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Please note: As part of the Fairchild Semiconductor integration, some of the Fairchild orderable part numbers will need to change in order to meet ON Semiconductor's system requirements. Since the ON Semiconductor product management systems do not have the ability to manage part nomenclature that utilizes an underscore (_), the underscore (_) in the Fairchild part numbers will be changed to a dash (-). This document may contain device numbers with an underscore (_). Please check the ON Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.onsemi.com. Please email any questions regarding the system integration to Fairchild guestions@onsemi.com.

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January 2010

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

Band Indicates Cathode

Absolute Maximum Ratings * T_A=25°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	А
TJ	Operating Junction Temperature	+125	°C
T _{STG}	Storage Temperature Range	-65 to +125	°C

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

Thermal Characteristics T_A=25°C unless otherwise noted

Symbol	Parameter	Value	Units
P_{D}	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	500	°C/W

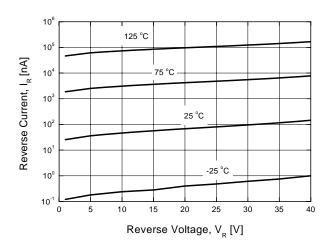
^{*} Device mounted on FR-4 PCB minimum land pad.

Electrical Characteristics T_A=25°C unless otherwise noted

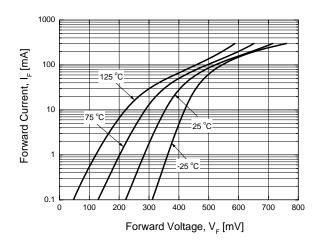
Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
BV _R	Breakdown Voltage	I _R =100μA	30			V
I _R	Reverse Leakage Current	V _R =25V			500	nA
V _F	Forward Voltage BAT42XV2	I _F =10mA			0.40	
		I _F =50mA			0.65	
	BAT43XV2		0.26		0.33	V
		I _F =15mA			0.45	
	BAT42XV2, BAT43XV2	I _F =200mA			1.0	
T _{RR}	Reverse Recovery Time	I _F =I _R =10mA		5		nS
		$R_L=100\Omega$				
		I _{RR} =1mA				
С	Capacitance	V _R =1V, f=1MHz		7		pF

Typical Performance Characteristics

Reverse Current vs Reverse Voltage

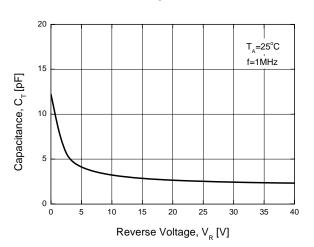


Forward Voltage vs Forward Current

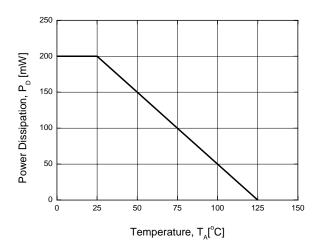


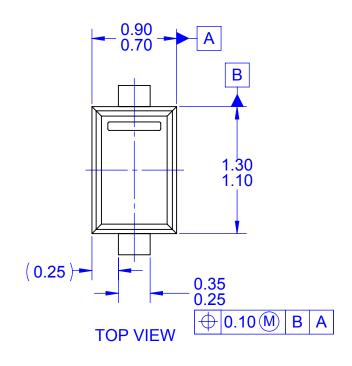
Typical Performance Characteristics (Continued)

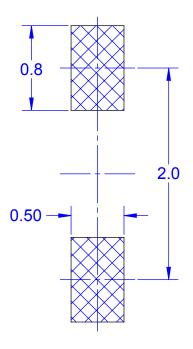
Total Capacitance



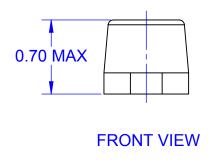
Power Derating Curve

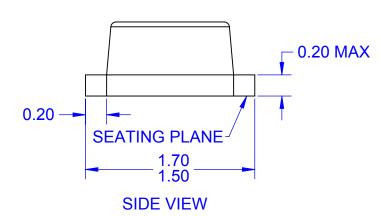






LAND PATTERN RECOMMENDATION





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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