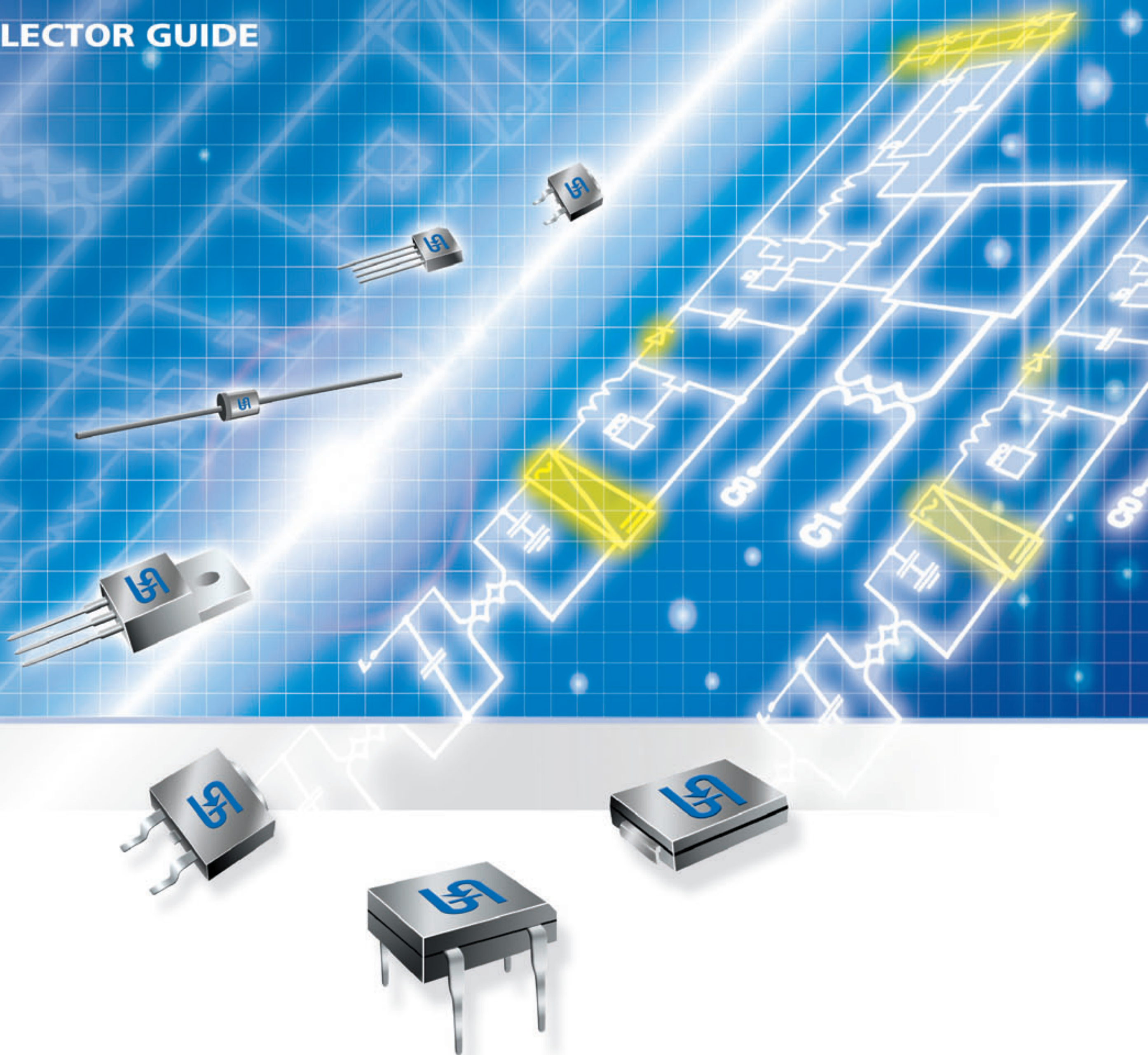


DIODES & RECTIFIERS

SELECTOR GUIDE



TAIWAN
SEMICONDUCTOR

SMD STANDARD / FAST RECTIFIERS



IF (A)	MELF	Sub SMA	SMA	SMB	SMC	D2PAK (TO-263)	Voltage Range $V_{BR}(V)$	COMMENT	
								Type	$T_{rr}(ns)$
0.5		RSFAL-ML					50-1000	Fast recovery	150-500
0.8		RS1AL-ML					50-1000	Fast recovery	150-500
1	LL4933G-37G						50-600	Standard recovery	—
	LL4001G-7G	S1AL-ML	S1A-M	S1AB-MB			50-1000	Standard recovery	—
			RS1A-M				50-1000	Fast recovery	150-500
			HS1A-M				50-1000	High efficient recovery	50-75
			US1A-M				50-1000	High efficient recovery	50-75
		ES1AL-ES1JL	ES1A-J				50-600	Super fast recovery	35
1.5			S2AA-MA				50-1000	Standard recovery	—
2			RS2AA-MA	RS2A-M			50-1000	Fast recovery	150-500
			ES2AA-JA	ES2A-J			50-600	Super fast recovery	35
				S2A-M			50-1000	Standard recovery	—
				HS2A-M			50-1000	High efficient recovery	50-75
3				S3AB-MB	S3A-M		50-1000	Standard recovery	—
					RS3A-M		50-1000	Fast recovery	150-500
				HS3AB-MB	HS3A-M		50-1000	High efficient recovery	50-75
					ES3A-J		50-600	Super fast recovery	35
4					S4A-M		50-1000	Standard recovery	—
5					HS5A-M		50-1000	High efficient recovery	50-75
