

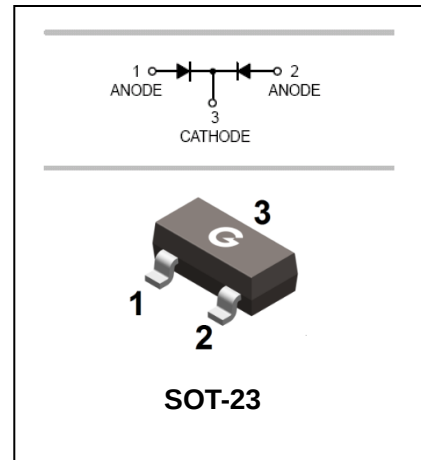
Low-leakage Double Diode

TBAV170

FEATURES

- Plastic SMD package
- Low leakage current: typ. 3pA
- Switching time: typ. 0.8us
- Continuous reverse voltage: max. 75V
- Repetitive peak reverse voltage: max. 85V
- Repetitive peak forward current: max. 500Ma
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF



APPLICATIONS

- Low-leakage current applications in surface mounted circuits

ORDERING INFORMATION

Type No.	Marking	Package Code
TBAV170	JX	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Limits	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	85	V
DC Reverse Voltage	V_R	75	V
Forward Continuous Current single diode loaded double diode loaded	I_F	215 125	mA
repetitive peak forward current	I_{FRM}	500	mA
non-repetitive peak forward current square wave; $T_j=25^{\circ}\text{C}$ prior to surge; $t_p=1\mu\text{s}$ $t_p=1\text{ms}$ $t_p=1\text{s}$	I_{FSM}	4 1 0.5	A
Power Dissipation	P_D	250	mW
Thermal Resistance Junction-to-Air ^{*1}	$R_{\theta JA}$	360	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Case ^{*1}	$R_{\theta JC}$	187	$^{\circ}\text{C/W}$
Thermal Resistance Junction-to-Lead ^{*1}	$R_{\theta JL}$	157	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-65 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150	$^{\circ}\text{C}$

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

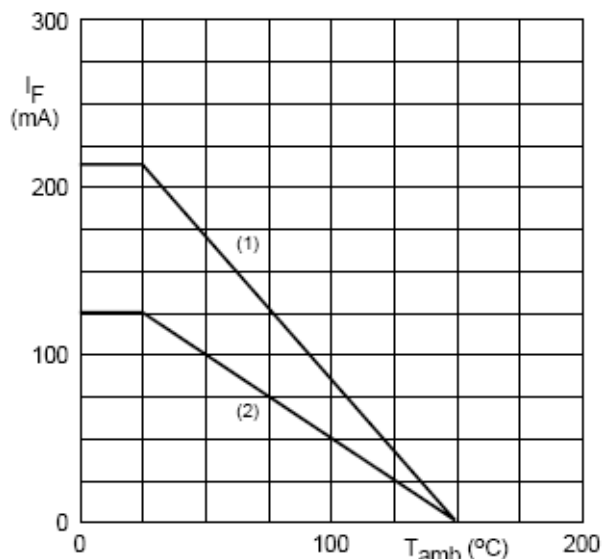
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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Typ	MAX	UNIT	Test Condition
Forward Voltage	V_F		900 1000 1100 1250	mV	$I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=50\text{mA}$ $I_F=150\text{mA}$
Reverse Leakage Current	I_R	0.003 3	5 80	nA	$V_R=75\text{V}$ $V_R=75\text{V}, T_J=150^\circ\text{C}$
Junction Capacitance	C_j	2		pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	0.8	3	μs	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R$

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

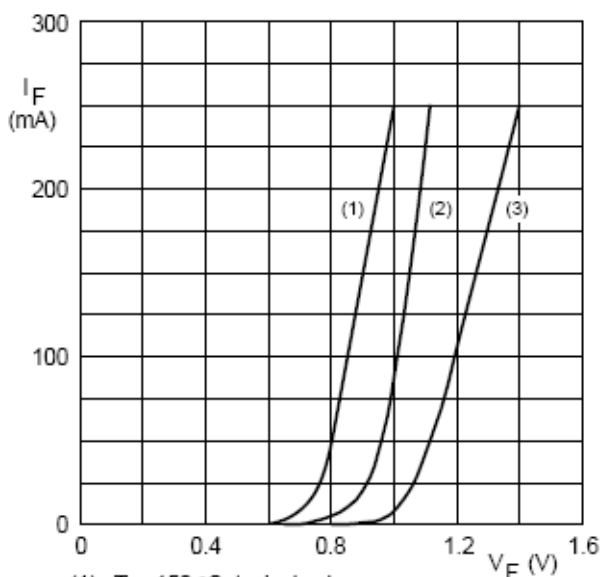


Device mounted on a FR4 printed-circuit board.

