBRB2545CT	STPS30L30CG	
MBRB3030CT	STPS2545CT	
MBRB3030CTL	STPS3030CT	
MBRD1035CTL	STPS30L30CG	
MBRD1535CT	STPS1045B	
MBRD1545CT		STPS1545CF
MBRD340	STPS340B	STPS1545CF
MBRD640	STPS640CB	
MBRD640CT	STPS640CB	
MBRD835L		STPS5L25B
MBRF1035	STPS1045F	
MBRF1045	STPS1045F	
MBRF1545CT	STPS1545CF	
MBRF1635	STPS1545F	
MBRF1645	STPS1545F	
MBRF20100CT	STPS20H100CF	
MBRF20200CT	STPS20150CT	
MBRF2035CT	STPS2030CF	STPS2045CF
MBRF2045CT	STPS2045CF	
MBRF2060CT	STPS2060CF	
MBRF2545CT	STPS2545CT	
MBRF3035PT	STPS3045CPI	
MBRF3045PT	STPS3045CPI	
MBRF735	STPS745F	
MBRF745	STPS745F	
MBRS1100T3	STPS1H100U	
MBRS130LT3	STPS1L30U	
MBRS140LT3	STPS1L40U	
MBRS140LT3	STPS1L40U	
MBRS320T3	STPS340S	
MBRS330T3	STPS340S	
MBRS340T3	STPS340S	
MBRS360T3	STPS3L60S	STPS360B
MGR806		
MR812		BYT01-400
MR813		BYT01-400
MR814		BYT01-400

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
MR856	STTH3L06	
MR856	STTH306	
MUR10120E	STTA1212D	STTA812D
MUR105	STTH102	
MUR110	STTH102	
MUR115	STTH102	
MUR120	STTH102	
MUR120	STTH102	
MUR130	BYT01-400	
MUR140	BYT01-400	
MUR1505	BYW81P-200	
MUR1510	BYW81P-200	
MUR1515	BYW81P-200	
MUR1520	BYW81P-200	
MUR1520	BYW81P-200	
MUR1550	STTH15R06D	
MUR1560	STTH15R06D	
MUR160	STTH15R06D	
MUR1605CT	STTH1L06	STTH106
MUR1610CT	STPR1620CT	
MUR1615CT	STPR1620CT	
MUR1620CT	STPR1620CT	
MUR1640CT	BYT16P-400	
MUR1660CT		STTH15R06D
MUR3005PT	BYW99P-200	
MUR3010PT	BYW99P-200	
MUR3015PT	BYW99P-200	
MUR3020PT	BYW99P-200	
MUR3020PT	BYW99P-200	
MUR3020WT	STPS30150CW	BYW99W-200
MUR3040	BYT30P-400	
MUR3060PT		STTH30R06CW
MUR3060WT		STTH30R06CW
MUR3080	BYT30P-1000	
MUR405	STTH302	
MUR410	STTH302	
MUR415	STTH302	
MUR420	STTH302	
MUR430		BYT03-400
MUR440		BYT03-400
MUR440		BYT03-400
MUR460		STTH3L06
MUR460		STTH306
MUR460		STTH3L06
MUR460		STTH306
MUR6040	BYT60P-400	
MUR605CT	STPR620CT	
MUR610CT	STPR620CT	
MUR615CT	STPR620CT	
MUR620CT	STPR620CT	
MUR805	STPR820D	
MUR810	STPR820D	
MUR8100E	BYT08P-1000	
MUR815	STPR820D	
MUR820	STPR820D	
MUR830	BYT08P-400	
MUR840	BYT08P-400	
MUR850	STTH8L06D	
MUR860	STTH8L06D	
MUR860	STTH8L06D	
MUR880E	BYT08P-1000	
MURB1620CT	STPR1620CG	
MURD320		STTH302S
MURD620CT		STPR1020CB
MURF1620CT		STPR1020CFP
MURF820	STPR820F	
MURH840CT	STTH8R06D	
MURH860CT	STTH8R06D	

