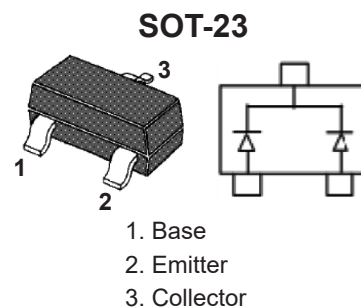


**RoHS
Compliant**



Features

- General-purpose switching
- High switching speed: $t_{rr} \leq 4\text{ns}$
- Low leakage current
- Small SMD plastic packages
- Low capacitance: $C_d \leq 1.5\text{pF}$
- Reverse voltage: $V_R \leq 100\text{V}$
- AEC-Q101 qualified



Characteristic	Conditions	Symbol	Min.	Typ.	Max.	Units
Forward Voltage	$I_F = 1\text{mA}^{(1)}$	V_F	-	-	715	mV
	$I_F = 10\text{mA}^{(1)}$		-	-	855	mV
	$I_F = 50\text{mA}^{(1)}$		-	-	1	V
	$I_F = 150\text{mA}^{(1)}$		-	-	1.25	V
Reverse Current	$V_R = 25\text{V}$	I_R	-	-	30	nA
	$V_R = 80\text{V}$		-	-	0.5	μA
	$V_R = 25\text{V}; T_J = 150^\circ\text{C}$		-	-	30	μA
	$V_R = 80\text{V}; T_J = 150^\circ\text{C}$		-	-	100	μA
Diode Capacitance	$V_R = 0\text{V}; f = 1\text{MHz}$	C_d	-	-	1.5	pF
Reverse Recovery Time	-(2)	t_{rr}	-	-	4	ns
Forward Recovery Voltage	-(3)	V_{FR}	-	-	1.75	V

Note:

(1) Pulse test: $t_p \leq 300\mu\text{s}$; $\delta \leq 0.02$.

(2) When switched from $I_F = 10\text{mA}$ to $I_R = 10\text{mA}$; $R_L = 100\Omega$; measured at $I_R = 1\text{mA}$.

(3) When switched from $I_F = 10\text{mA}$; $t_r = 20\text{ns}$.

Quick reference data

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Units
Reverse Current	$V_R = 80\text{V}$	I_R	-	-	0.5	μA
Reverse Voltage	-	V_R	-	-	100	V
Reverse Recovery Time	-(1)	t_{rr}	-	-	4	ns

Note:

(1) When switched from $I_F = 10\text{mA}$ to $I_R = 10\text{mA}$; $R_L = 100\Omega$; measured at $I_R = 1\text{mA}$.

Absolute Maximum Rating

Parameter	Conditions	Symbol	Min.	Max.	Units
Repetitive Peak Reverse Voltage	-	VRRM	-	100	V
Reverse Voltage	-	VR	-	100	
Forward Current	Tamb ≤ 25°C	IF	-	215	mA
Repetitive Peak Forward Current	-	IFRM	-	450	
Non-Repetitive Peak Forward Current	Square Wave ⁽¹⁾ tp = 1μs	IFSM	-	4	A
	tp = 1ms		-	1	
	tp = 1s		-	0.5	
Total Power Dissipation	Tamb ≤ 25°C	Ptot	-	250	mW
Forward Current	Tamb ≤ 25°C	IF	-	125	mA
Junction Temperature	-	TJ	-	+150	°C
Ambient Temperature	-	Tamb	-65	+150	
Storage Temperature	-	TSTG	-65	+150	

Notes:

[1] TJ = 25°C prior to surge.

[2] Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated and standard footprint.

[3] Reflow soldering is the only recommended soldering method.