8						SFAS801G-8G	50-600	Super fast recovery	35
16						SFS1601G-8G	50-600	Super fast recovery	35

BUTTON RECTIFIERS



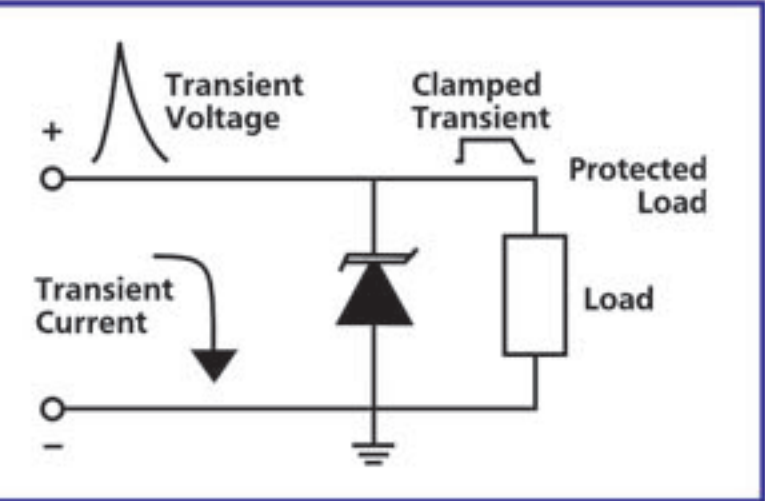
IF (A)	AR	ARS	Voltage Range $V_{BR}(V)$
25	AR25A-M	ARS25A-M	50-1000
35	AR35A-M	ARS35A-M	50-1000
50	AR50A-M	ARS50A-M	50-1000

SMD SCHOTTKY RECTIFIERS

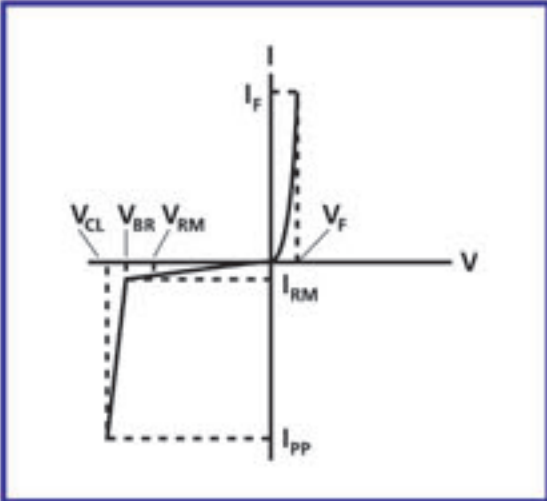
										
IF (A)	SOT-23 (single)	SOT-23 (dual)	SOD-323F	MELF	Sub SMA	SMA	SMB	SMC	D²PAK (TO-263)	Voltage Range V _{BR} (V)
0.03	RB751V-40									40
0.07	BAS70	BAS70/04 /05/06								70
0.2	BAT54	BAT54A/C/S								30-100
0.5	B0520WS B0530WS									20 30
1	LL5817-19 LSR102-06									20-40 20-60 20-150
2	SS12L-115L SS12-115 SK12B-115B									20-150
3	SS22L-215L SK22A-215A SS22-215									20-150
5	SK32A-315A SK32B-315B SS32-315									20-150
8	SK52B-515B SK52C-515C									20-150
10	SRAS820-150									20-150 35-150 35-150
15	SRS1020-10150 MBRS1035-10150 MBRS1035CT-10150CT									35-150
16	MBRS1535CT-15150CT									20-150 35-150
20	SRS1620-16150 MBRS1635-16150									20-150 20-150 35-150
25	SRS2020-20150 SRAS2020-20150 MBRS2035CT-20150CT MBRS2535CT-25150CT									35-150

