Advanced Schottky Barrier Diodes

ASD723S2

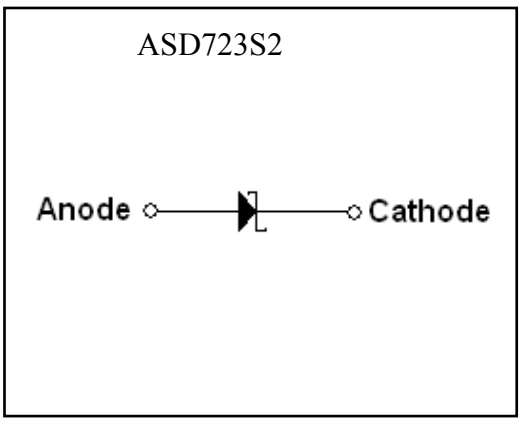
Features:

- Low turn-on voltage
- Fast switching
- Pb-free lead plating and halogen-free package

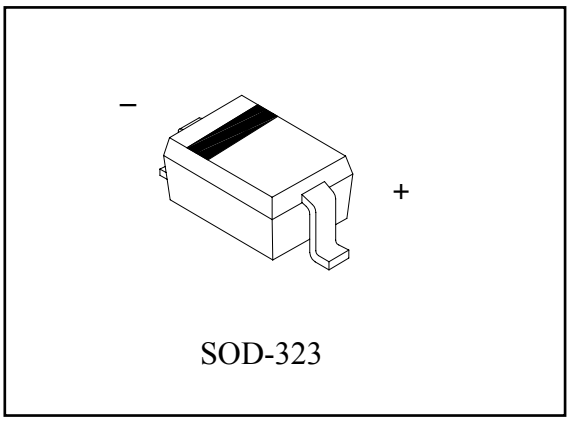
Mechanical data:

- Case: Molded Plastic, JEDEC SOD-323.
- Terminals : Pure tin plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band
- Mounting position: Any
- Weight: 4.8mg (approximately)

Symbol



Outline



Ordering Information

Device	Package	Shipping
ASD723S2-0-T1-G	SOD-323 (Pb-free lead plating and halogen-free package)	3000 pcs / tape & reel

Environment friendly grade : S for RoHS compliant products, G for RoHS compliant and green compound products

Packing spec, T1 : 3000 pcs / tape & reel, 7” reel

Product rank, zero for no rank products

Product name

Absolute Maximum Ratings(Ta=25℃)

Characteristics	Symbol	Value	Unit
Non-repetitive Peak Reverse Voltage	V_{RM}	30	V
Forward Current	I_{FM}	200	mA
Forward Surge Current @ 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	1	A
Power dissipation @ T_C=25°C	P_D	250	mW
Thermal Resistance, Junction to ambient	$R_{\theta JA}$	500	°C/W
Capacitance between Terminals @ f=1MHz and applied 10V_{DC} Reverse Voltage	C_T	15	pF
Operating Junction and Storage Temperature Range	Tj, Tstg	-65 to +150	°C

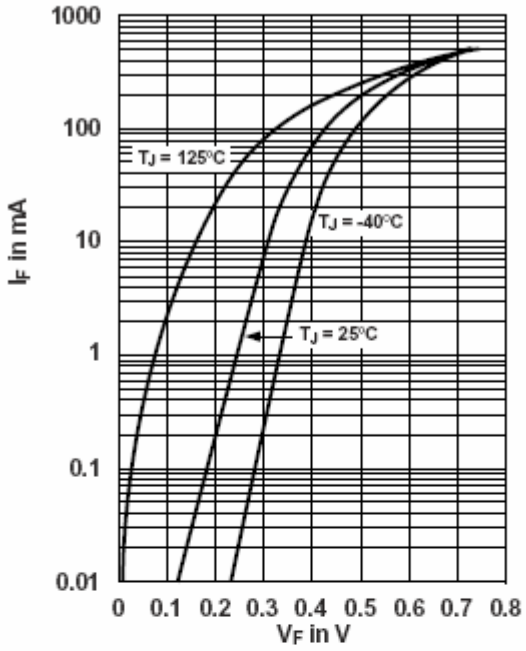
Electrical Characteristics (T_A=25°C, unless otherwise noted)

