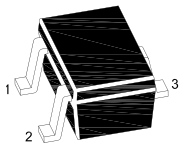
ABAS19W, ABAS20W, ABAS21W/AW/CW/SW

Silicon Epitaxial Planar Diodes

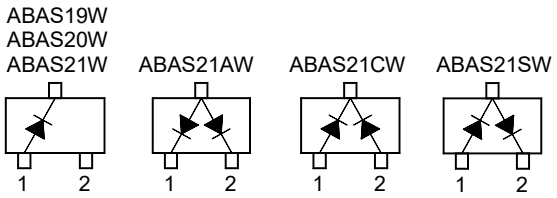
High Voltage Switching Diodes

Features

- AEC-Q101 Qualified
- Halogen and Antimony Free(HAF), RoHS compliant



SOT-323 Plastic Package



Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Reverse Voltage	ABAS19W ABAS20W ABAS21W/AW/CW/SW	V_R	120 200 250	V
Continuous Forward Current		$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current		I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 μs	I_{FSM}	0.5 2.5	A
Power Dissipation [1]		P_D	250	mW
Operating Junction Temperature Range		T_j	- 55 to + 150	℃
Storage Temperature Range		T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance, Junction to Ambient [1]	$R_{\theta JA}$	500	℃/W

[1] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

Characteristics at T_a = 25℃

Parameter		Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage					
at I_R = 100 μA	ABAS19W	$V_{(BR)R}$	120	-	V
at I_R = 100 μA	ABAS20W		200	-	
at I_R = 100 μA	ABAS21W/AW/CW/SW		250	-	
Forward Voltage					
at I_F = 100 mA		V_F	-	1	V
at I_F = 200 mA			-	1.25	
Reverse Current					
at V_R = 100 V	ABAS19W	I_R	-	0.1	μA
at V_R = 150 V	ABAS20W		-	0.1	
at V_R = 200 V	ABAS21W/AW/CW/SW		-	0.1	
at V_R = 100 V, T_j = 150℃	ABAS19W		-	100	
at V_R = 150 V, T_j = 150℃	ABAS20W		-	100	
at V_R = 200 V, T_j = 150℃	ABAS21W/AW/CW/SW		-	100	
Total Capacitance					
at V_R = 0, f = 1 MHz		C_{tot}	-	5	pF
Reverse Recovery Time					
at I_F = I_R = 30 mA, R_L = 100 Ω, I_{rr} = 0.1 X I_R		t_{rr}	-	50	ns