TRANSIENT VOLTAGE SUPPRESSORS

								
Power Dissipation P _{MAX} (W)	DO-41	DO-15	DO-201	SMA	SMB	SMC	Breakdown Voltage V _{BR} (V)	Stand-off Voltage V _{RWM} (V)
400	P4KE series			SMAJ series			6.4-231	5-170
	BZW04 series			P4SMA series			6.1-484	5.5-376
500		SA series					6.1-220	5.5-171
600		P6KE series					6.4-462	5.8-376
		BZW06 series					6.4-231	5-170
					SMBJ series		6.1-484	5.5-376
					P6SMB series		14.3-462	12.8-376
1500			1.5KE series				6.4-231	5-170
						SMCJ series	6.1-242	5.5-171
						1.5SMC series	6.1-484	5.5-376



SYMBOL	DESIGNATION
V _{RM}	Stand off voltage
V _{BR}	Breakdown voltage
V _{CL}	Clamping voltage
I _{RM}	Leakage current@V _{RM}
IPP	Peak pulse current
VF	Forward voltage drop



ZENER and SWITCHING DIODES

									
Power Dissipation P _{MAX} (mW)	DO-35	DO-41	Sub SMA	1206 0805 0603	MINI MELF	SMA	Voltage Range V _R /V _R (V)	Comment	
								Type	t _{rr} (ns)
150					LL4148		100	Switching diodes	4
350				TS4148 RZ(0603)			100	Switching diodes	4
500	1N4148			TS4148 RY(0805)			100	Switching diodes	4
				TS4148 RX(1206)			100	Switching diodes	4
							75	Switching diodes	4
800				BZD27C series ⁽¹⁾			12-240	Zener diodes	—
1000		1N47xx 1MxxZ				1SMA47xx 1SMAxxZ	11-100	Zener diodes	—
							110-200	Zener diodes	—
1500						1SMA5926-56	11-68	Zener diodes	—

(1) Please check web for available voltage.

STANDARD RECTIFIERS

										
IF (A)	TS-1	A-405	DO-41	DO-15	DO-201AD	R-6	P600	TO-220AC	TO-220AB	Voltage Range V _{BR} (V)
1	1T1-7 1T1G-7G	1N4001S-7S 1N4001SG-7SG	BY133 1N4001-7							1300
			1N4001G-7G							50-1000
1.5			1N5391S-99S	1N5391-99						50-1000
				1N5391G-99G						50-1000
2				2A01-07						50-1000
				2A01G-07G						50-1000
3					1N5400-08					50-1000
					1N5400G-08G					50-1000
					BY251-55					200-1300
6						6A05-100				50-1000
						6A05G-100G				50-1000
8						P600A-M				50-1000
10								GPA801-7		50-1000
16									GP1001-7	50-1000
									GPA1601-7	GP1601-7