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Reverse Breakdown	I_R=100μA	V_R	30	-	-	V
*Forward Voltage	I_F = 2mA	V_F	-	260	-	mV
	I_F = 15mA		-	320	-	
	I_F = 100mA		-	420	-	
	I_F = 200mA		-	490	550	
Reverse Current	V_R = 30V	I_R	-	-	5	μA

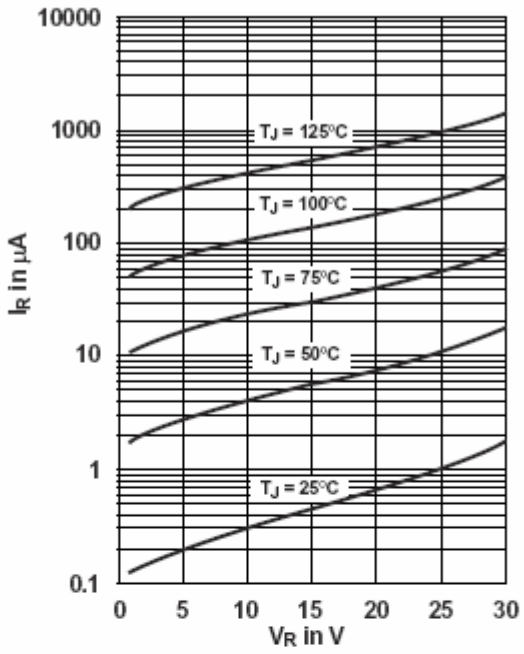
*Pulse Test: Pulse Width ≤380μs, Duty Cycle≤2%

Characteristic Curves

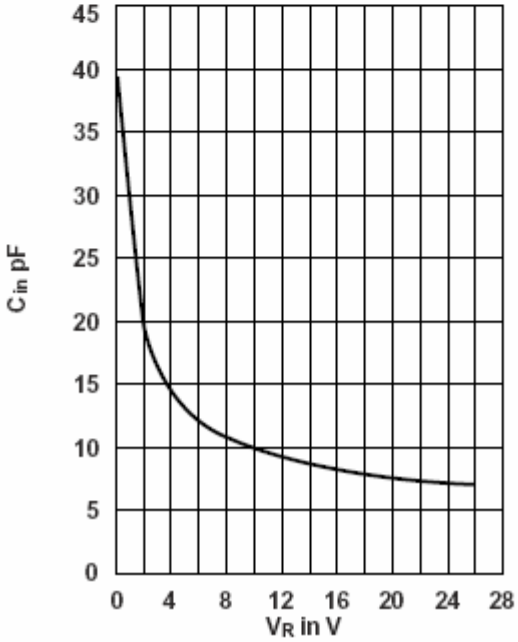
Forward Voltage Forward Current at Various Temperatures (Typical Values)



