



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOD-123 Plastic-Encapsulate Diodes

BAT42W/BAT43W SCHOTTKY DIODES

SOD-123



FEATURES

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automatic Insertion

MARKING: BAT42W S7
BAT43W S8

Maximum Ratings and Electrical Characteristics, Single Diode @T_A=25°C

Parameter	Symbol	BAT42W/BAT43W	Unit
Peak Repetitive Peak reverse voltage Working Peak DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current	I_{FM}	200	mA
Repetitive Peak Forward Current@t<1.0s	I_{FRM}	500	mA
Peak forward surge current @<10ms	I_{FSM}	4.0	A
Power Dissipation	P_d	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	K/W
Storage temperature	T_{STG}	-55~+125	°C

Electrical Ratings @T_A=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Breakdown Voltage	$V_{(BR)R}$	30			V	$I_R=100\mu A$
Forward voltage	All Types V_F			1.0	V	$I_F=200mA$
	BAT42W V_F			0.4	V	$I_F=10mA$
	BAT42W V_F			0.65	V	$I_F=50mA$
	BAT43W V_F	0.26		0.33	V	$I_F=2mA$
	BAT43W V_F			0.45	V	$I_F=15mA$
Reverse current	I_R			0.5	μA	$V_R=25V$
Capacitance between terminals	C_T			10	pF	$V_R=1.0V, f=1.0MHz$
Reverse Recovery Time	t_{rr}			5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$

Typical Characteristics

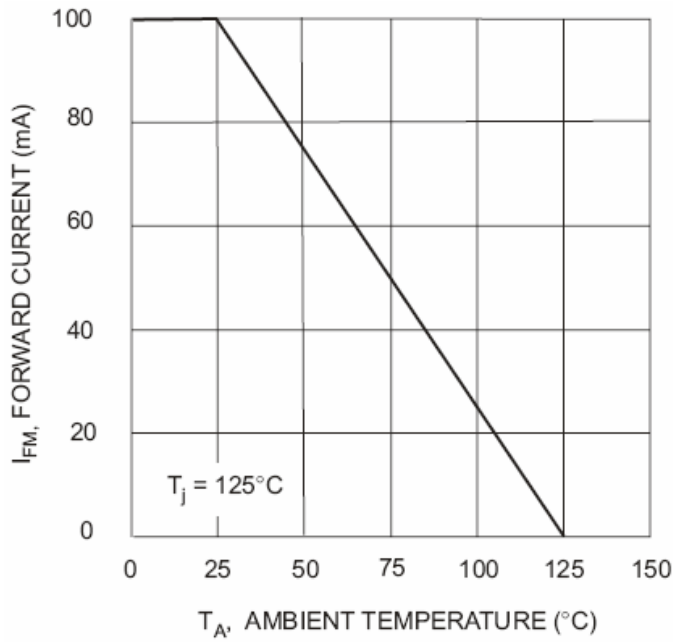


Fig. 1 Forward Current Derating Curve

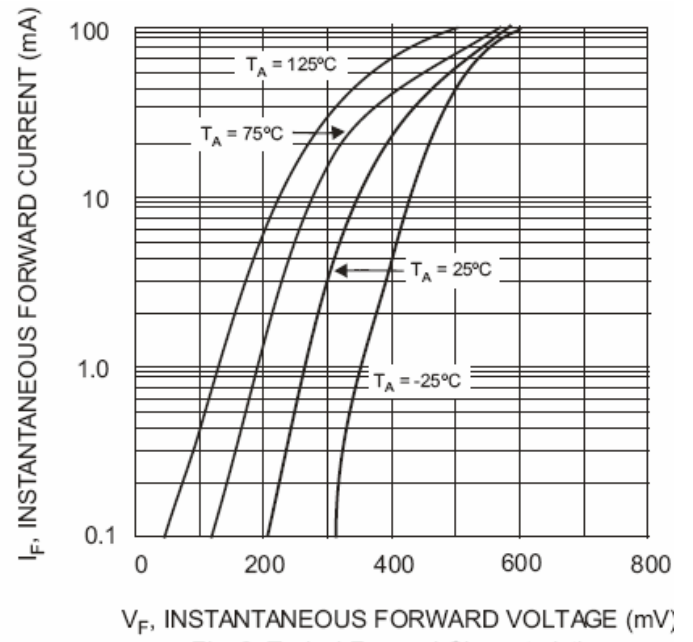


Fig. 2 Typical Forward Characteristics

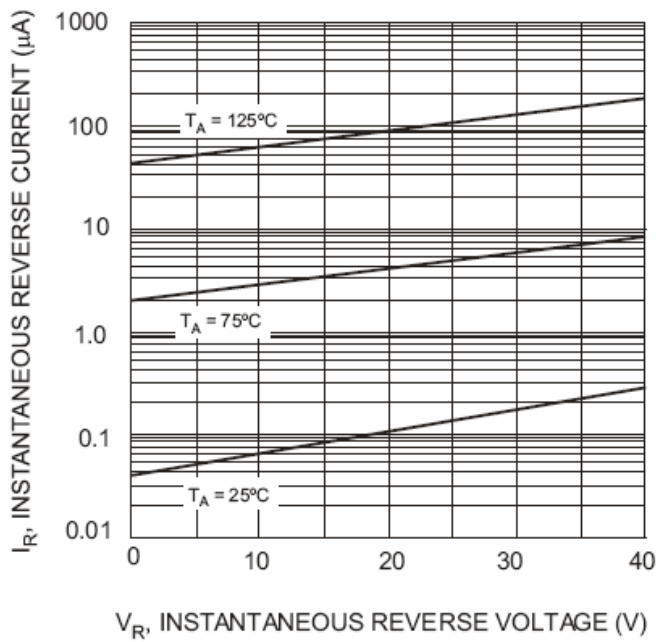


Fig. 3 Typical Reverse Characteristics

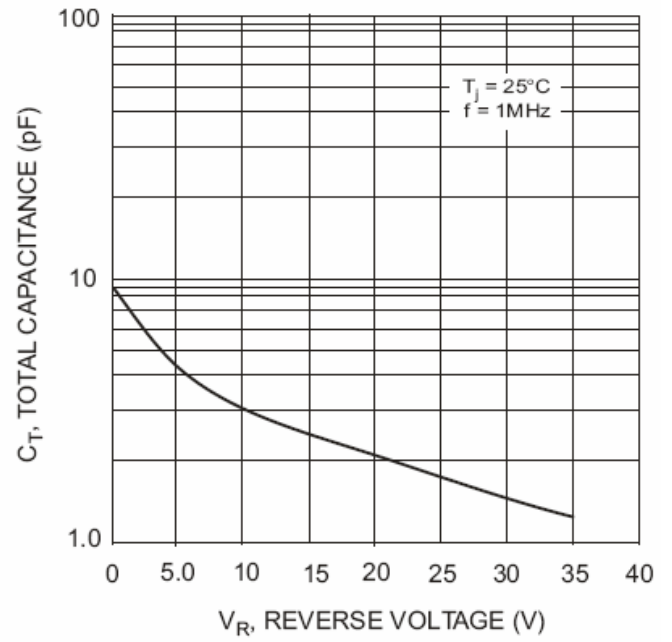


Fig. 4 Total Capacitance vs. Reverse Voltage