Thermal Characteristics

Parameter	Conditions	Symbol	Min.	Max.	Units
Thermal Resistance from Junction to Ambient	In Free Air ^[1]	Rth(j-a)	-	500	K/W
Thermal Resistance from Junction to Tie-Point	-	Rth(j-t)	-	360	

Note:

[1] Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

Rating and Characteristic Curves

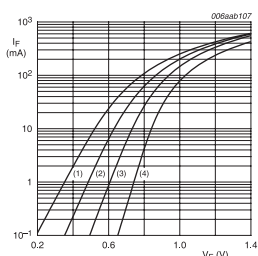


Fig 1. Forward current as a function of forward voltage; typical values

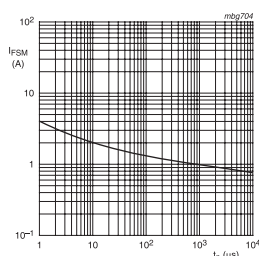


Fig 2. Non-repetitive peak forward current as a function of pulse duration; maximum values

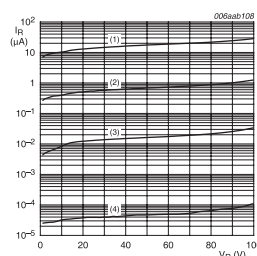


Fig 3. Reverse current as a function of reverse voltage; typical values

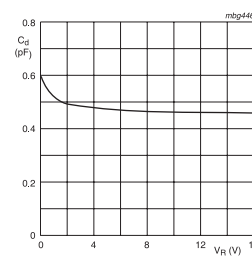
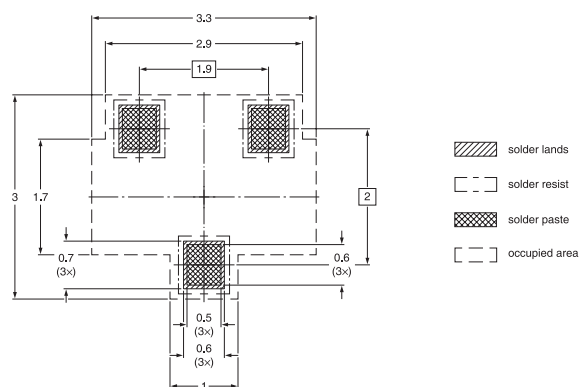


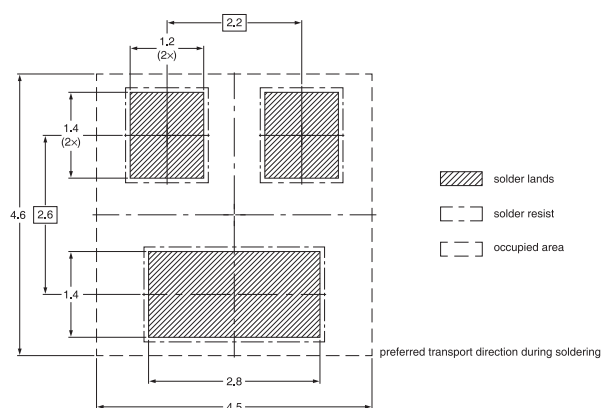
Fig 4. Diode capacitance as a function of reverse voltage; typical values

Soldering Diagram

**Reflow Soldering Footprint
(SOT23/TO-236AB)**

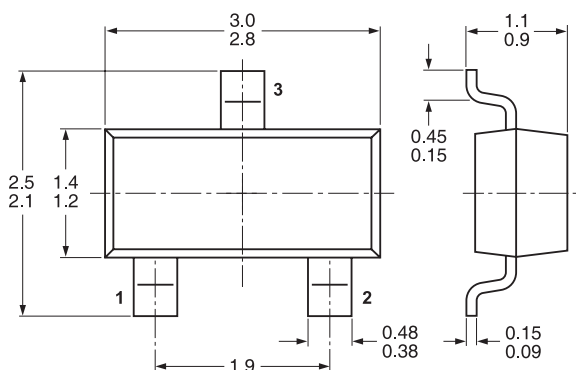


**Wave Soldering footprint
(SOT23/TO-236AB)**



Diagram

(SOT23/TO-236AB)



Part Number Table

Description	Part Number
Surface Mount Switching Diode	BAV70

Dimensions : Millimetres

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