



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOD-523 Plastic-Encapsulate Diodes

BAT54X Schottky barrier Diodes

SOD-523

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FEATURES

- Extremely Fast Switching Speed
- Low forward voltage – 0.35 V (Typ) @ $I_F = 10 \text{ mAdc}$

MARKING: JV

Maximum Ratings and Electrical Characteristics, Single Diode @ $T_A = 25^\circ\text{C}$

Parameter	Symbol	Limits	Unit
DC reverse voltage	V_R	30	V
Forward current	I_F	200	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive peak forward current (t=1us)	I_{FSM}	600	mA
Total Device Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	635	$^\circ\text{C}/\text{W}$
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	150	$^\circ\text{C}$

Electrical Ratings @ $T_A = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	30				$I_R = 10\mu\text{A}$
Forward voltage	V_{F1}		0.22	0.24	V	$I_F = 0.1\text{mA}$
	V_{F2}		0.41	0.5		$I_F = 30\text{mA}$
	V_{F3}		0.52	0.8		$I_F = 100\text{mA}$
	V_{F4}		0.29	0.32		$I_F = 1.0\text{mA}$
	V_{F5}		0.35	0.40		$I_F = 10\text{mA}$
Reverse Recovery Time	t_{rr}			5	ns	$I_F = I_R = 10\text{mAdc}, I_{R(REC)} = 1\text{mAdc}$
Reverse current	I_R		0.5	2.0	μA	$V_R = 25\text{V}$
Total Capacitance	C_T		7.6	10	pF	$V_R = 1\text{V}, f = 1\text{MHz}$

Typical Characteristics

BAT54X

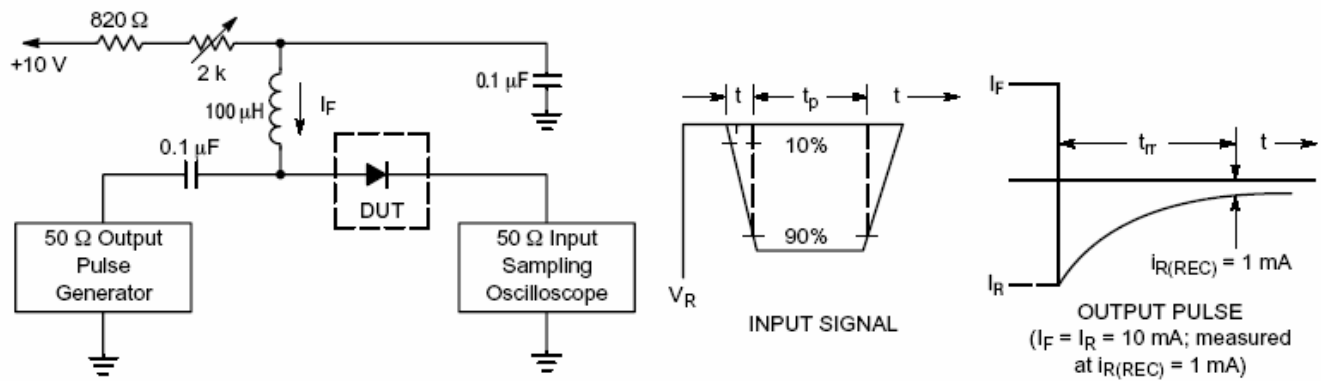


Figure 1. Recovery Time Equivalent Test Circuit

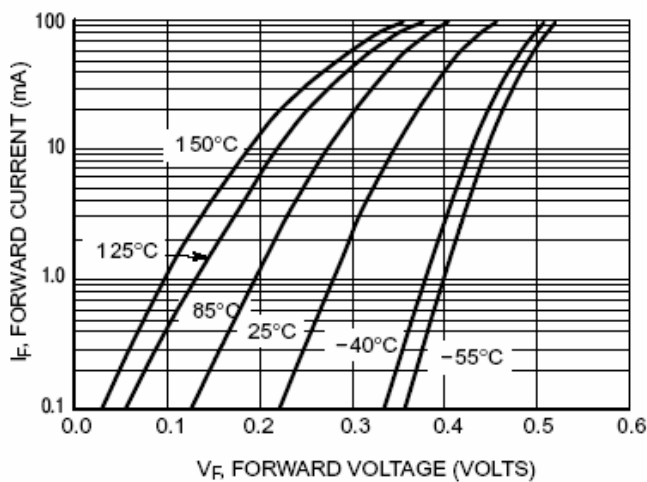


Figure 2. Forward Voltage

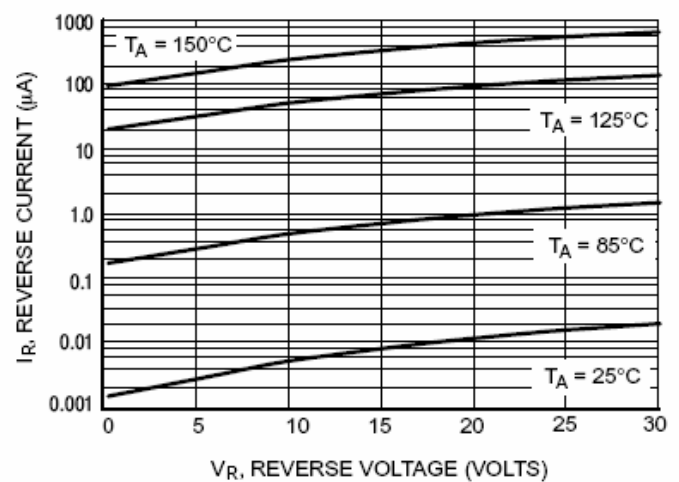


Figure 3. Leakage Current

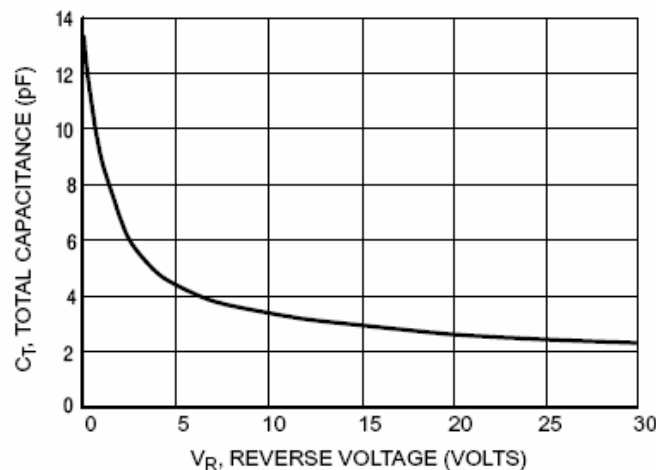


Figure 4. Total Capacitance