CROSS-REFERENCE

MURH860CT to RS8GT

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
MURHB860CT		STTH8R06B
MURHF860CT		STTH8R06FP
MURM105		STPS140M
MURS110T3	SMBYW01-200	
MURS115T3	SMBYW01-200	
MURS120T3	SMBYW01-200	
MURS130T3	SMBYT01-400	
MURS140T3	SMBYT01-400	
MURS160	STTH1L06U	
MURS160T3	STTH1L06U	
MURS160T3	STTH1L06U	
MURS160T3	STTH1L06U	
MURS320T3	STTH302S	
MURS360		
NS1002		BYT01-400
NS1004		BYT01-400
NS502		BYT01-400
NS504		BYT01-400
PBYR10100	STPS8H100D	
PBYR1025	STPS10L25D	
PBYR1035	STPS1045D	
PBYR1035F	STPS1045F	
PBYR1040		STPS1045D
PBYR1040F		STPS1045F
PBYR1045	STPS1045D	
PBYR1045F	STPS1045F	
PBYR12035TV	STPS12045TV	
PBYR12040TV		STPS12045TV
PBYR12045TV	STPS12045TV	
PBYR1525	STPS15L25CT	
PBYR1535CT	STPS1545CT	
PBYR1535CTF	STPS1545CF	
PBYR1540CT	STPS1545CT	
PBYR1540CTF	STPS1545CF	
PBYR1545CT	STPS1545CT	
PBYR1545CTF	STPS1545CF	
PBYR16035TV	STPS16045TV	
PBYR16040TV	STPS16045TV	
PBYR16045TV	STPS16045TV	
PBYR1635		STPS1545D
PBYR1635F		STPS1545F
PBYR1640		STPS1545D
PBYR1640F		STPS1545F
PBYR1645		STPS1545D
PBYR1645F		STPS1545F
PBYR20100CT	STPS20H100CT	
PBYR2025CT	STPS20L25CT	
PBYR2035CT	STPS2030CT	
PBYR2035CTF	STPS2030CF	
PBYR2040CT	STPS2045CT	
PBYR2040CTF	STPS2045CF	
PBYR2045CT	STPS2045CT	
PBYR2045CTF	STPS2045CF	
PBYR2535CT	STPS3030CT	
PBYR2545CT	STPS3045CT	
PBYR3035PT	STPS3045CP	
PBYR3040PT	STPS30L45CW	
PBYR3045PT	STPS3045CP	
PBYR635CT	STPS640CT	
PBYR640CT	STPS640CT	
PBYR735	STPS745D	
PBYR735F	STPS745F	
PBYR740	STPS745D	
PBYR740F	STPS745F	
PBYR745	STPS745D	
PBYR745F	STPS745F	
PHS1001	STTH102 / STTH152	
PHS1002	STTH102 / STTH152	
PHS1003	STTH102 / STTH152	

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
PHS2401	BYW51-200	
PHS2402	BYW51-200	
PHS2403	BYW51-200	
PHS2404	BYW51-200	
PLR812	BYT01-400	
PLR813	BYT01-400	
PLR814	BYT01-400	
PLR816	STTH106	
PLR817		STTA112
PLR818		STTA112
RB411D		BAT54
RF1A		SMBYW02-400
RF1B		SMBYW02-400
RF1D		SMBYW02-200
RF1G		SMBYT01-400
RG1D	STTH102	
RG1G		BYT01-400
RG1J		STTH1L06
RG1K		
RG1M		
RG2		BYT01-400
RG2A		STTH1L06
RG2J		STTH3L06
RG2M		BYT13-1000
RG2Z		STTH152
RG3J		STTH3L06
RG3M		BYT13-1000
RG4Z		STSR220
RGF1J	STTH1L06A	
RGP10D	STTH102	
RGP10F		BYT01-400
RGP10G		BYT01-400
RGP80A	BYW80-200	
RGP80B	BYW80-200	
RGP80D	BYW80-200	
RGP80G	STTH8L06D	
RGP80J	STTH8L06D	
RGP80K	STTH8L06D	
RHRD460S	STTH5R06B	
RHRD660	STTH5R06B	
RHRD660S		BYT12P-1000
RHRG1560CC		STTH8R06R
RHRG30-070		STTH15R06D
RHRG3060		STTA3006P
RHRG3060CC		STTH30R06CW
RHRP1560	STTH30R06CW	
RHRP3060	STTH15R06D	
RHRP860	STTH8R06D	
RHRP860CC		STTH8R06D
RHRU10060		STTH8L06D
RMCO20		BYT01-400
RMCO40		BYT01-400
RP16AT		BYW51-200
RP16BT		BYW51-200
RP16DT		BYW51-200
RS2A	SMBYW02-200	
RS2B	SMBYW02-200	
RS2D	SMBYW02-200	
RS2G		SMBYT01-400
RS3A	STTH302S	
RS3B	STTH302S	
RS3D	STTH302S	
RS3G		SMBYT03-400
RS8AT		BYW80-200
RS8BT		BYW80-200
RS8DT		BYW80-200
RS8GT		BYT08P-400
RS8JT	STTH8L06D	

