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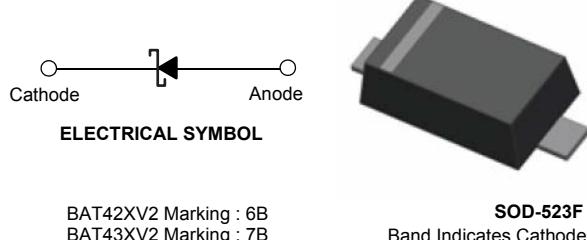
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BAT42XV2-BAT43XV2 Schottky Barrier Diodes

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



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	$^\circ\text{C}/\text{W}$

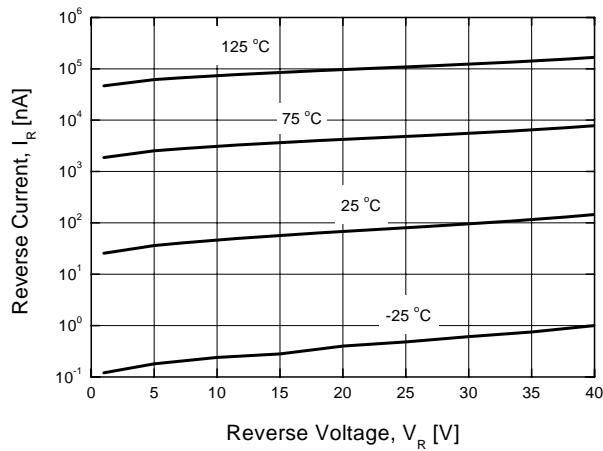
* Device mounted on FR-4 PCB minimum land pad.

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

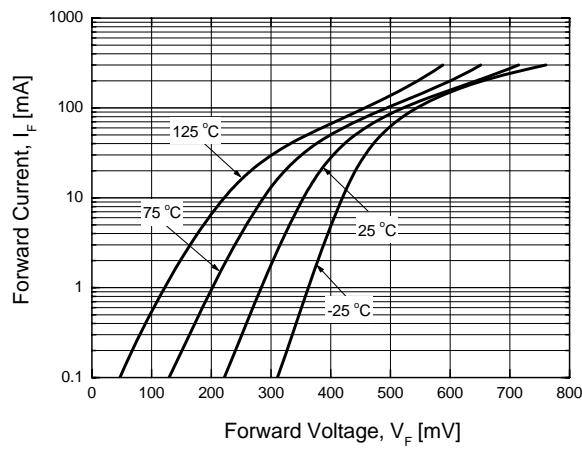
Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_R	Breakdown Voltage	$I_R=100\mu\text{A}$	30			V
I_R	Reverse Leakage Current	$V_R=25\text{V}$			500	nA
V_F	Forward Voltage BAT42XV2 BAT43XV2 BAT42XV2, BAT43XV2	$I_F=10\text{mA}$	0.26		0.40	V
		$I_F=50\text{mA}$			0.65	
		$I_F=2\text{mA}$			0.33	
		$I_F=15\text{mA}$			0.45	
		$I_F=200\text{mA}$			1.0	
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

