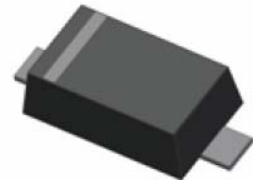
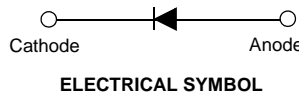


# BAT42XV2-BAT43XV2 Schottky Barrier Diodes

## Features

- Low Forward Voltage Drop
- Flat Lead, Surface Mount Device at 0.60mm Height
- Extremely Small Outline Plastic Package SOD523F
- Moisture Level Sensitivity 1
- Pb-free Version and RoHS Compliant
- Matte Tin (Sn) Lead Finish
- Green Mold Compound



BAT42XV2 Marking : 6B  
BAT43XV2 Marking : 7B

**SOD-523F**  
Band Indicates Cathode

## Absolute Maximum Ratings \* $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$V_{RRM}$	Maximum Repetitive Reverse Voltage	30	V
$V_R$	Maximum DC Blocking Voltage	30	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
$I_{FSM}$	Peak Forward Surge Current	4	A
$T_J$	Operating Junction Temperature	+125	$^\circ\text{C}$
$T_{STG}$	Storage Temperature Range	-65 to +125	$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

## Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	$^\circ\text{C}/\text{W}$

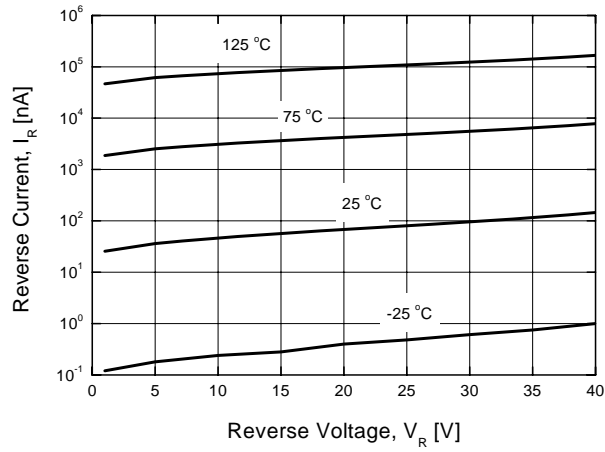
\* Device mounted on FR-4 PCB minimum land pad.

## Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

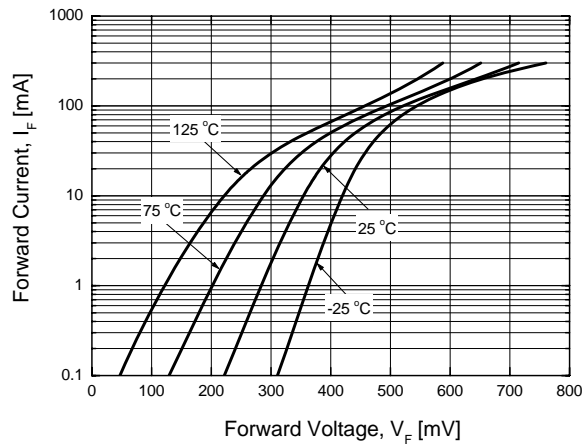
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_R$	Breakdown Voltage	$I_R=100\mu\text{A}$	30			V
$I_R$	Reverse Leakage Current	$V_R=25\text{V}$			500	nA
$V_F$	Forward Voltage	BAT42XV2 $I_F=10\text{mA}$ $I_F=50\text{mA}$ BAT43XV2 $I_F=2\text{mA}$ $I_F=15\text{mA}$ BAT42XV2, BAT43XV2 $I_F=200\text{mA}$	0.26		0.40 0.65 0.33 0.45 1.0	V
$T_{RR}$	Reverse Recovery Time	$I_F=I_R=10\text{mA}$ $R_L=100\Omega$ $I_{RR}=1\text{mA}$		5		nS
C	Capacitance	$V_R=1\text{V}$ , $f=1\text{MHz}$		7		pF

