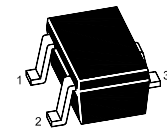
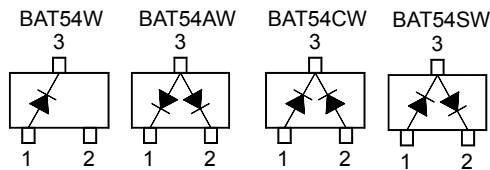


BAT54W / AW / CW / SW-CH

Surface Mount Schottky Barrier Diodes

Features

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



SOT-323 Plastic Package

Applications

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

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

Parameter	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	$^\circ\text{C}$

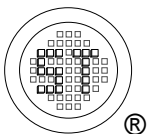
Thermal Resistance

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

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

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\text{ }\mu\text{A}$	$V_{(BR)R}$	30	-	V
Forward Voltage at $I_F = 0.1\text{ mA}$ at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 30\text{ mA}$ at $I_F = 100\text{ mA}$	V_F	- - - - -	240 320 400 500 1000	mV
Reverse Current at $V_R = 25\text{ V}$	I_R	-	2	μA
Total Capacitance at $V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_T	-	10	pF
Reverse Recovery Time at $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}	-	5	ns



Electrical Characteristic Curves

Fig 1. Reverse Characteristic Curve

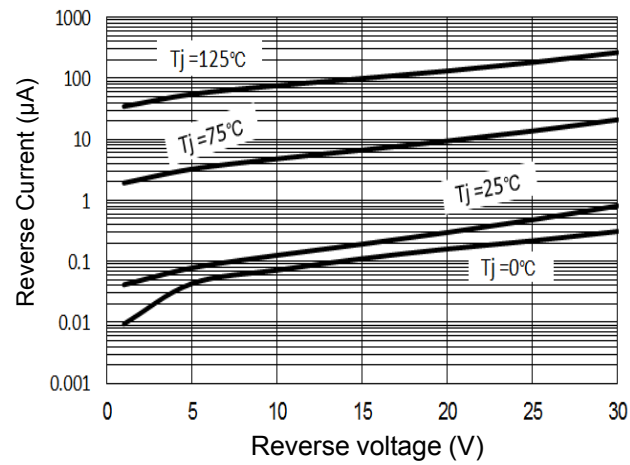


Fig 2. Forward Characteristic Curve

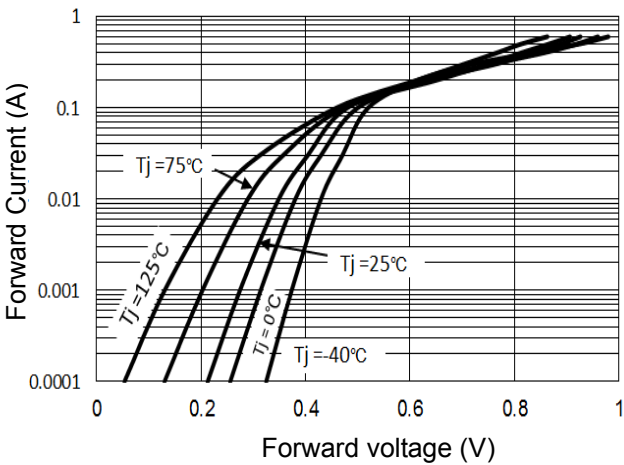


Fig 3. Junction Capacitance

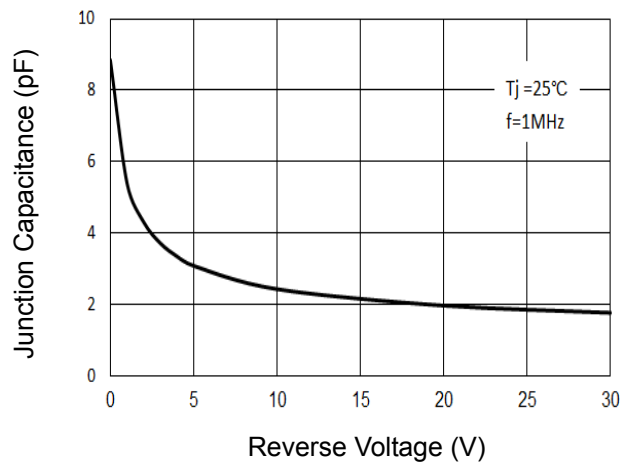
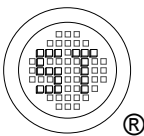
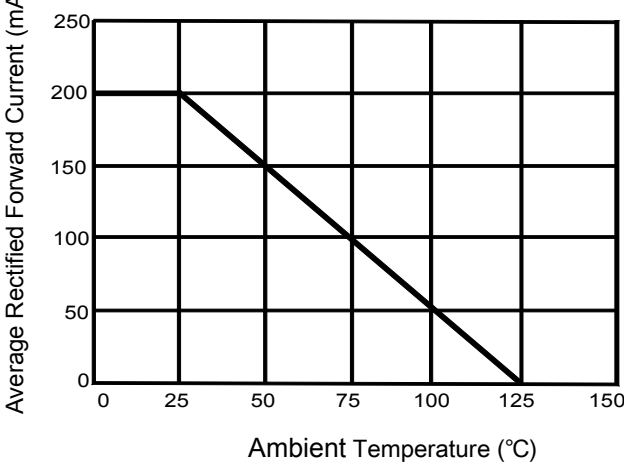


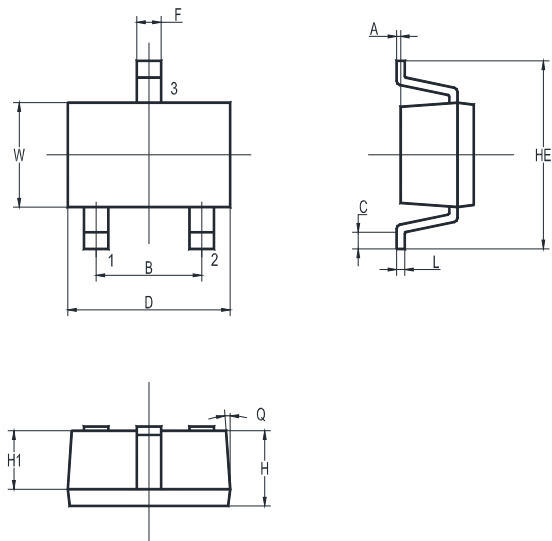
Fig 4. Average Rectified Current Derating Curve



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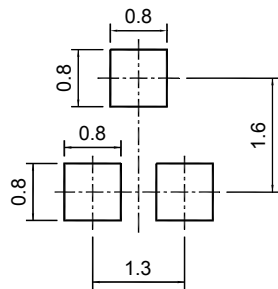
Package Outline Dimensions (Units: mm)

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

"L**" = Part No.

Type	Marking	Type	Marking
BAT54W	L4	BAT54AW	L42
BAT54CW	L43	BAT54SW	L44

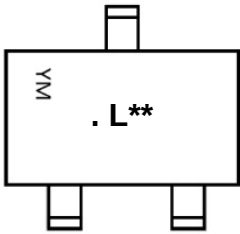
"•" = HAF (Halogen and Antimony Free)

"YM" = Date Code Marking

"Y" = Year

"M" = Month

Font type: Arial



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