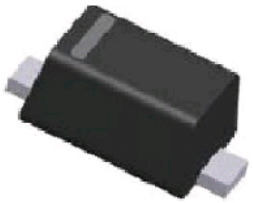
Schottky Diodes

BAT41KF1LM

SOD-523



Top View

PIN DESCRIPTION

PIN	DESCRIPTION
1	Cathode
2	Anode

■ Features

- Low leakage current losses
- Negligible switching losses
- Low forward and reverse recovery times
- Extremely fast switching
- Surface mount device
- Low capacitance diode

■ Absolute Maximum Ratings(Tj = 25° C, unless otherwise specified)

Parameter	Symbol	Rating	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Continuous Forward Current	I_F	200	mA
Surge Non-repetitive Forward Current tp=10ms Sinusoidal	I_{FSM}	1	A
Thermal Resistance Junction to Ambient (Note1)	$R_{\theta JA}$	600	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature range	T_{stg}	-55 to 150	

Note1: Epoxy printed circuit board with recommended pad layout

■ Electrical Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	I_R= 100 μA	100			V
Forward voltage (1)	V_{F1}	I_F= 1 mA, T_j = 25℃			0.45	V
	V_{F2}	I_F= 200 mA, T_j = 25℃			1	
Reverse voltage leakage current (2)	I_{R1}	V_R=50 V, T_j = 25℃			0.1	μA
	I_{R2}	V_R=50 V, T_j = 100℃			20	
Capacitance between terminals	C_T	V_R= 1 V, F = 1 MHz		3	10	pF

Notes:

1. Pulse test: tp=380 μs,δ<2%
2. Pulse test: tp=5 ms,δ<2%

■ Marking

Marking	41

Schottky Diodes

BAT41KF1LM

■ Typical Characterisitics

Figure 1. Average forward power dissipation versus average forward current

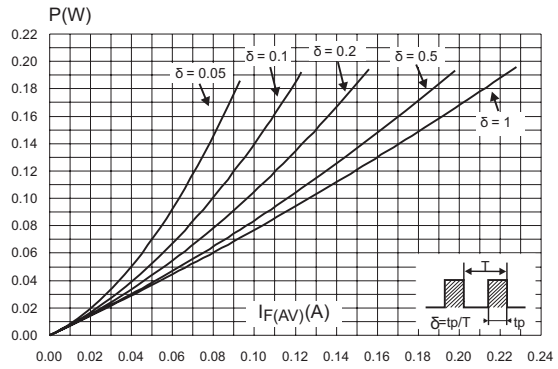


Figure 2. Average forward current versus ambient temperature (δ = 1)

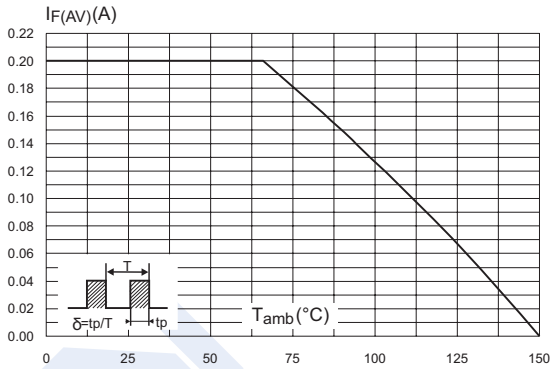


Figure 3. Reverse leakage current versus reverse applied voltage (typical values)

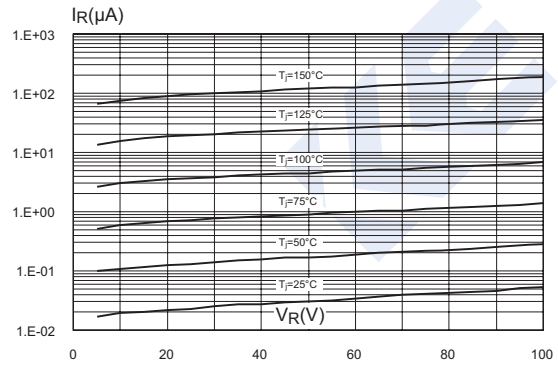
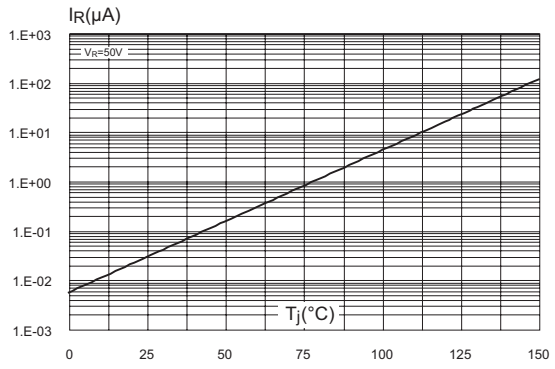


Figure 4. Reverse leakage current versus junction temperature (typical values)



Schottky Diodes

BAT41KF1LM

■ Typical Characterisitics

Figure 5. Junction capacitance versus reverse applied voltage (typical values)