Electrical Characteristic Curve

Fig 1. Power Derating Curve

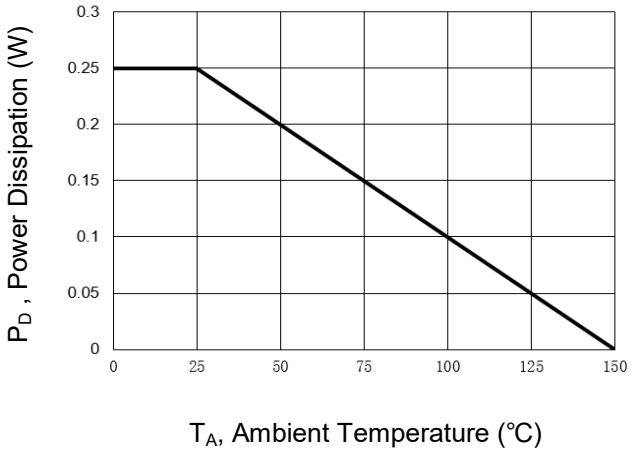


Fig 2. Forward Characteristic Curve

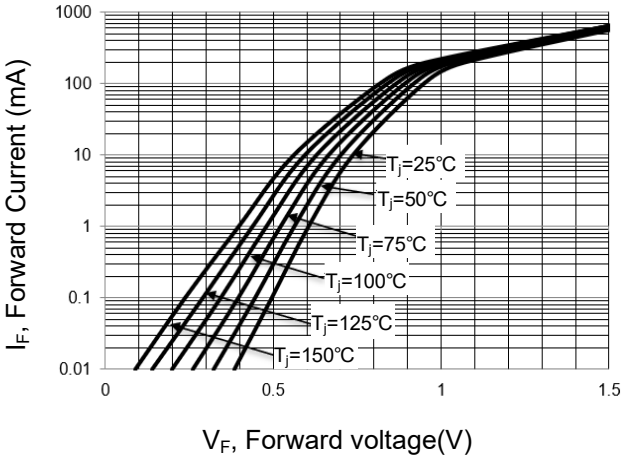


Fig 3. Reverse Characteristic Curve

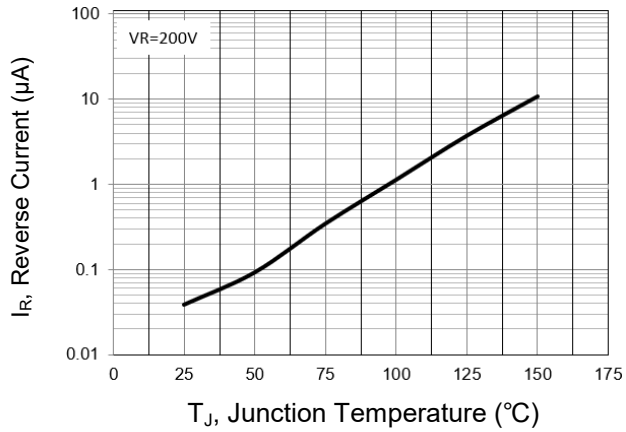
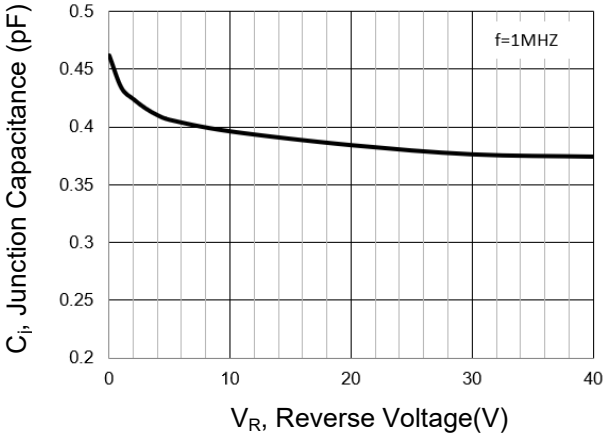
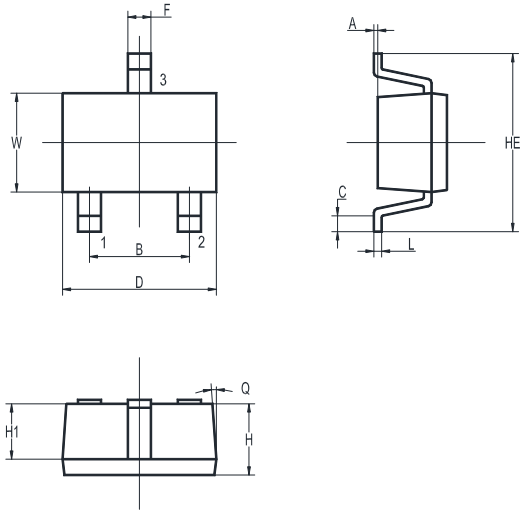


Fig 4. Junction Capacitance

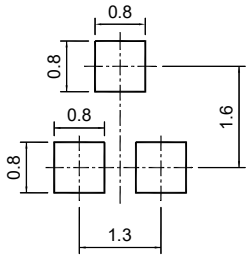


Package Outline Dimensions (Units: mm) SOT-323



UNIT	A	B	C	D	H	H1	HE	F	L	W	Q
mm	0.1 MAX.	1.4 1.2	0.2 MIN.	2.1 1.9	1.0 0.8	0.7 TYP.	2.4 2.0	0.35 0.25	0.15 0.05	1.35 1.15	5° MAX.

Recommended Soldering Footprint



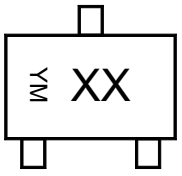
Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-323	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

Marking information

" XX " = Part No.

Type	Marking	Type	Marking
ABAS19W~ABAS21W	F5	ABAS21CW	F3
ABAS21AW	F2	ABAS21SW	F4



" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

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