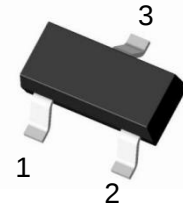


0.2A, 30V Surface Mount Schottky Barrier Diodes

Features

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



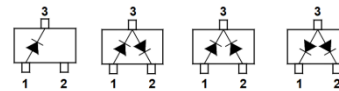
SOT-323

Applications

- Ultra high-speed switching
- Voltage clamping
- Protection circuits

Equivalent circuit

ABAT54W ABAT54AW ABAT54CW ABAT54SW



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

Parameters	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Reverse Voltage	V_R	30	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	300	mA
Peak Forward Surge Current ($t_p = 10\text{ ms}$)	I_{FSM}	600	mA
Total Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance Junction-to-Ambient (<i>Note 1</i>)	$R_{\theta JA}$	500	$^\circ\text{C/W}$

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



Electrical Characteristics (T _a =25°C unless otherwise noted)					
Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reverse Breakdown Voltage	V _{(BR)R}	I _R =100μA	30	-	V
Forward Voltage	V _F	I _F =0.1mA	-	240	mV
		I _F =1mA	-	320	
		I _F =10mA	-	400	
		I _F =30mA	-	500	
		I _F =100mA	-	1000	
Reverse Current	I _R	V _R =25V	-	2	μA
Reverse Recovery Time	t _{rr}	From I _F = 10 mA through I _R = 10 mA to I _{RR} = 1 mA , R _L = 100 Ω	-	5	ns
Total Capacitance	C _{tot}	V _R = 1 V, f =1MHz	-	10	pF

