

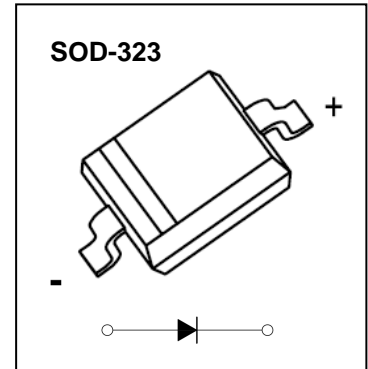
SOD-323 Plastic-Encapsulate Diodes

FEATURES

For use in low voltage, high frequency inverters  
Free wheeling, and polarity protection applications

MARKING:

TKB5817WS :SJ	TKB5818WS :SK	TKB5819WS :SL



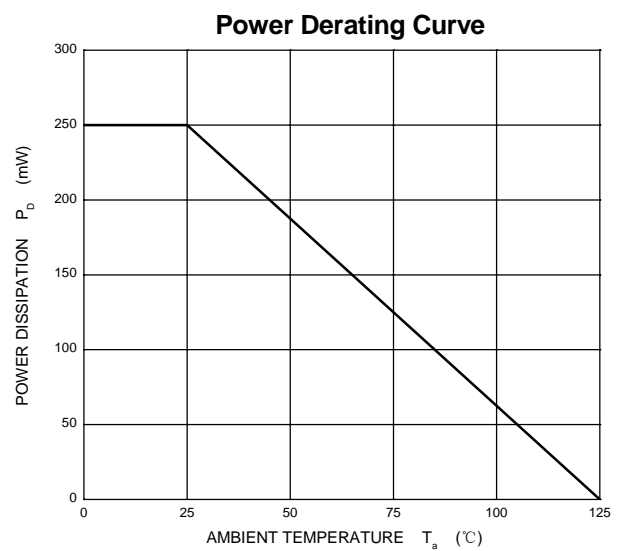
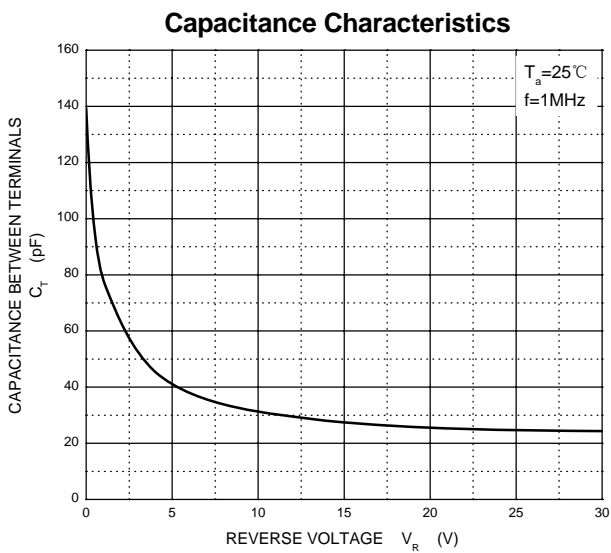
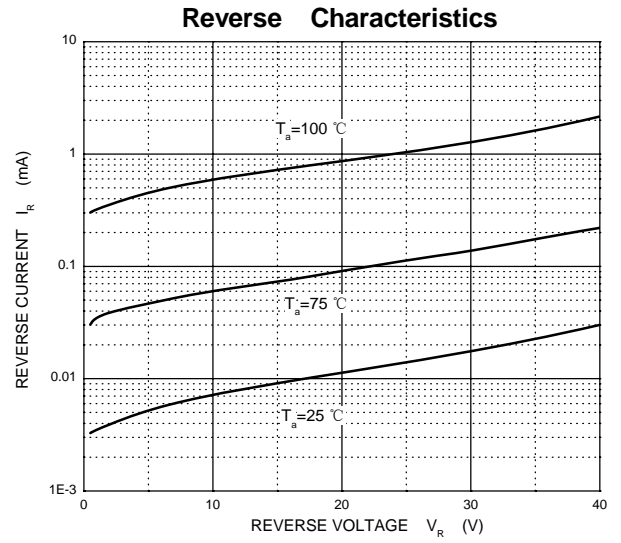
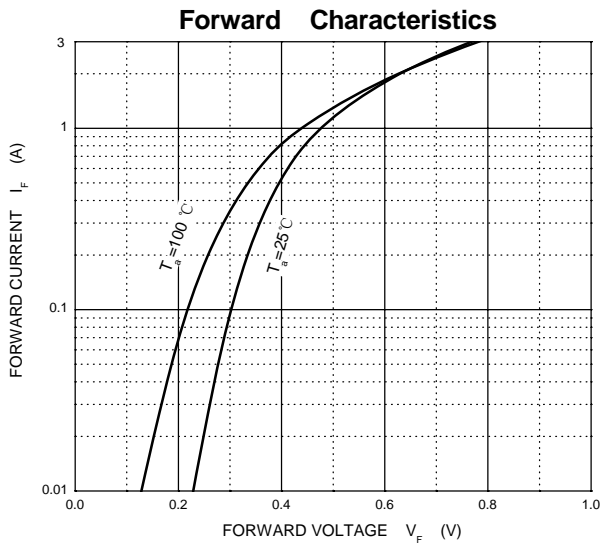
Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25°C