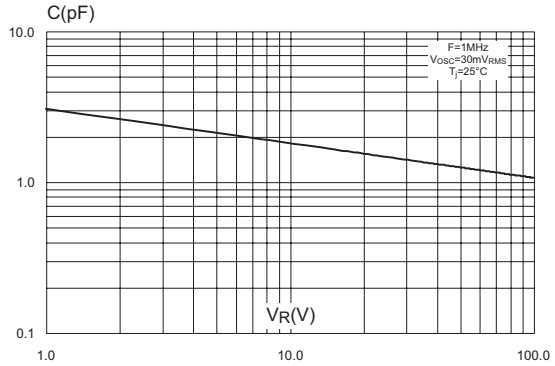


Figure 6. Forward voltage drop versus forward current (typical values)

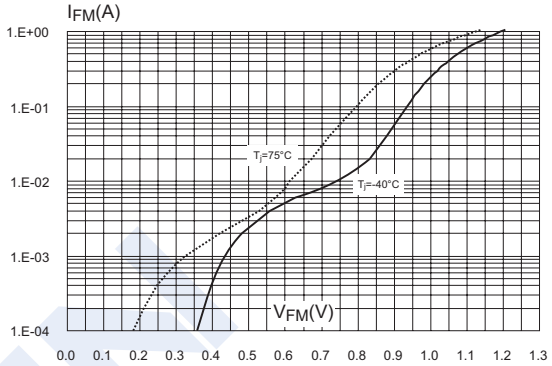


Figure 7. Forward voltage drop versus forward current (typical values)

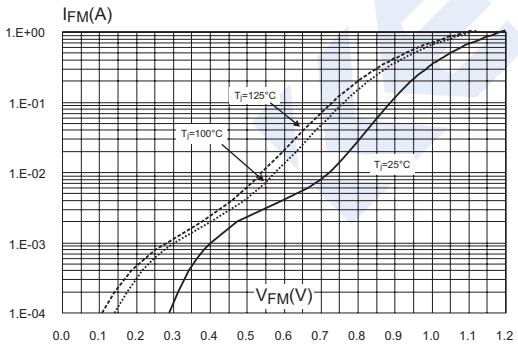
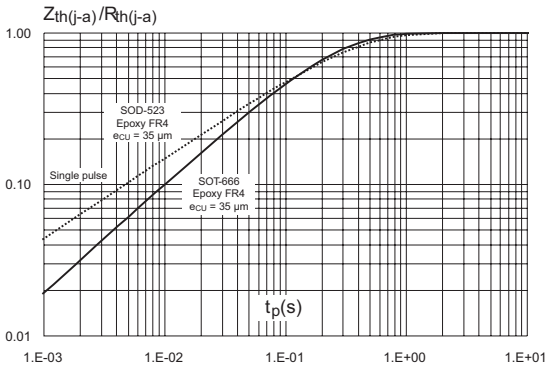


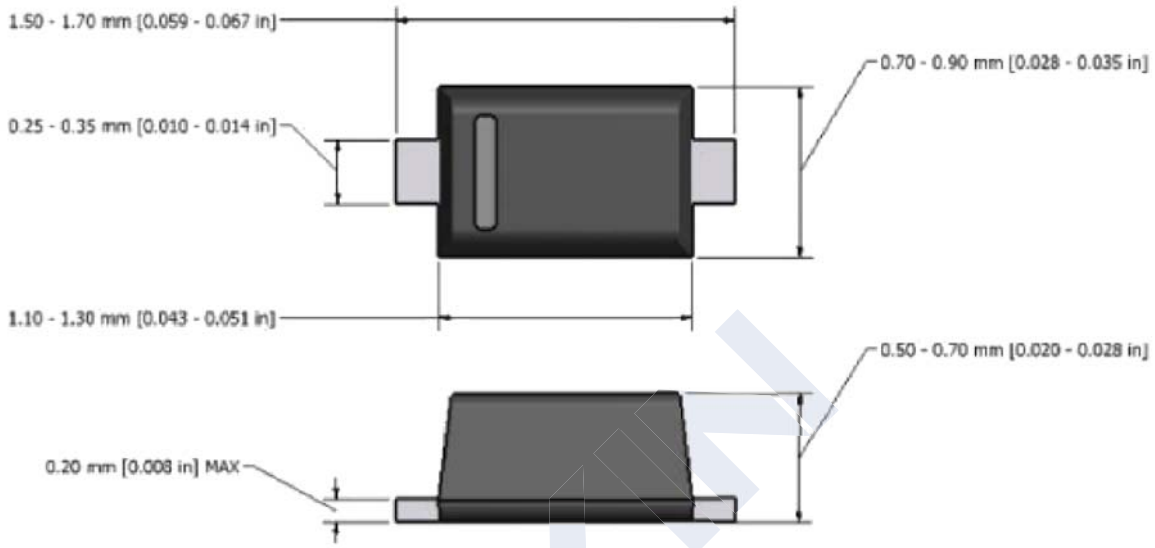
Figure 8. Relative variation of thermal impedance junction to ambient versus pulse duration (printed circuit board, epoxy FR4, e_{CU}=35µm)



Schottky Diodes

BAT41KF1LM

■ Package Outline Dimensions (SOD-523)



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

■ The Recommended Mounting Pad Size