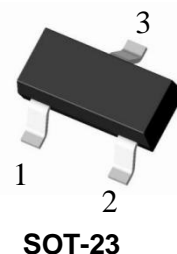


0.2A, 120-250V Silicon Epitaxial Planar Diodes

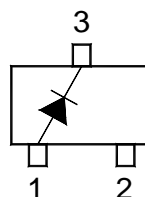
Features

- AEC-Q101 Qualified
- Low turn-on voltage
- Fast switching
- Halogen and Antimony Free(HAF), RoHS compliant



Mechanical Data

- SOT-23 Plastic Package
- Mounting position: Any



Absolute Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter		Symbol	Value			Unit
			ABAS19	ABAS20	ABAS21	
Reverse Voltage		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	t = 1 s	I _{FSM}	0.5			A
	t = 1 μs		2.5			
Peak Forward Surge Current (t<1s)		P _D	350			mW
Operating Junction Temperature Range		T _J	150			°C
Storage Temperature Range		T _{STG}	-55 ~ +150			°C

Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient (Note 1)	$R_{\theta JA}$	357	$^{\circ}\text{C/W}$

Note 1: Device mounted on FR-4 PCB with minimum recommended pad layout.

Electrical Characteristics (T_J =25°C unless otherwise noted)

Parameter	Symbol	Test Conditions		Min.	Max.	Unit
Forward Voltage	V _F	I _F =100mA		-	1	V
		I _F =200mA			1.25	
Reverse Breakdown Voltage	V _(BR)	I _R =100μA	ABAS19	120	-	V
			ABAS20	200		
			ABAS21	250		
Reverse Current	I _R	V _R =100V	ABAS19	-	0.1	μA
		V _R =150V	ABAS20			
		V _R =200V	ABAS21			
		V _R =100V, T _j =150°C	ABAS19	-	100	μA
		V _R =150V, T _j =150°C	ABAS20			
		V _R =200V, T _j =150°C	ABAS21			
Total Capacitance	C _{tot}	V _R = 0 V, f =1MHz		-	5	pF
Reverse Recovery Time	t _{rr}	I _F = I _R = 30 mA, I _{rr} = 0.1 X I _R , R _L = 100 Ω		-	50	ns

Typical Characteristics Curves ($T_J = 25^\circ\text{C}$ unless otherwise noted)