CROSS-REFERENCE

RS8JT to SGI540C

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
RS8KT		BYT12P-1000
RS8MT		BYT12P-1000
RUD805	BYW80-200	
RUD810	BYW80-200	
RUD815	BYW80-200	
RUD820	BYW80-200	
RUR1510	BYW81P-200	
RUR1510		BYT12P-1000
RUR1515	BYW81P-200	
RUR1520	BYW81P-200	
RUR1560	STTH15R06D	
RUR1580		BYT12P-1000
RUR805	BYW80-200	
RUR810	BYW80-200	
RUR8100	BYT08P-1000	
RUR815	BYW80-200	
RUR820	BYW80-200	
RUR840	BYT08P-400	
RUR850	STTH8L06D	
RUR860	STTH8L06D	
RUR880		BYT08P-1000
RURD1610	BYW99P-200	
RURD1615	BYW99P-200	
RURD1620	BYW99P-200	
RURD460		STTH3L06
RURD460		STTH306
RURD460		STTH5L06
RURD460S	STTH5L06B	
RURD805	BYW51-200	
RURD810	BYW51-200	
RURD815	BYW51-200	
RURD820	BYW51-200	
RURD860		STTH8L06D
RURG1510CC		STTH15R06D
RURG1515CC		STTH15R06D
RURG1520CC		STTH15R06D
RURG1540CC		STTH15R06D
RURG1550CC		STTH15R06D
RURG1560CC		STTH15R06D
RURG3010		BYW77P-200
RURG30100	BYT30P-1000	
RURG3015		BYW77P-200
RURG3020		BYW77P-200
RURG3040	BYT30P-400	
RURG3060	STTA3006P	
RURG3060		STTH30R06CW
RURG3060CC		STTH30R06CW
RURG3080	BYT30P-1000	
RURG50100	BYT60P-1000	
RURG5040	BYT60P-400	
RURG5060	STTA6006P	
RURG5080		BYT60P-1000
RURP3060		STTH30R06CW
RURP860		STTH8L06D
RURP860CC	STTH8L06D	
RURU10060		STTH8L06D
S08C35		STPS745D
S08C45		STPS745D
S10C40	STPS10L45CT	
S10SC4M	STPS10L45CT	
S15C45	STPS1545CT	
S15SC3M		STPS1545CF
S15SC4M		STPS1545CF
S1A2F		BYT01-400
S1A3F		BYT01-400
S1A4F		BYT01-400
S20LC40		BYW99W-200
S24LCA20		BYW99W-200
S30SC4M	STPS30L45CW	

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
S3A	STTH302S	
S3B	STTH302S	
S3D	STTH302S	
S3G		SMBYT03-400
S60SC3M		STPS6045CP
S60SC4M	STPS60L45CW	STPS6045CW
S60SC4M	STPS6045CPI	STPS6045CP
SB120		BYV10-40
SB130		BYV10-40
SB140		BYV10-40
SB150		BYV10-60
SB160		BYV10-60
SBL1030CT	STPS3030CT	
SBL1040	STPS1045D	
SBL1040CT	STPS1045D	
SBL1630CT	STPS2030CT	
SBL1640CT	STPS16L45CT	
SBL2030PT	STPS2030CT	STPS20L25CT
SBL2040CT	STPS20L45CT	
SBL2040PT	STPS20L45CW	
SBL3030PT	STPS30L45CW	STPS3030CT
SBL3040CT	STPS30L45CT	
SBL3040PT	STPS30L45CW	
SBL4040PT	STPS30L45CW	
SBL530		STPS745D
SBL540		STPS745D
SBLF1030		STPS1045F
SBLF1040		STPS1045F
SBLF1630CT		STPS1545CF
SBLF1640CT		STPS1545CF
SBLF3030PT	STPS3045CPI	
SBLF3040PT	STPS3045CPI	
SBLF530		STPS745F
SBLF530CT		STPS640CF
SBLF540		STPS745F
SBLF540CT		STPS640CF
SBYV26C		STTH106
SD101A	1N6263	
SD101B	1N6263	
SD101C	1N6263	
SD102A		BAT42/BAT48
SD102B		BAT42/BAT48
SD102C		BAT42/BAT48
SD103A		BAT48
SD103B		BAT48
SD103C		BAT48
SD241P		STPS2045CT
SD41P	STPS3045CP	
SES5401	STPR820D	
SES5401C	STPR1620CT	
SES5402C	STPR1620CT	
SES5403	STPR820D	
SES5403C	STPR1620CT	
SES5404	STPR820D	
SES5404C	STPR1620CT	
SF10L60U		STTH8L06D
SF20L60U		STTA2006P
SF3L60U	STTH5L06D	
SF4005	STTH1L06	
SF5L60U	STTH5L06D	STTH106
SGI5401	BYW80-200	
SGI5401C	BYW51-200	
SGI5402	BYW80-200	
SGI5402C	BYW51-200	
SGI5403	BYW80-200	
SGI5403C	BYW51-200	
SGI5404	BYW80-200	
SGI5404C	BYW51-200	
SL30	STPS1L30U	