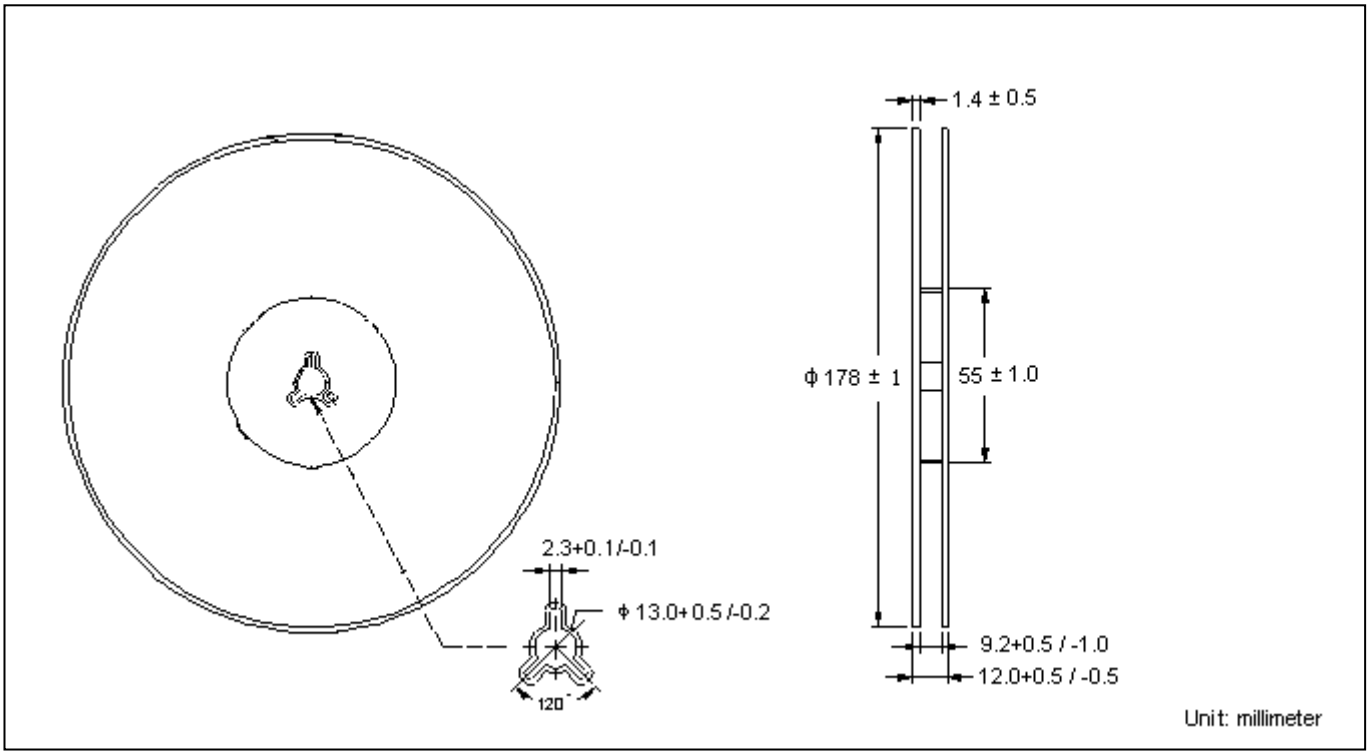
Typical Variation of Reverse Current at Various Temperatures