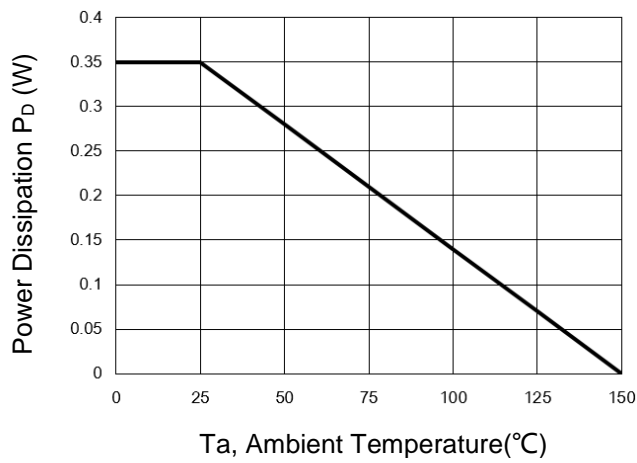


Fig 1. Power Derating Curve

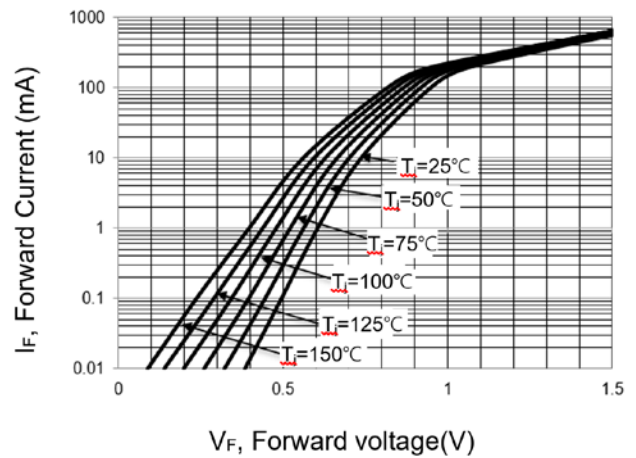


Fig 2. Forward Characteristic Curve

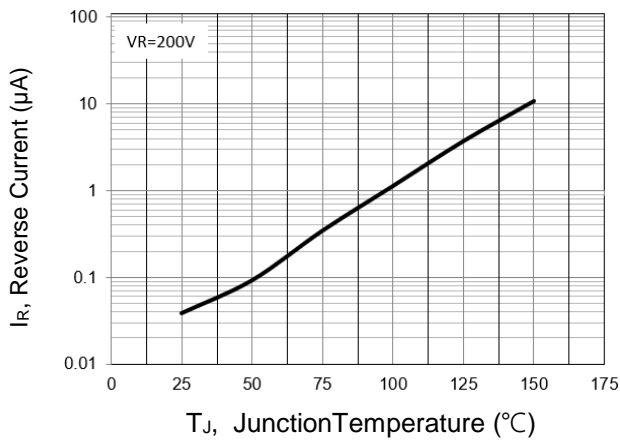


Fig 3. Reverse Characteristic Curve

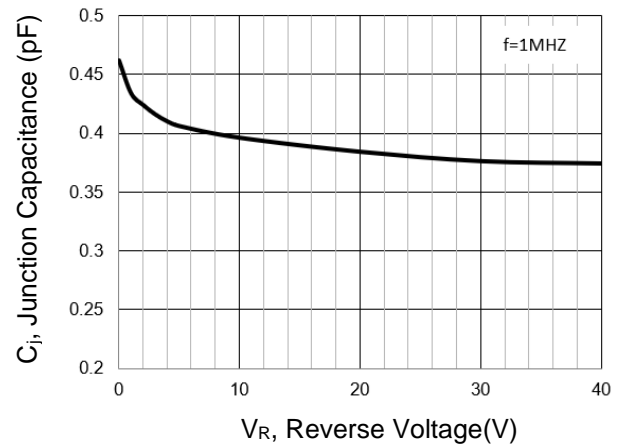
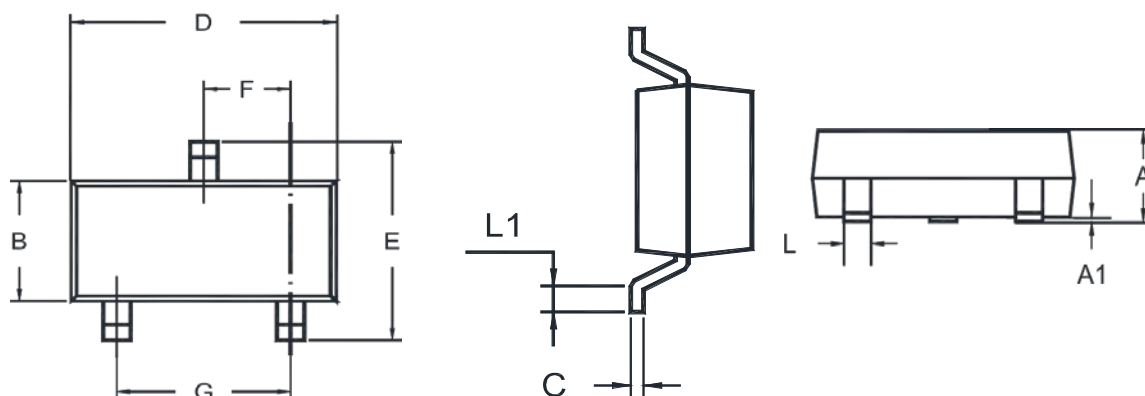


Fig 4. Junction Capacitance

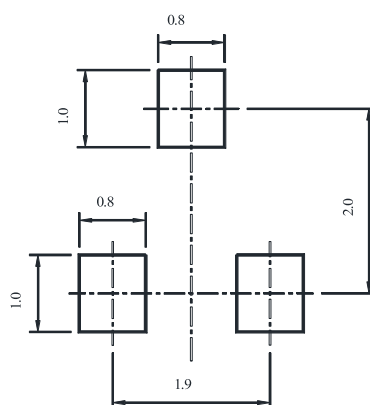
Package Outline Dimensions (Unit: millimeters)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.60	1.02	2.04	0.51	0.20
	0.89	0.013	1.20	0.08	2.80	2.20	0.89	1.78	0.37	MIN

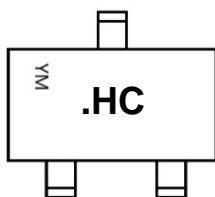
Recommended Soldering Footprint (Unit: millimeters)



Packing Information

Package	Tape Width	Pitch		Reel Size		Per Reel Packing Quantity
SOT-23	mm	mm	inch	mm	inch	
	8	4 ± 0.1	0.157 ± 0.004	178	7	3000

Marking Information



1. " HC " = Part No
2. " • " = Automotive
3. " Y " = Year"
4. "M " = Month

Font type: Arial

Revision History

Version	Date	Description of changes
Rev.A	2025.10.16	Primary

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