CROSS-REFERENCE

SL30 to YG885C02R

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
SRP100D SRP100G SRSFR120 SRSFR140 SS12 SS13 SS14 SS16 SS19 SS1B SS22 SS23 SS24 SS26 SS29 SS2B SS32 SS33 SS34 SSH1A020 SSH1A040 SSH1A060 TS201G TS30 TS40 UES1001 UES1002 UES1003 UES1102 UES1103 UES1104 UES1105 UES1106 UES1301 UES1302 UES1303 UES1304 UES1305 UES1306 UES1401 UES1402 UES1403 UES1404 UES1421 UES1422 UES1423 UES1501 UES1502 UES1503 UES1504 UES1605S UES1610S UES1615S UES1620S UES2401 UES2402 UES2403 UES2404 UES2601 UES2602 UES2603 UES2604 UES3005C UES3005S UES3010C	STTH102 STPS1L30A STPS1L30A STPS140A STPS2L40U STPS2L40U STPS2L40U STPS340S STPS340S STPS340S STTH102 STTH102 STTH102 BYW80-200 BYW80-200 BYW80-200 BYW80-200 STTH12R06D BYT12P-1000 BYW81P-200 BYW81P-200 BYW81P-200 BYW81P-200 STPR1620CT STPR1620CT STPR1620CT STPR1620CT BYW99P-200 BYW99P-200	BYT01-400 BYT01-400 BYT01-400 STPS140A STPS140A STPS160U STPS1H100U STPS1H100U STPS340U STPS340U STPS340U STPS1H100U STPS1H100U STPS1H100U STPS3L25S BYV10-40 BYV10-40 BYV10-60 STTH302 BYT01-400 BYT01-400 STTH302 STTH302 STTH302 BYT03-400 BYT03-401 STTH302 STTH302 STTH302 STTH302 BYT03-400 BYT03-400 BYT12P-1000 BYW81P-200 BYW81P-200 BYW81P-200 BYW81P-200 BYW99P-200 BYW99P-200 BYW99P-200 BYW99P-200 BYW77P-200

INDUSTRY STANDARD	ST EQUIVALENT	ST NEAREST
UES3010S UES3015C UES3015S UF150 UF4001 UF4002 UF4003 UF4004 UF4005 UF5401 UF5402 UF5402 UF5403 UF5404 UF5406 UF5406 UG12JT UG15JT UG18DCT UG30BPT UG30CPT UG30DPT UG5JT UG8JT UGB12JT UGB15JT UGB5JT UGB8JCT UGB8JT UGD5J UGF12JT UGF15JT UGF8JCT UGF8JT UPS120E UPS5817 UPS5819 US1J USD3030C USD3040C USD3045C USD4530C USD4540C USD4545C VHE1401 VHE1402 VHE1403 VHE1404 VHE205 VHE210 VHE215 VHE220 VHE2401 VHE2402 VHE2403 VHE2404 VHE605 VHE610 VHE615 VHE620 VSK120 VSK130 VSK140 YG885C02R	BYW99P-200 STTH1L06 STTH102 STTH102 STTH102 BYT01-400 STTH1L06 STTH302 STTH302 STSR220 STTH302 BYT03-400 STTH3L06 STTH306 STTH12R06D STTH15R06D STPR820D BYW99P-200 BYW99P-200 BYW99P-200 STTH5L06D STTH8R06D STTH8R06B STTH5L06B STTH12R06FP STTH15R06FP STTH8R06FP STPS120M STPS1L20M STPS1L40M STTH1L06A STPS3030CT STPS3045CP STPS3045CP STPR820D STPR820D STPR820D STPR820D STTH102 STTH102 STTH102 STTH102 STPR820D STPS1620CT STPS1620CT STPS1620CT BYW10-40 BYV10-40 BYV10-40 STPS20L25CT	BYW77P-200 BYW77P-200 STTH106 STTH106 BYW29-200 STTH12R06D STTH15R06D STTH5L06B STTH8R06D STTH8R06D STPS3045CP STPS4045CP STPS4045CP STPS4045CP STTH302 STTH302 STTH302 STTH302

PSPICE PARAMETERS

Rectifier Parameters Simulation

As computers have replaced oscilloscopes and soldering irons in laboratories, most of the designers are currently using PSpice software simulator.

