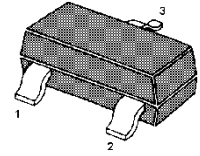
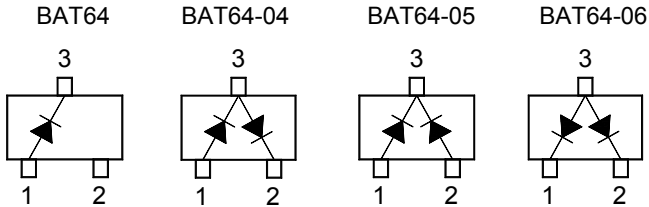


## BAT64 / -04 / -05 / -06

### Surface Mount Schottky Barrier Diodes

#### Features

- Low forward voltage



SOT-23 Plastic Package

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

Parameter	Symbol	Value	Unit
Reverse Voltage	$V_R$	40	V
Average Rectified Forward Current	$I_{F(AV)}$	120	mA
Peak Forward Surge Current (at $t_p \leq 10$ ms)	$I_{FSM}$	800	mA
Forward Current	$I_F$	250	mA
Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

#### Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance - Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	400	$^\circ\text{C/W}$

<sup>1)</sup> 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 $I_R = 100 \mu\text{A}$	$V_{(BR)R}$	40	-	V
Forward Voltage at $I_F = 1$ mA at $I_F = 10$ mA at $I_F = 30$ mA at $I_F = 100$ mA	$V_F$	240 300 350 430	350 430 520 750	mV
Reverse Current at $V_R = 30$ V at $V_R = 30$ V, $T_j = 75^\circ\text{C}$	$I_R$	- -	2 100	$\mu\text{A}$
Total Capacitance at $V_R = 1$ V, $f = 1$ MHz	$C_T$	-	10	pF
Reverse Recovery Time at $I_F = 10$ mA, $I_R = 10$ mA, $I_{RR} = 1$ mA, $R_L = 100 \Omega$	$t_{rr}$	-	5	ns

