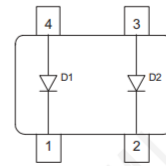


Description

- General-purpose diode for high-speed switching
- Circuit protection
- Voltage clamping
- High-level detecting and mixing



ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Package	Configuration	LS(nH)
BAS40-07,215-JSM	SOT143	parallel pair	2

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	40	V
Forward current	I_F	120	mA
Non-repetitive peak surge forward current $t \leq 10\text{ms}$	I_{FSM}	200	
Total power dissipation $T_S \leq 81^\circ\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 ... 125	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}	≤ 275	K/W

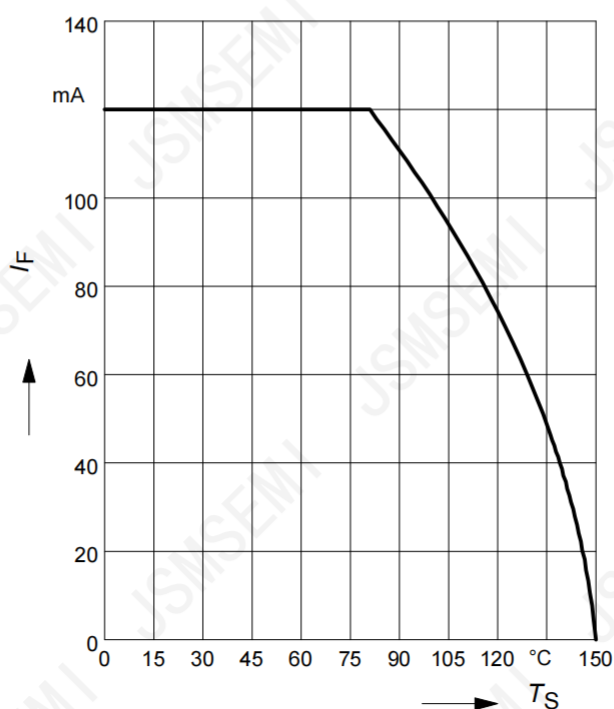
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at $T_A = 25^\circ\text{C}$, unless otherwise specified

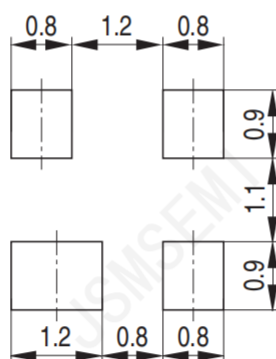
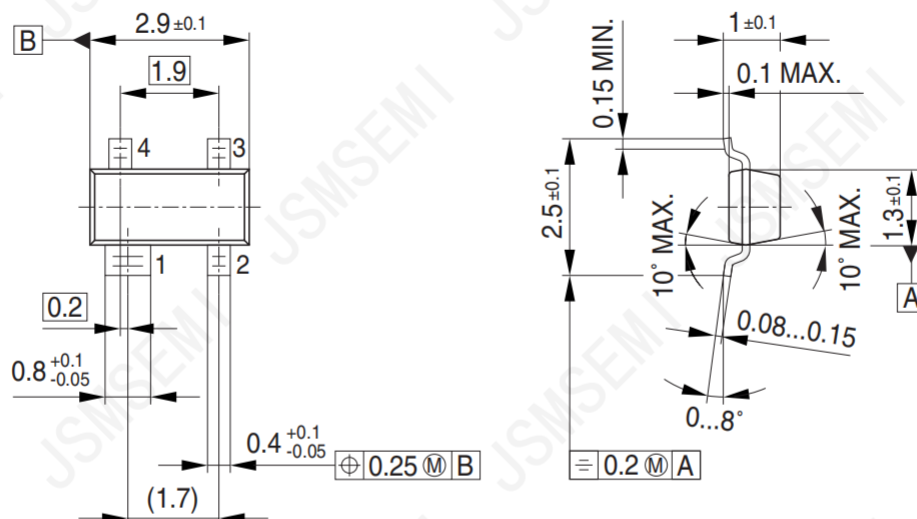
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)}= 10\ \mu\text{A}$	$V_{(BR)}$	40	-	-	V
Reverse current $V_R = 30\ \text{V}$	I_R	-	-	1	μA
Forward voltage $I_F= 1\ \text{mA}$ $I_F= 10\ \text{mA}$ $I_F= 40\ \text{mA}$	V_F	250 350 600	310 450 720	380 500 1000	mV
Forward voltage matching ¹⁾ $I_F= 10\ \text{mA}$	ΔV_F	-	-	20	
AC Characteristics					
Diode capacitance $V_R = 0\ ,\ f = 1\ \text{MHz}$	C_T	-	3	5	pF
Differential forward resistance $I_F = 10\ \text{mA}$, $f = 10\ \text{kHz}$	R_F	-	10	-	Ω
Charge carrier life time $I_F = 25\ \text{mA}$	T_{rr}	-	-	100	ps

¹ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

Forward current $I_F = f(T_S)$



Package SOT143



Revision History

Rev.	Change	Date
V1.0	Initial version	2/23/2024

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For additional information please contact Kevin@jsmsemi.com or visit www.jsmsemi.com