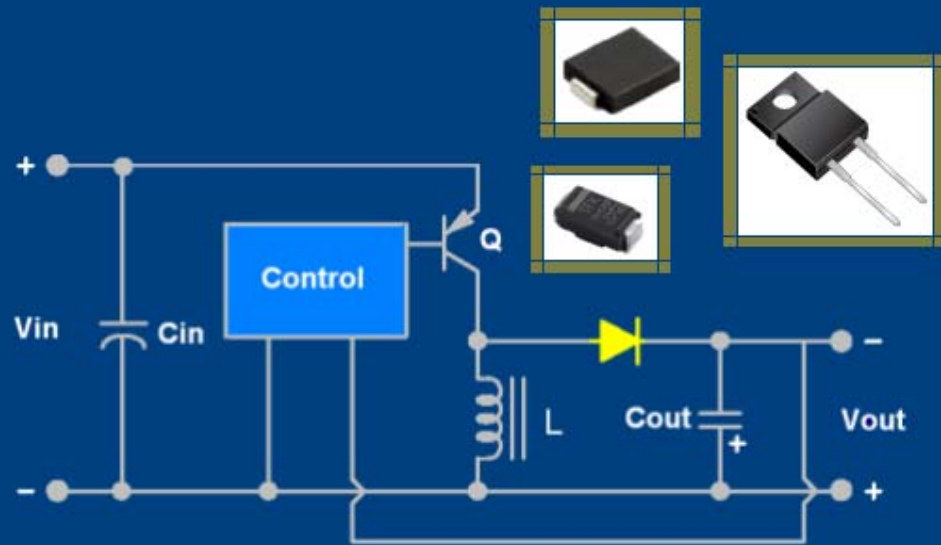


Power Schottky Diode



Sep. 2004

AUK Corporation

Feature of Schottky Diode

Most important parameter of Rectifier Diode

- Forward Voltage Drop (VF)
- Reverse Recovery Time (trr)

Comparative Information of Rectifiers

Rectifiers Technology	Forward Voltage (V)	Reverse Recovery time (ns)	Forward Recovery time (ns)	Relative Cost
Fast Recovery Diode	1.0	150	1050	1.0
Ultra Fast Recovery Diode	0.9	75	50	1.5
Schottky Diode	0.5	< 1.0	-	1.6

Power Schottky Diode

Part num.	Maximum Rating			Electrical Characteristics				PKG	SCHE.
	V _{RM} [V]	I _o [A]	I _{FSM} [A] @60Hz	V _F		I _R [uA]			
				max	I _F [A]	max	V _R [V]		
SDB2301	20	1	3	0.45	1.0	250	20	SOT-23F	MP
SDB0540	40	0.5	2	0.50	0.5	200	40	SOD-123	MP
SDB1040	40	1	3	0.50	1.0	200	40	SOD-123	MP
SDB10A40	40	1	40	0.50	1.0	200	40	SOD-106	MP
SDB30A40	40	3	70	0.55	3.0	1000	40	SOD-106	MP
SDB10A60 [Ⓢ]	60	10	150	-	-	-	-	TO-220F	'05.2Q
SDB20A60 [Ⓢ]	60	20	150	-	-	-	-	TO-220F	'05.2Q
SDB30A60 [Ⓢ]	60	30	200	-	-	-	-	TO-220F	'05.2Q

[Ⓢ] Under development

Comparative of Package Dimension

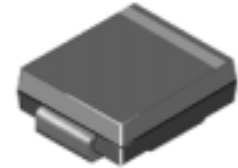
SOD-123

SMA(DO-214AC)

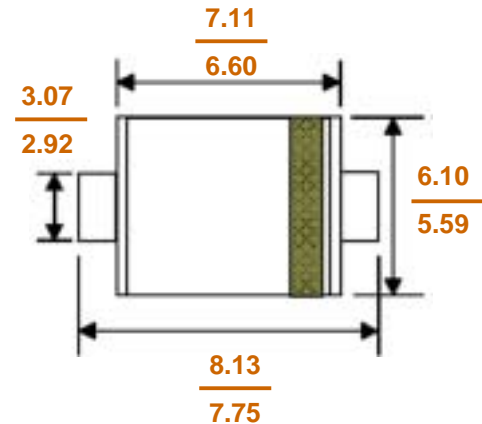
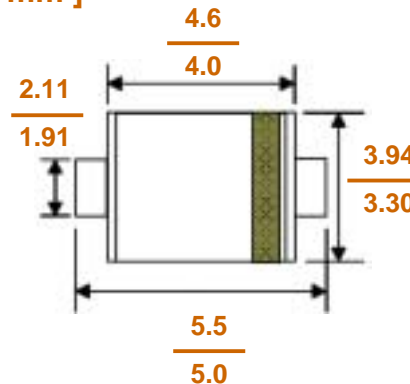
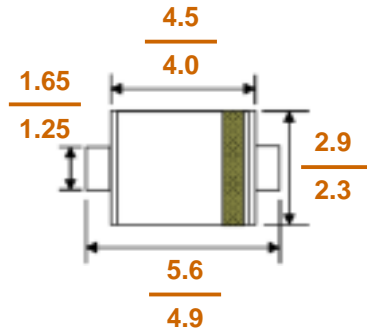
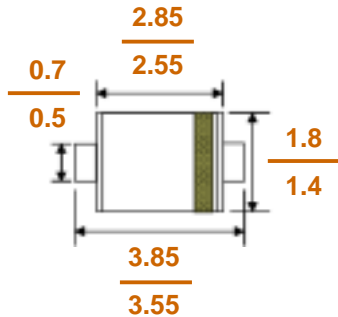
SMB (DO-214AA)