# BAT64 / -04 / -05 / -06

## Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

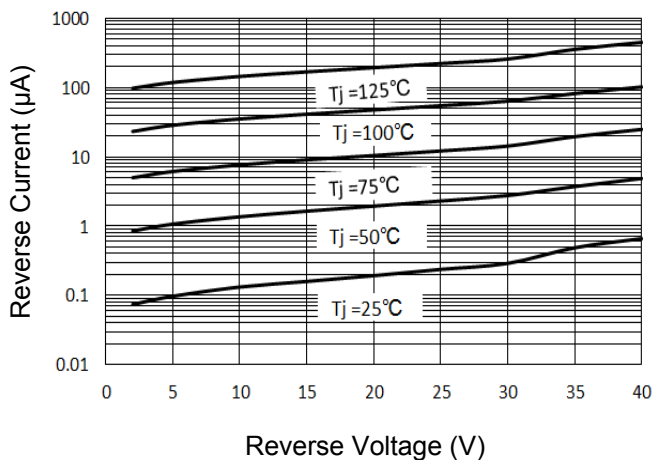


Fig 2. Forward Characteristics Curve

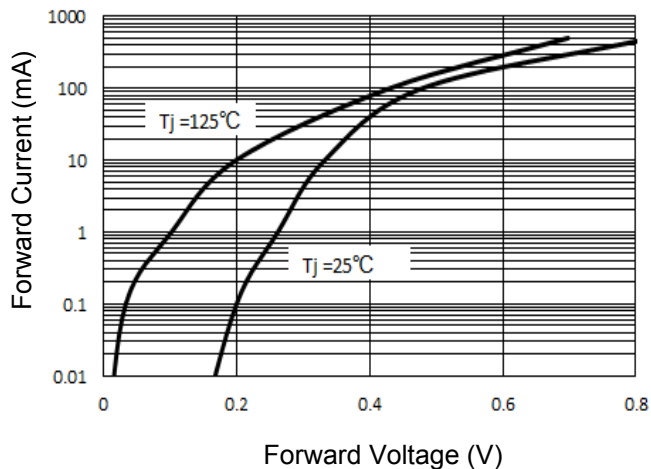


Fig 3. Junction Capacitance

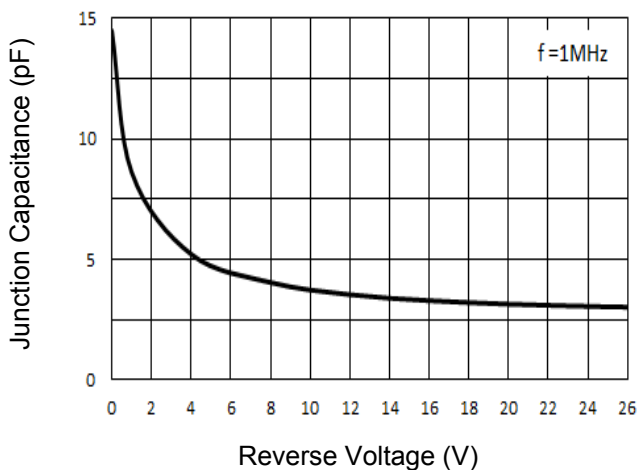
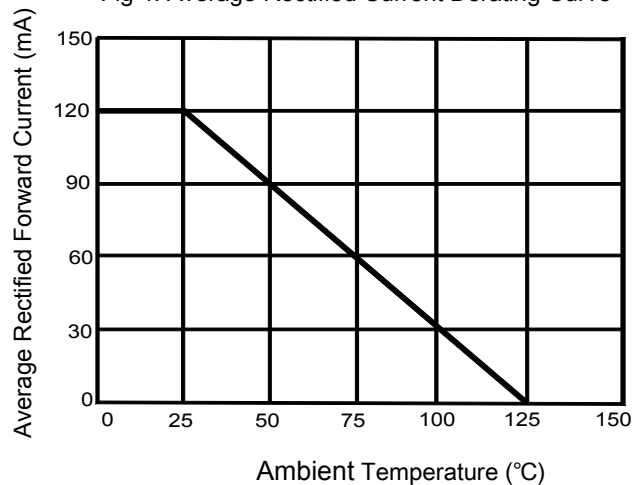


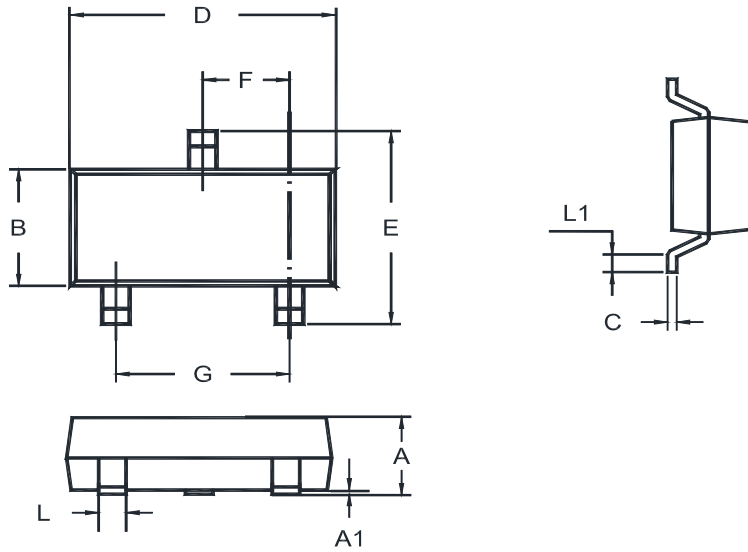
Fig 4. Average Rectified Current Derating Curve



## BAT64 / -04 / -05 / -06

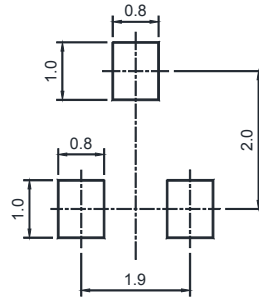
Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

### Recommended Soldering Footprint



### Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

### Marking information

" \*\*\* " = Part No.

Type	Marking	Type	Marking
BAT64	50	BAT64-04	51
BAT64-05	52	BAT64-06	53

" YM " = Date Code Marking

" Y " = Year

" M " = Month

Font type: Arial