FAST RECOVERY RECTIFIERS $t_{rr}=120\text{ns to }500\text{ns}$



IF (A)	TS-1	A-405	DO-41	DO-15	DO-201AD	R-6	TO-220AC	TO-220AB	ITO-220AC	ITO-220AB	Voltage Range $V_{BR}(V)$	$t_{rr}(\text{ns})$
1	SFR1T1-7 ⁽²⁾ F1T1-7 F1T1G-7G	SFR101S-7S ⁽²⁾ FR101S-7S FR101SG-7SG	SFR101-7 ⁽²⁾ FR101-7 FR101G-7G 1N4933-37 1N4933G-7G BA157-9 BA157G-9G								50-1000 50-1000 50-1000 50-600 50-600 400-1000 400-1000	120-350 150-500 150-500 200 200 150-250 150-250
1.5			FR151S-7S		SFR151-7 ⁽²⁾ FR151-7 FR151G-7G						50-1000 50-1000 50-1000	120-350 150-500 150-500
2					SFR201-7 FR201-7 FR201G-7G						50-1000 50-1000 50-1000 50-1000 100-800	120-500 150-350 150-500 150-500 250
3						BY296-9 SFR301-7 ⁽²⁾ FR301-7 FR301G-7G BY396-9					50-1000 50-1000 50-1000 50-1000 100-800	120-500 150-350 150-500 150-500 250
5										FRF501G-7G	50-1000	150-500
6						FR601-7 SFR601-7 ⁽²⁾ FR601G-7G					50-1000 50-1000 50-1000	150-500 120-350 150-500
8							FRA801G-7G		FRAF801G-7G		50-1000	150-500
10							FRA1001G-7G	FR1001G-7G	FRAF1001G-7G	FRF1001G-7G	50-1000	150-500
16							FRA1601G-7G	FR1601G-7G	FRAF1601G-7G	FRF1601G-7G	50-1000	150-500

(2) Soft fast recovery series

HIGH EFFICIENT RECTIFIERS $t_{rr}=50\text{ns to }80\text{ns}$



IF (A)	TS-1	A-405	DO-41	DO-15	DO-201AD	R-6	TO-220AC	TO-220AB	ITO-220AC	ITO-220AB	TO-3P/ TO-247AD	Voltage Range $V_{BR}(V)$	$t_{rr}(\text{ns})$
1	HT11-8 HT11G-8G	HER101S-8S HER101SG-8SG	HER101-8 HER101G-8G UF1A-M UF4001-7	MUR160 MUR190								600 900 50-1000 50-1000 50-1000 50-1000 50-1000	50 75 50-75 50-75 50-75 50-75 50-75
1.5				HER151-8 HER151G-8G								50-1000 50-1000	50-75 50-75
2				HER201-8 HER201G-8G								50-1000 50-1000	50-75 50-75
3					HER301-8 HER301G-8G							50-1000 50-1000	50-75 50-75
5					HER501-8							50-1000	50-75
6						HER601-8 HER601G-8G						50-1000 50-1000	50-75 50-75
8						HER801G-8G	HERA801G-8G	HER0801G-08G	HERAF801G-8G			50-1000	50-80
10								HER1001G-8G	HERAF1001G-8G	HERF1001G-8G		50-1000	50-80
16							HERA1601G-8G	HER1601G-8G	HERAF1601G-8G	HERF1601G-8G	HER1601PT-8PT	50-1000	50-80
30											HER3001PT-8PT	20-1000	50-80

SUPER FAST RECTIFIERS

$t_{rr}=15\text{ns to }50\text{ns}$



IF (A)	TS-1	A-405	DO-41	DO-15	DO-201AD	TO-220AC	TO-220AB	ITO-220AC	ITO-220AB	TO-3P/ TO-247AD	Voltage Range $V_{BR}(V)$	$t_{rr}(\text{ns})$
0.6	UG06A-D										50-200	15
1	SF11-8 SF11S-8S SF11-8										50-600	35
	SF11G-8G SF11SG-8SG SF11G-8G										50-600	35
2	SF21-8										50-600	35
	SF21G-8G										50-600	35
3	SF31-8										50-600	35
	SF31G-8G										50-600	35
	31DF4										400	35
	31DF6										600	35
4	SF41G-8G										50-600	35
	MUR420-60										200-600	25-50
5	SF54-58										50-600	35
	SFAF501G-08G SFF501G-8G										50-600	35
6	SF61-8										50-600	35
	SF61G-8G										50-600	35
8	SFA801G-8G SF801G-8G SFAF801G-8G										50-600	35
	MUR820-60										200-600	25-50
10	SFA1001G-8G SF1001G-8G SFAF1001G-8G SFF1001G-8G										50-600	35
16	SFA1601G-8G SF1601G-8G SFAF1601G-8G SFF1601G-8G SF1601PT-8PT										50-600	35
	MUR1620CT-60CT MURF1620CT-60CT										200-600	25-50
20	SF2001G-08G SFAF2001G-08G SFF2001G-8G SF2001PT-8PT										50-600	35
30	SF3001PT-6PT										50-400	35

