

**SOD-323 Plastic-Encapsulate Diodes****BAT42WS/BAT43WS** SCHOTTKY DIODES

SOD-323

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**FEATURES**

Low Forward Voltage Drop  
 Fast Switching Time  
 Surface Mount Package Ideally Suited for  
 Automatic Insertion  
 Also Available in Lead Free Version

**MARKING:** BAT42WS S7  
 BAT43WS S8

**Maximum Ratings and Electrical Characteristics, Single Diode @T<sub>A</sub>=25°C**

Parameter	Symbol	BAT42WS/BAT43WS	Unit
Peak Repetitive Peak reverse voltage	V <sub>RRM</sub>	30	V
Working Peak	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>R</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Forward Continuous Current	I <sub>FM</sub>	200	mA
Repetitive Peak Forward Current@t<1.0s	I <sub>FRM</sub>	500	mA
Peak forward surge current @<10ms	I <sub>FSM</sub>	4.0	A
Power Dissipation	P <sub>d</sub>	200	mW
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	625	K/W
Storage temperature	T <sub>STG</sub>	-55~+125	°C

**Electrical Ratings @T<sub>A</sub>=25°C**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Breakdown Voltage	V <sub>(BR)R</sub>	30			V	I <sub>R</sub> =100μA
Forward voltage	All Types			1.0	V	I <sub>F</sub> =200mA
	BAT42WS			0.4	V	I <sub>F</sub> =10mA
	BAT42WS			0.65	V	I <sub>F</sub> =50mA
	BAT43WS	0.26		0.33	V	I <sub>F</sub> =2mA
	BAT43WS			0.45	V	I <sub>F</sub> =15mA
Reverse current	I <sub>R</sub>			0.5	μA	V <sub>R</sub> =25V
Capacitance between terminals	C <sub>T</sub>			10	pF	V <sub>R</sub> =1.0V,f=1.0MHz
Reverse Recovery Time	t <sub>rr</sub>			5	ns	I <sub>F</sub> =I <sub>R</sub> =10mA I <sub>rr</sub> =0.1X I <sub>R</sub> ,R <sub>L</sub> =100Ω

# Typical Characteristics

# BAT42WS/BAT43WS

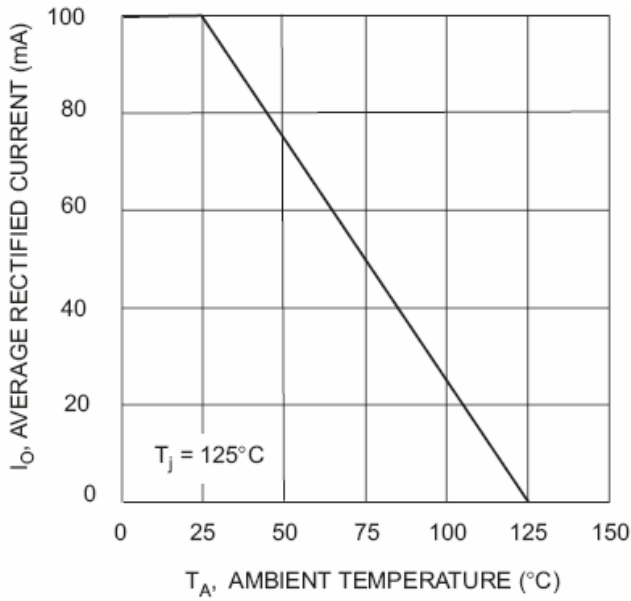


Fig. 1 Forward Current Derating Curve

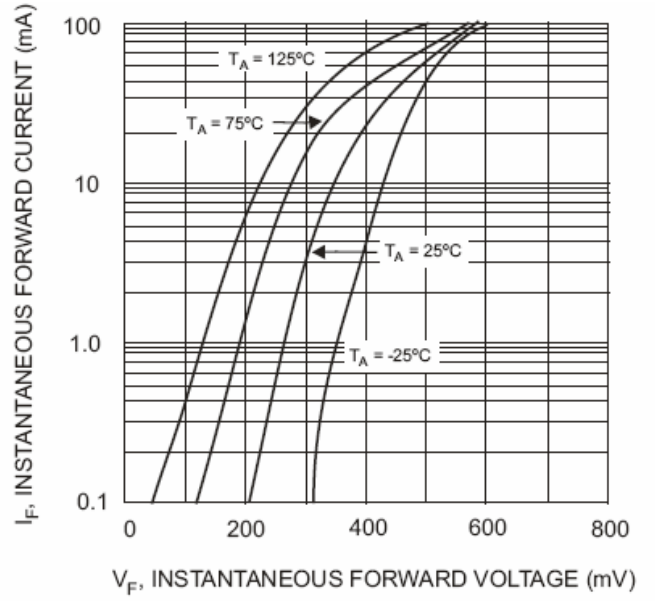


Fig. 2 Typical Forward Characteristics

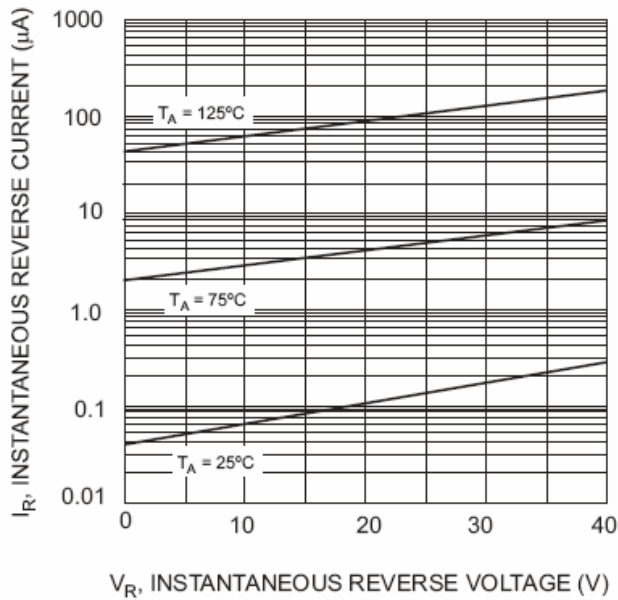


Fig. 3 Typical Reverse Characteristics

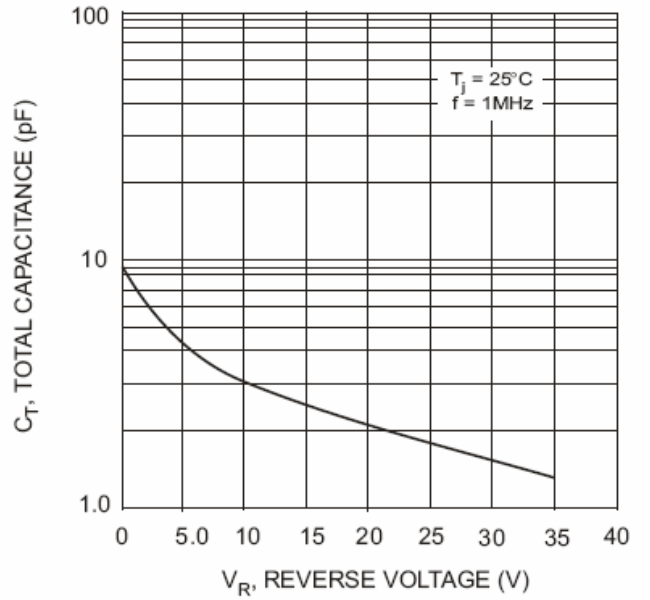


Fig. 4 Total Capacitance vs. Reverse Voltage