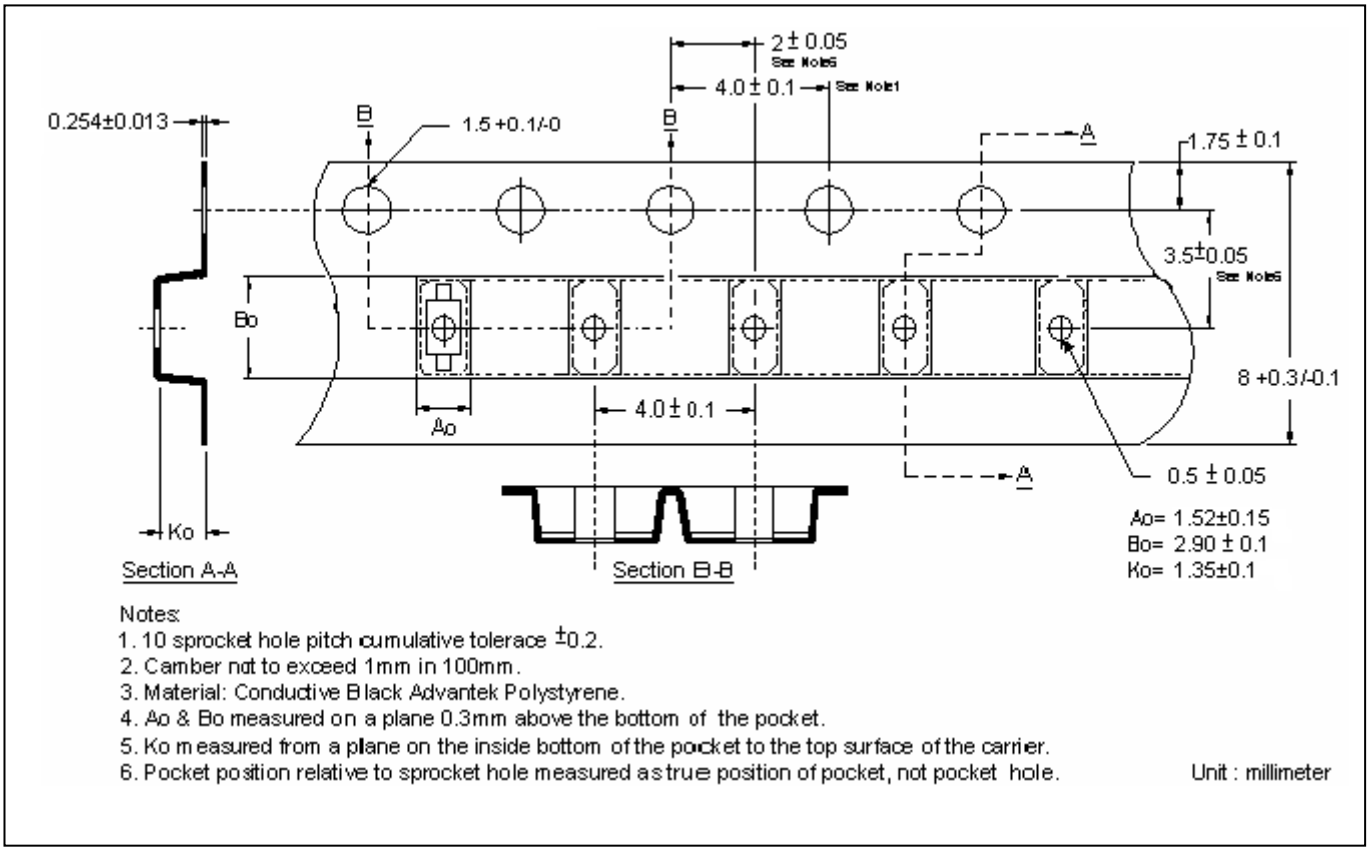
Typical Capacitance °C vs. Reverse Applied Voltage V_R



Reel Dimension



Carrier Tape Dimension



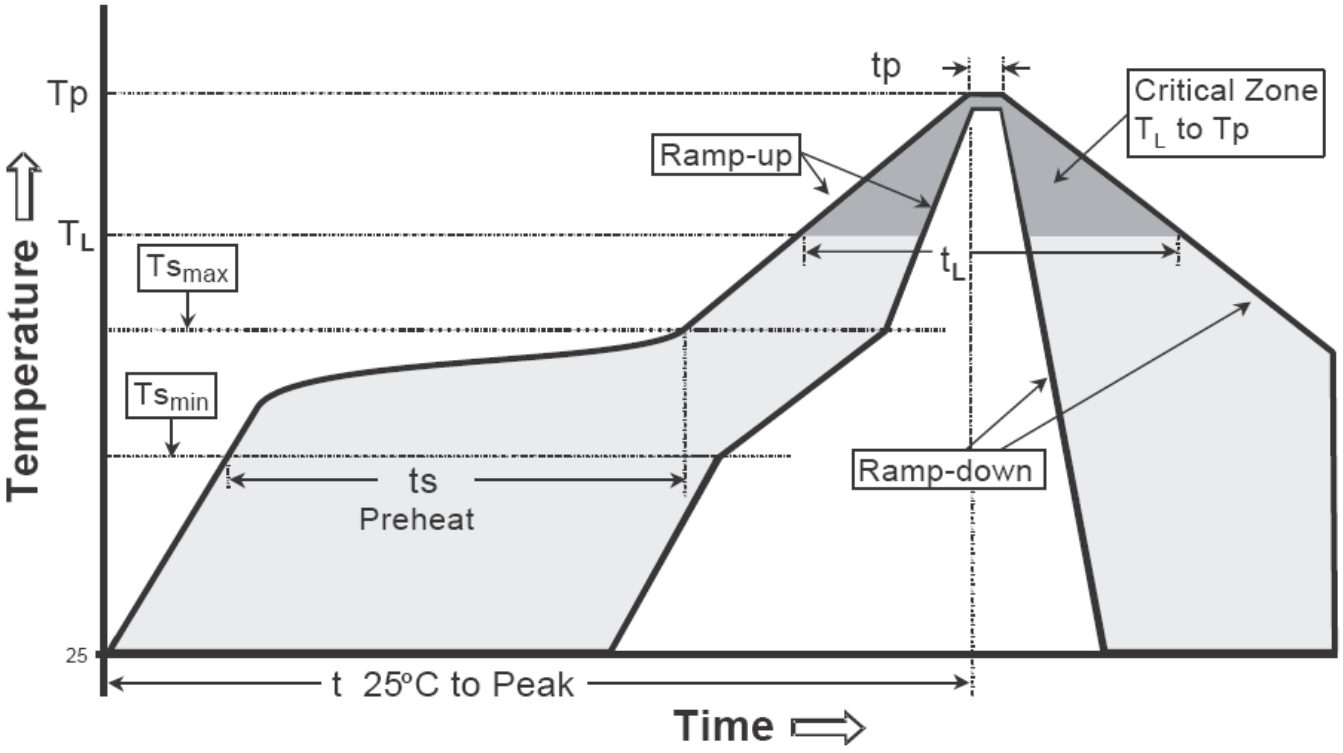
Notes:
1. 10 sprocket hole pitch cumulative tolerace ±0.2.
2. Camber not to exceed 1mm in 100mm.
3. Material: Conductive Black Advantek Polystyrene.
4. Ao & Bo measured on a plane 0.3mm above the bottom of the pocket.
5. Ko measured from a plane on the inside bottom of the pocket to the top surface of the carrier.
6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.