Typical Characteristics Curves

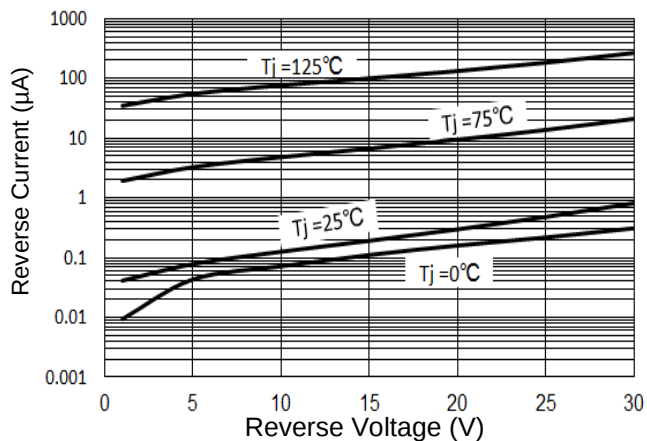


Fig 1. Reverse Characteristics Curve

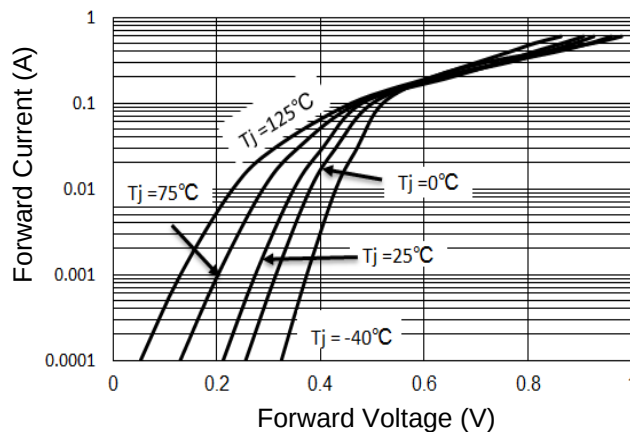


Fig 2. Forward Characteristics Curve

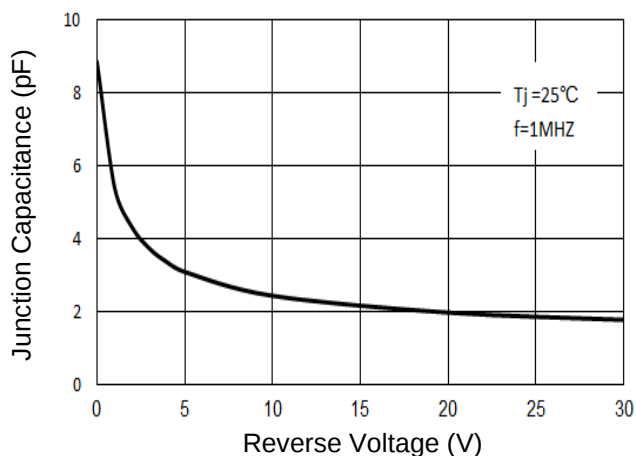


Fig 3. Junction Capacitance

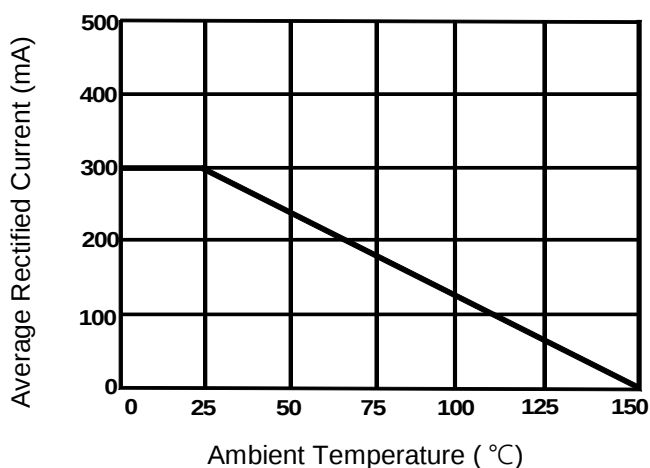
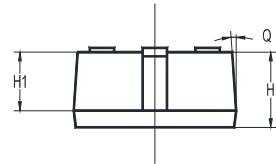
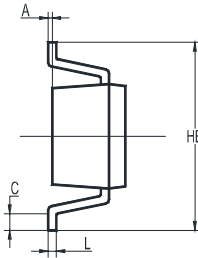
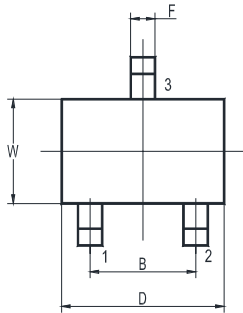


Fig 4. Average Rectified Current Derating Curve



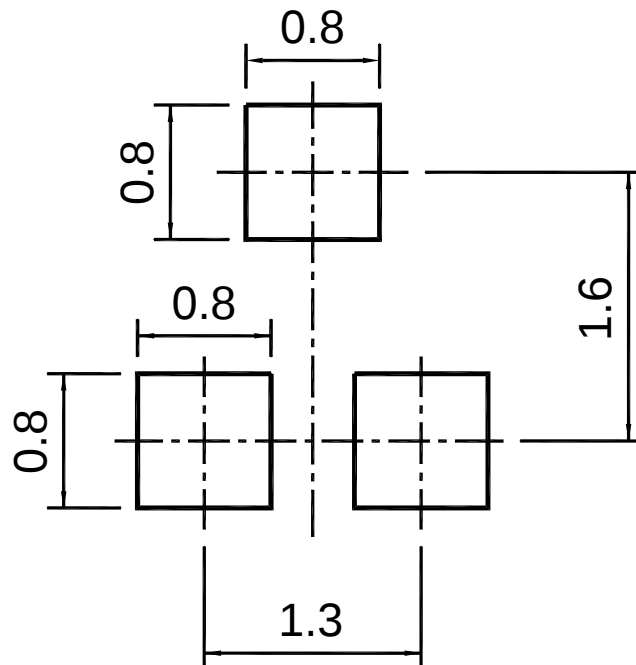
Package Outline Dimensions (Unit: millimeters)

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

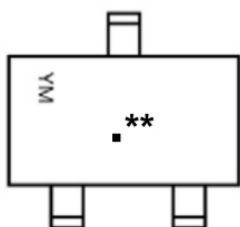
Recommended Soldering Footprint (Unit: millimeters)



Packing Information

Package	Tape Width	Pitch		Reel Size		Per Reel Packing Quantity
SOT-323	mm	mm	inch	mm	inch	3000
	8	4±0.1	0.157±0.004	178	7	

Marking Information



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

Font type: Arial

Type	Marking	Type	Marking	Type	Marking	Type	Marking
ABAT54W	L4	ABAT54AW	L42	ABAT54CW	L43	ABAT54SW	L44

Revision History

Version	Date	Description of changes
Rev.A	2025.10.16	Primary



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