SCHOTTKY RECTIFIERS



IF (A)	TS-1	DO-41	DO-15	DO-201AD	TO-220AC	TO-220AB	ITO-220AC	ITO-220AB	TO-3P/ TO-247AD	Voltage Range V _{BR} (V)							
0.5	SR002-015									20-150							
1	SRT12-115	SR102-115								20-150							
		1N5817-19								20-40							
2	SR202-215									20-150							
3	1N5820-22									20-40							
	SR302-315									20-150							
5	SR502-515									20-150							
	SRAF520-150									20-150							
7.5	MBR735-150									35-150							
	MBRF735-150									35-150							
8	SR802-815 SRA820-150									20-150							
	MBRF835CT-8150CT									35-150							
10	SRA1020-150 SR1020-10150 SRAF1020-150 SRF1020-150									20-150							
	MBR1035-150 MBR1035CT-150CT MBRF1035-150 MBRF1035CT-150CT									35-150							
15	MBR1535CT-150CT MBRF1535CT-150CT									35-150							
16	SRA1620-150 SR1620-150 SRAF1620-150 SRF1620-150 SR1620PT-150PT									20-150							
	MBR1635-150 MBRF1635-150									35-150							
20	SRA2020-150 SR2020-150 SRF2020-150 SR2020PT-150PT									20-150							
	MBR2035CT-150CT MBRF2035CT-150CT									35-150							
25	MBR2535CT-150CT MBRF2535CT-150CT									35-150							
30	SR3020PT-150PT									20-150							
	MBR3035CT-150CT MBRF3035CT-MBRF150CT									35-150							
40	SR4020PT-150PT									20-150							
	MBR4035PT-150PT									35-150							
60	MBR6035PT-150PT									35-150							

BRIDGES



IF (A)	ABS	MBS	DBS & DBLS (low profile)	DB & DBL (low profile)	WOB	KBP	GBL	Voltage Range V _{BR} (V)
0.5		MBS2-10						200-1000
0.8	ABS2-10	RMB2S-6S ⁽³⁾						200-1000
1			SDBS12-115 ⁽⁴⁾ DBS101G-7G DBLS101G-7G HDBS101G-7G ⁽⁵⁾	SDB12-115 ⁽⁴⁾ DB101G-7G DBL101G-7G HDB101G-7G ⁽⁵⁾	1W005M-10M	KBP101G-7G		20-150 50-1000 50-1000 50-1000
1.5			DBS151G-7G DBLS151G-7G	DB151G-7G DBL151G-7G	W005M-10M	KBP151G-7G	D2SB05-80	50-800 50-1000 50-1000
2					2W005M-10M	KBP201G-7G	GBL201-207	50-1000
3						KBP301G-7G		50-1000

(3) Fast recovery 150ns
(4) Schottky rectifier
(5) High efficiency 50-75ns



IF (A)	KBL	KBU	GBU	GBL	TS-4B	TS-6P	Voltage Range V _{BR} (V)
4	KBL401-7 KBL401G-7G	KBU401-7 KBU401G-7G	GBU401-7	GBL005-10	TS4B01G-7G TSS4B01G-3G ⁽⁶⁾		50-1000 50-1000 50-200
6	KBL601-07	KBU601-7 KBU601G-7G	GBU601-7		TS6B01G-7G	TS6P01G-7G	50-1000 50-1000
8		KBU801-7 KBU801G-7G	GBU801-7			TS8P01G-7G	50-1000 50-1000
10		KBU1001-7 KBU1001G-7G	GBU1001-7		TS10B-01G-07G	TS10P01G-7G	50-1000 50-1000

(6) Superfast recovery 35ns



IF (A)	TS-6P	GBPC	GBPC-M	GBPC-W	GBPC40	GBPC40-M	Voltage Range V _{BR} (V)
15	TS15P01G-7G	GBPC15005-10	GBPC15005M-10M	GBPC15005W-10W			50-1000
20	TS20P01G-7G						50-1000
25	TS25P01G-7G	GBPC25005-10	GBPC25005M-10M	GBPC25002W-10W			50-1000
35		GBPC35005-10	GBPC35005M-10M	GBPC35005W-10W			50-1000
40					GBPC40005-10 GBPC50005-10	GBPC40005M-10M GBPC50005M-10M	50-1000 50-1000

EXCELLENCE IN PRODUCT QUALITY

Taiwan Semiconductor Co., Ltd. (TSC), founded in January 1979 at Tu Chen Hsian, Taipei Hsien, Taiwan. The corporation specializes in manufacturing rectifiers, analog ICs and MOSFETs, an essential component operating within home electrical appliances, communication & information products, equipment instruments, automobiles. Since its establishment, TSC has gained a worldwide reputation for its excellence in products quality.



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