For many years, the parameters of our 600V TURBOSWITCH™ diodes have been available. We provide now all parameters of the following Power Schottky and Ultrafast rectifiers.

BYT01-400	BYW4200B	STPR620CT	STPS340S
BYT03-400	BYW51-200	STPR820D	STPS340U
BYT08P-1000	BYW51F-200	STPR820F	STPS5L25B
BYT08P-400	BYW51G-200	STPS10100D	STPS6045CP
BYT08PI-1000	BYW77P-200	STPS1045B	STPS6045CPI
BYT08PI-400	BYW77PI-200	STPS1045D	STPS640CF
BYT12P-1000	BYW80-200	STPS1045F	STPS640CT
BYT12P-600	BYW81P-200	STPS10L25D	STPS745D
BYT12PI-1000	BYW81PI-200	STPS1100U	STPS745F
BYT16P-400	BYW98-200	STPS12045TV	STPS80100TV
BYT230PIV-1000	MDV03-400	STPS140U	STPS80L10TV
BYT230PIV-400	SMBYT01-400	STPS1545CF	STSR220
BYT260PIV-400	SMBYT03-400	STPS1545CT	STTA12006TV1
BYT261PIV-1000	SMBYW01-200	STPS1545D	STTA12006TV2
BYT261PIV-400	SMBYW02-200	STPS1545F	STTA1206D
BYT30P-1000	SMBYW04-200	STPS15L10D	STTA1206DI
BYT30P-400	STPR1020CB	STPS15L25D	STTA2006P
BYT30PI-1000	STPR1020CF	STPS16045TV	STTA2006PI
BYT30PI-400	STPR1020CG	STPS160U	STTA3006P
BYT3400B	STPR1020CT	STPS20100CG	STTA3006PI
BYT60P-1000	STPR1220D	STPS20100CT	STTA506D
BYT60P-400	STPR1520D	STPS2045CF	STTA506F
BYV255-200	STPR1620CG	STPS2045CT	STTA6006TV1
BYV52-200	STPR1620CT	STPS2060CT	STTA6006TV2
BYV52PI-200	STPR2420CT	STPS20L15D	STTA806D
BYV54V-200	STPR320	STPS24045TV	STTA806DI
BYW100-200	STPR520D	STPS3060CW	W210-200
BYW29-200	STPR520F	STPS3100B	W210PIV-400
BYW29F-200	STPR620CF	STPS340B	W210PIV-400

APPLICATION NOTES

Available on ST web site "<http://www.st.com/stonline/books/toc/an/58htm>"

<i>Characteristics of Power Semiconductors</i>	AN512
<i>Analysis and Optimization of High Frequency Power Rectification</i>	AN370
<i>The Conduction Losses in a Power Rectifier</i>	AN604
<i>Series Operation of Fast Rectifiers</i>	AN443
<i>Parallel Operation of Power Rectifiers</i>	AN599
<i>Modeling Parallel Operation of Power Rectifiers with PSPICE</i>	AN602
<i>New High Voltage Ultrafast Diodes: the TURBOSWITCH™ A & B Series</i>	AN601
<i>TURBOSWITCH™ in a PFC Boost Converter</i>	AN603
<i>Plastic Packages for Power Discretes and ICs</i>	AN526
<i>Maximum Tj for Schottky Diodes</i>	AN869
<i>TURBOSWITCH™ in Asynchronous Motor Drive</i>	AN877
<i>Low Forward Voltage Schottky Diodes</i>	AN836
<i>New family of Damper and Modulation diodes for horizontal Deflection circuit</i>	AN1380

THYRISTORS

- . SCR (Silicon Controlled Rectifiers)
- . TRIACs
- . DIACs
- . IGNITORS
- . AC switches

RECTIFIERS

- . Signal Schottky
- . Power Schottky
- . Ultrafast and TURBOSWITCH™
- . Deflection diodes

PROTECTION

- . TRANSIL™
- . TRISIL™
- . Protection ICs
- . Data Protection

IPAD™

(Integrated Passive and Active Devices)

- . Computer IPADs
- . Telecom IPADs