SMC (DO-214AB)

SOD-106

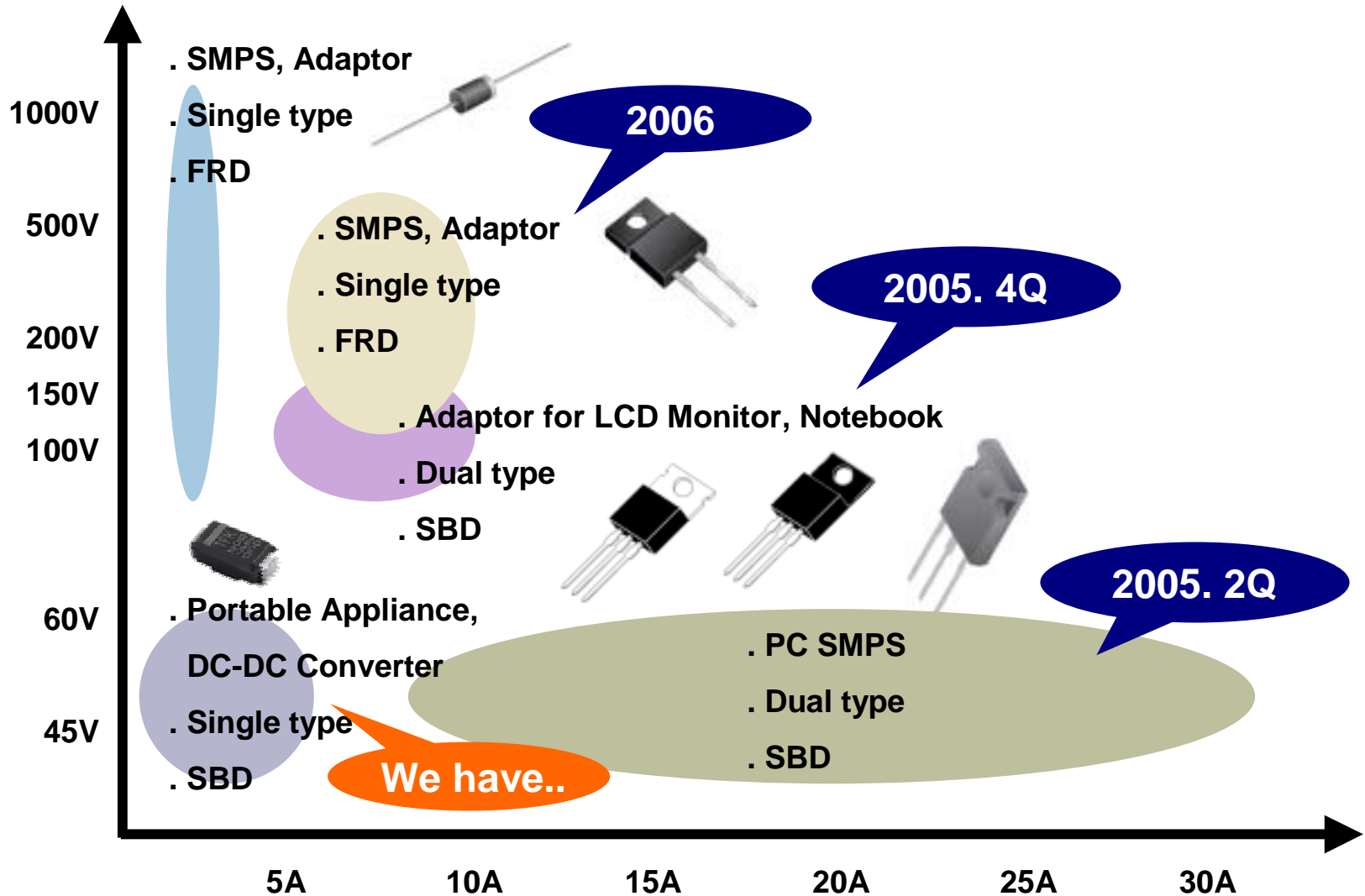


[Unit : mm]



- SOD-123 Package that requires only 40% of the area of the SMA
- SOD-106 Package have the same footprint as an SMA Package and can be a direct replacement

Road Map for Rectifiers



Application

AUK Power Schottky Diodes Suited to..

- Low Voltage SMPS
- High frequency DC-DC Converter
- High frequency Inverter
- Free wheeling, Polarity Protection
- Battery Charger
- Notebook PC
- LCD Inverter
- Mobile Phone
- DSC, DVC

I_o \ V_{RM}	20V	40V	60V
0.5A	DSC, DVC	Notebook PC Desk top PC	-
1A	-	DSC, DVC Notebook PC Desk top PC Mobile phone	-
3A		Notebook PC Desk top PC LCD Inverter	-
10/20/30A		-	PC SMPS DC-DC Converter

Cross Reference

AUK	Diodes	ROHM	FKS	On Semi	VISHAY
SDB2301	B120	-	-	MBR120ES MBR120LS	-
SDB0540	B0540W BAT400D	RB411D	MBR0540	MBR0540	MBR0540
SDB1040	1N5819HW	RB160M-40	FMKA140	MBR140SF	-
SDB10A40	B140	RB160L-40	SS14	MBRA140	SS14
SDB30A40	B340	RB050LA-40	SS34	MBRS340	SS34

Package difference