## Typical Performance Characteristics

### Reverse Current vs Reverse Voltage

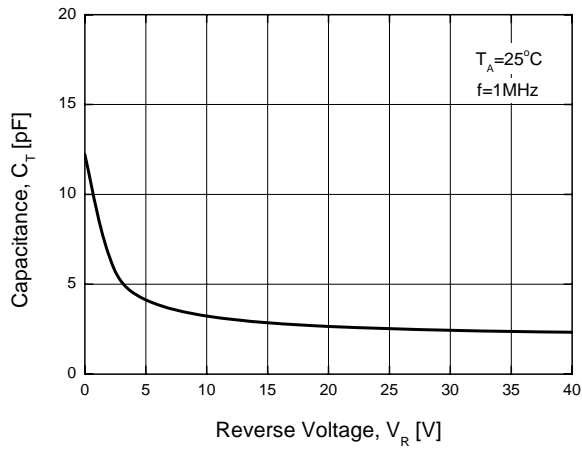


### Forward Voltage vs Forward Current

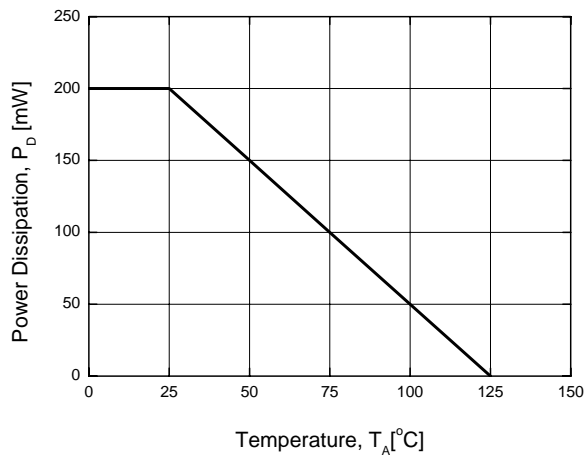


Typical Performance Characteristics (Continued)

Total Capacitance

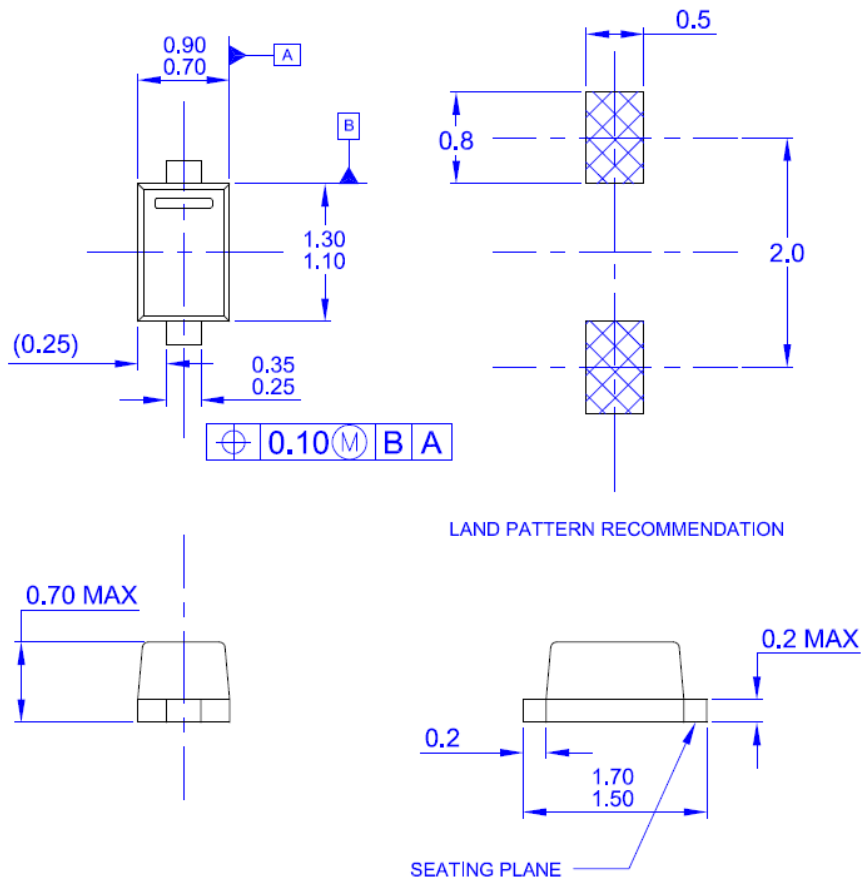


Power Derating Curve



Physical Dimension

SOD-523F









NOTES: UNLESS OTHERWISE SPECIFIED

- A) PACKAGE REFERENCE: THIS PACKAGE OUTLINE CONFORMS TO JEITA SC-79.
- B) ALL DIMENSIONS ARE IN MILLIMETERS.
- C) DRAWING CONFORMS TO ASME Y14.5M - 1994
- D) DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR EXTRUSIONS.
- E) LANDPATTERN RECOMMENDATION IS BASED ON IPC7351A STANDARD SOD1609X65M.
- F) DRAWING NUMBER AND REVISION: MKT-SOD523F1rev1



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	Power-SPM™		

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Preliminary	First Production	Datasheet contains preliminary data; supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve design.
No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
Obsolete	Not In Production	Datasheet contains specifications on a product that is discontinued by Fairchild Semiconductor. The datasheet is for reference information only.