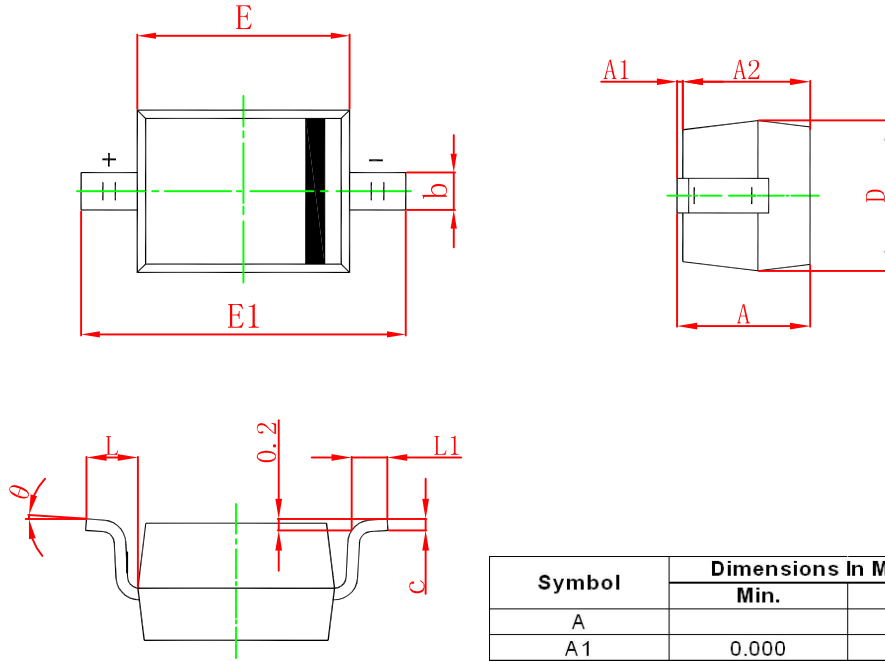
Parameter	Symbol	TKB5817WS	TKB5818WS	TKB5819WS	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	20	30	40	V
Peak repetitive peak reverse voltage	$V_{RRM}$	20	30	40	V
Working peak reverse voltage	$V_{RWM}$				
DC blocking voltage	$V_R$				
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	$I_O$	1			A
Forward surge current 4 ms, 100% duty cycle	$I_{FSM}$	9			A
Repetitive peak forward current	$I_{FRM}$	1.5			A
Power dissipation	$P_d$	250			mW
Thermal resistance junction to ambient	$R_{\theta JA}$	400			°C/W
Junction temperature	$T_J$	125			°C
Storage temperature	$T_{STG}$	-55~+150			°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1mA$			V
		TKB5817WS	20		
		TKB5818WS TKB5819WS	30 40		
Reverse voltage leakage current	$I_R$	$V_R=20V$ TKB5817WS		1	mA
		$V_R=30V$ TKB5818WS			
		$V_R=40V$ TKB5819WS			
Forward voltage	$V_F$	TKB5817WS	$I_F=1A$	0.45	V
			$I_F=3A$	0.75	
		TKB5818WS	$I_F=1A$	0.55	V
			$I_F=3A$	0.875	
		TKB5819WS	$I_F=1A$	0.6	V
			$I_F=3A$	0.9	
Diode capacitance	$C_D$	$V_R=4V, f=1MHz$		120	pF

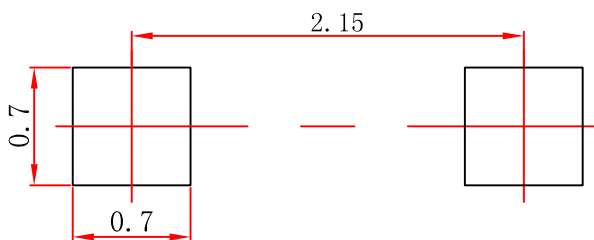
### Typical Characteristics





Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

### SOD-323 Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.