(1) Single diode loaded.

(2) Double diode loaded.

Maximum permissible continuous forward current as a function of ambient temperature.



(1) $T_J = 150^\circ\text{C}$; typical values.

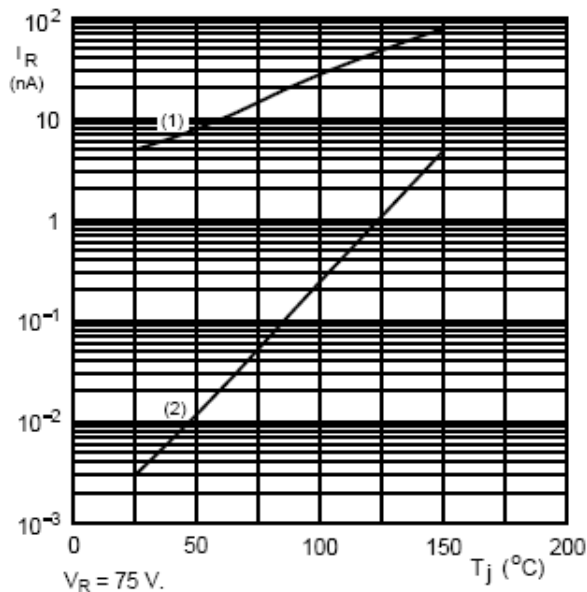
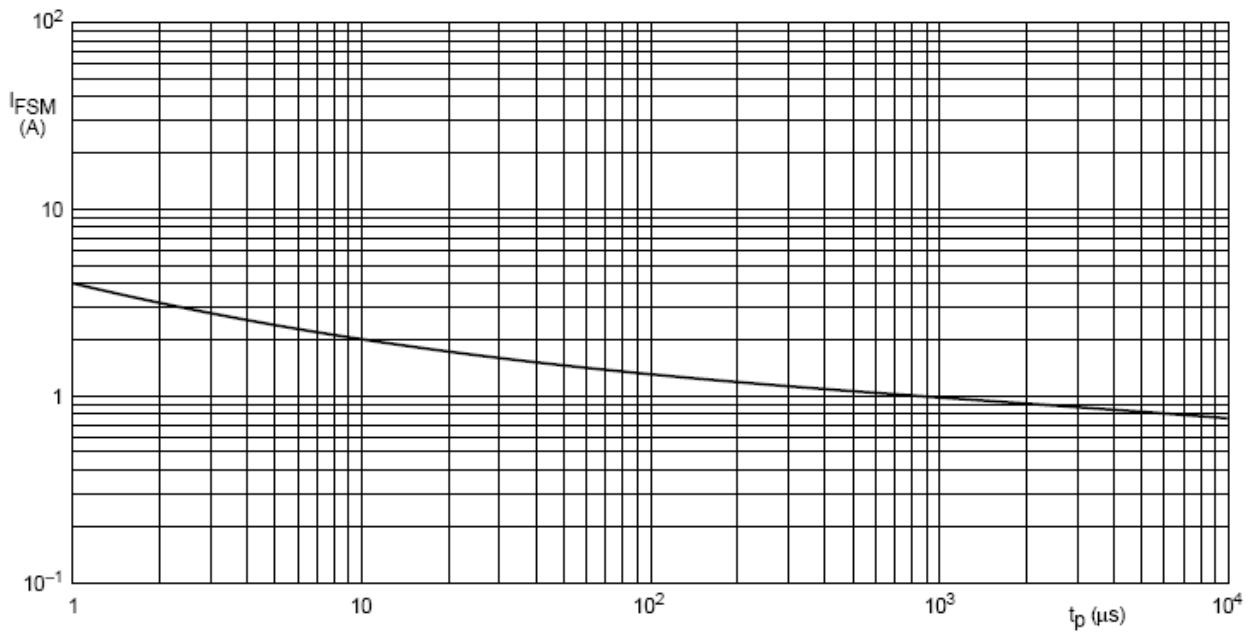
(2) $T_J = 25^\circ\text{C}$; typical values.

(3) $T_J = 25^\circ\text{C}$; maximum values.

Forward current as a function of forward voltage; per diode.