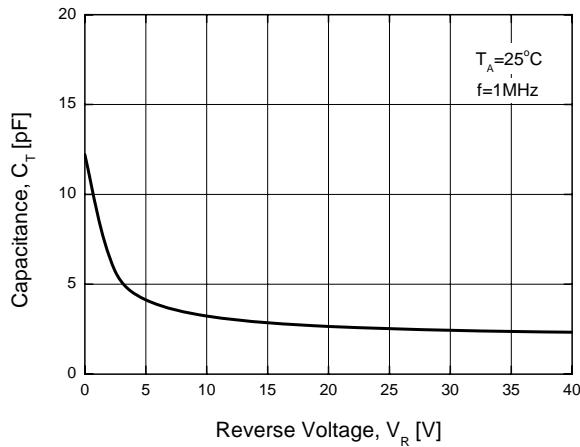


Forward Voltage vs Forward Current

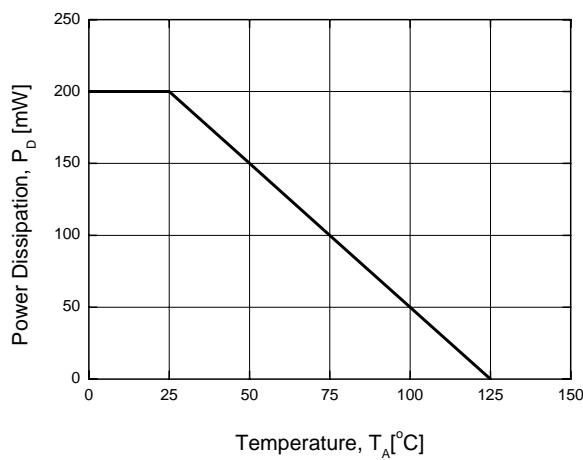


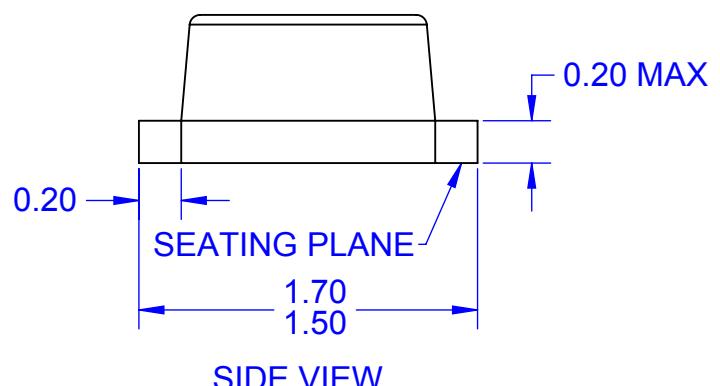
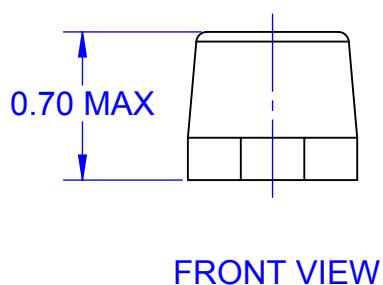
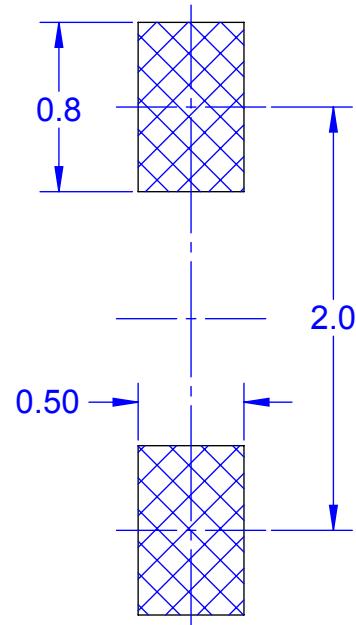
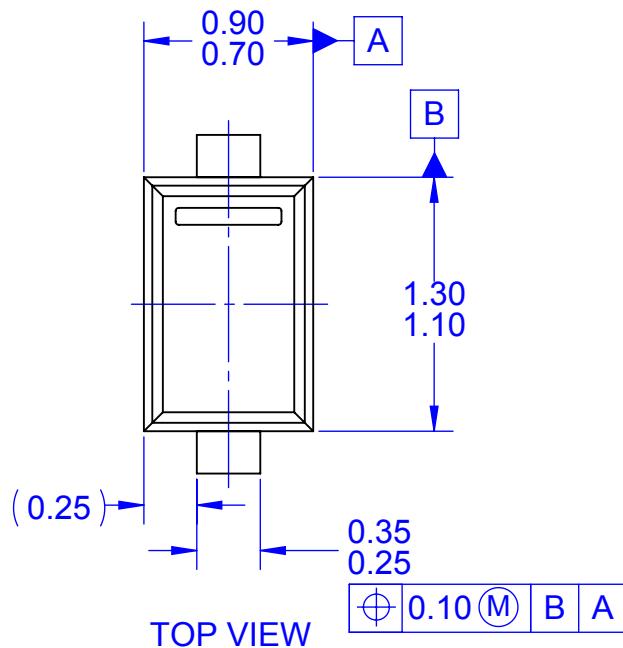
Typical Performance Characteristics (Continued)

Total Capacitance



Power Derating Curve





NOTES:

- A. CONFORMS TO JEITA SC-79
- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DRAWING CONFORMS TO ASME Y14.5M-2009
- D. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS.
- E. LAND PATTERN RECOMMENDATION IS BASED ON IPC7351A STANDARD SOD1609X65M
- F. DRAWING FILENAME: MKT-SOD523F1rev2



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