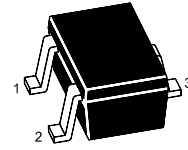
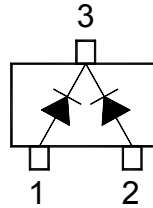


BAT378W

Silicon Epitaxial Planar Schottky Barrier Diode



SOT-323 Plastic Package
1. Anode 2. Anode 3. Cathode

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

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	V_{RM}	15	V
Reverse Voltage	V_R	10	V
Maximum Peak Forward Current	I_{FM}	200	mA
Surge Forward Current (10 ms)	I_{FSM}	1	A
Average Rectified Forward Current	$I_{F(AV)}$	100	mA
Power Dissipation	P_{tot}	100	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +125	$^\circ\text{C}$
Operating Temperature Range	T_{opr}	-40 to +100	$^\circ\text{C}$

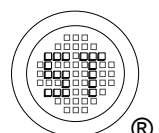
Thermal Resistance

Parameter	Symbol	Value	Unit
Typical Thermal Resistance Junction to Ambient ¹⁾	$R_{\theta JA}$	1000	$^\circ\text{C/W}$

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	Typ.	Max.	Unit
Forward Voltage at $I_F = 5\text{ mA}$ at $I_F = 100\text{ mA}$	V_F	- -	0.3 0.5	V
Reverse Current at $V_R = 10\text{ V}$	I_R	-	20	μA
Total Capacitance at $V_R = 0\text{ V}$, $f = 1\text{ MHz}$	C_T	20	40	pF