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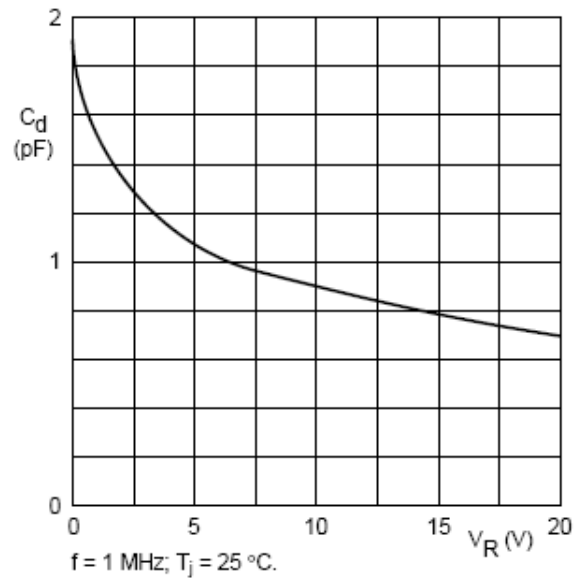


$V_R = 75$ V.

(1) Maximum values.

(2) Typical values.

Reverse current as a function of junction temperature; per diode.



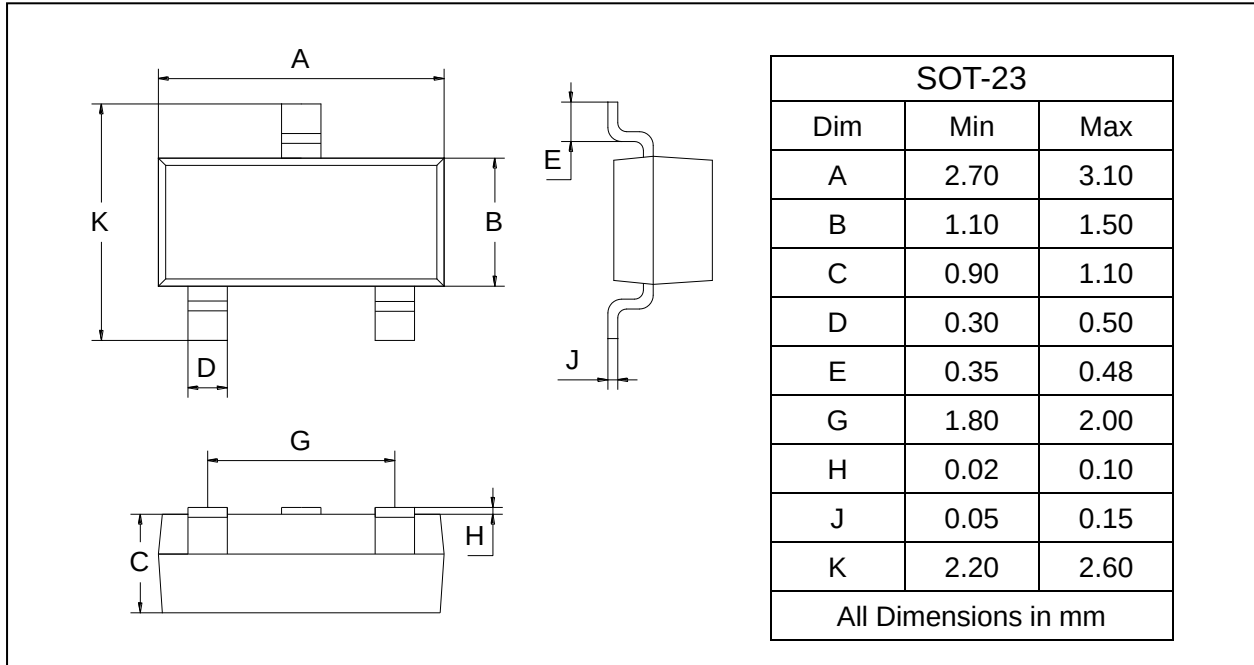
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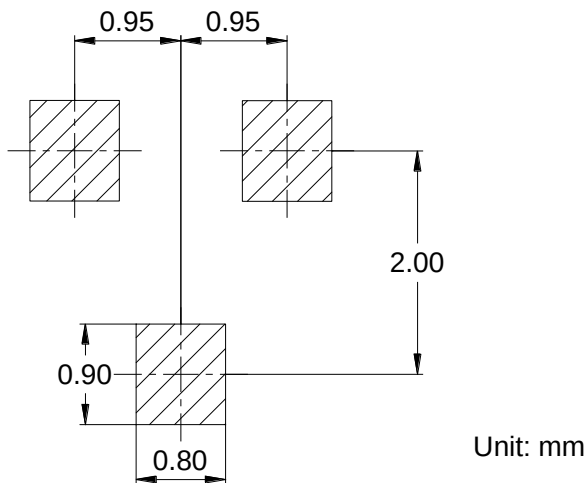
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
TBAV170	SOT-23	3000 pcs / Tape & Reel