Electrical Characteristic Curves

Fig 1. Reverse Characteristic Curve

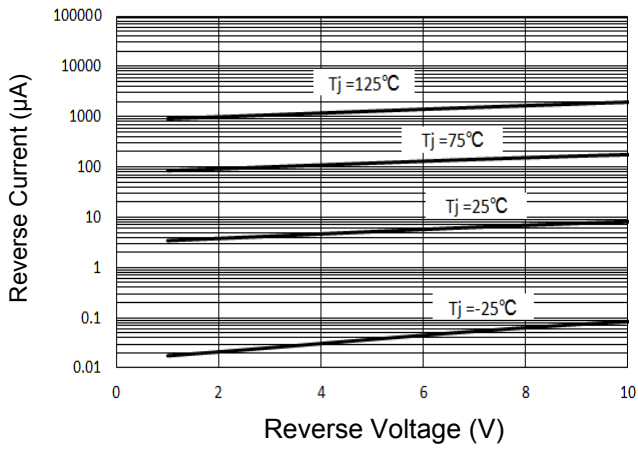


Fig 2. Forward Characteristic

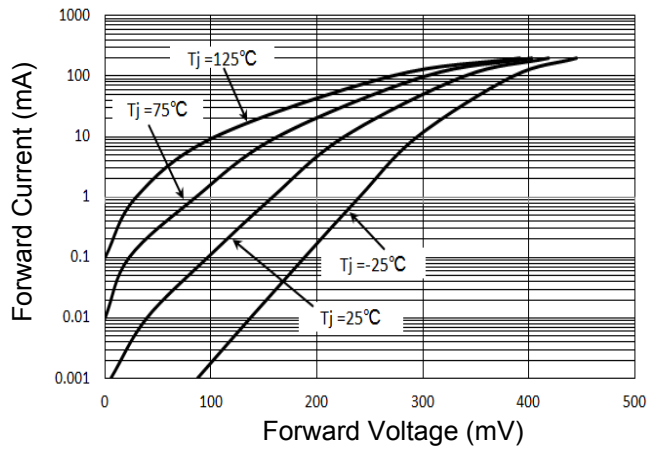


Fig 3. Junction Capacitance

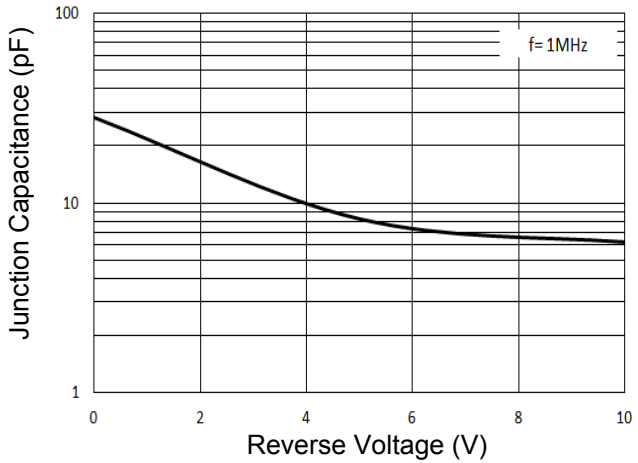
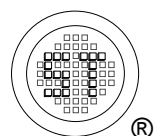
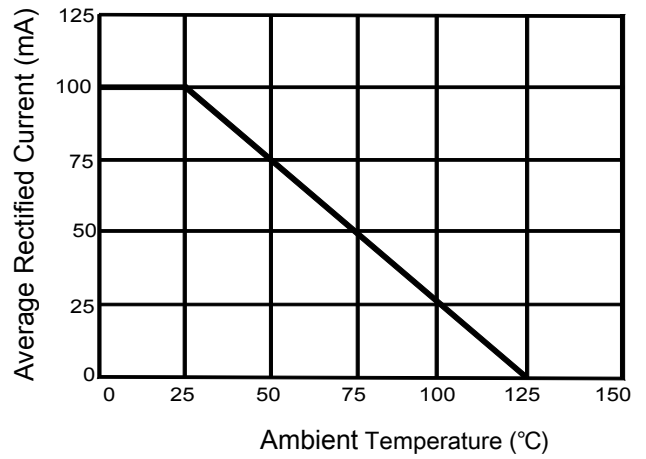


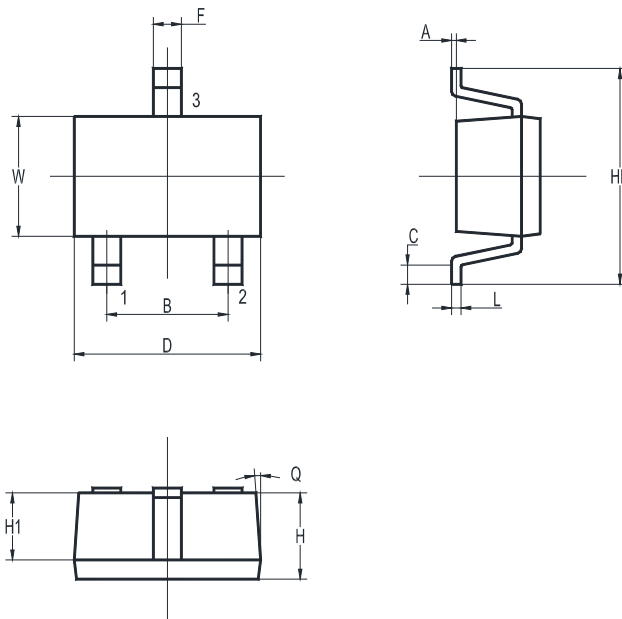
Fig 4. Average Rectified Current Derating Curve



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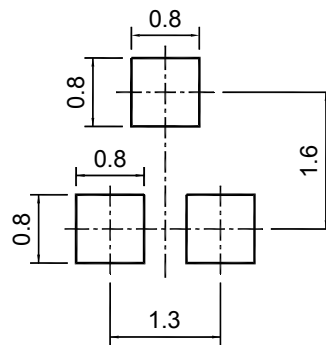
Package Outline Dimensions (Units: mm)

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

- " B7 " = Part No.
 - " YM " = Date Code Marking
 - " Y " = Year
 - " M " = Month
- Font type: Arial