Unit : millimeter

Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

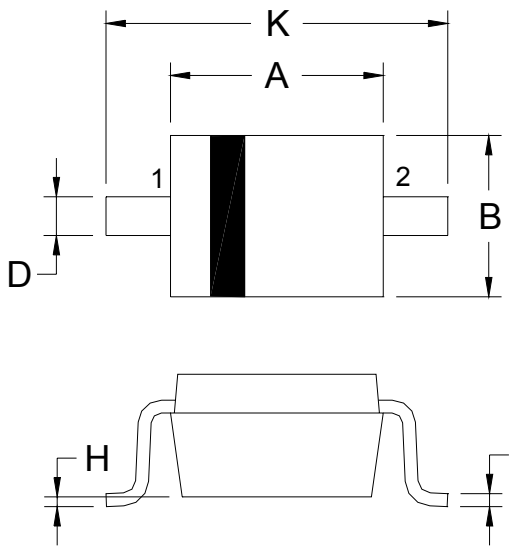
Recommended temperature profile for IR reflow

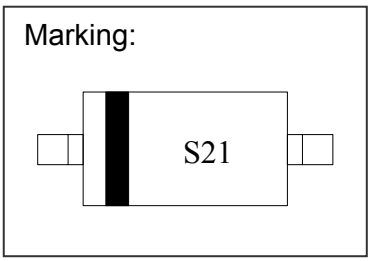


Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat −Temperature Min(T_S min) −Temperature Max(T_S max) −Time($t_{s\ min}$ to $t_{s\ max}$)	 100°C 150°C 60-120 seconds	 150°C 200°C 60-180 seconds
Time maintained above: −Temperature (T_L) − Time (t_L)	 183°C 60-150 seconds	 217°C 60-150 seconds
Peak Temperature(T_P)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	10-30 seconds	20-40 seconds
Ramp down rate	6°C/second max.	6°C/second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

SOD-323 Dimension





Style: Pin 1.Cathode 2.Anode

2-Lead SOD-323 Plastic
Surface Mounted Package
CYStek Package Code: S2

*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0630	0.0709	1.60	1.80	E	0.0060	-	0.15	-
B	0.0453	0.0531	1.15	1.35	H	0.0000	0.0040	0.00	0.10
C	0.0315	0.0394	0.80	1.00	J	0.0035	0.0070	0.089	0.177
D	0.0098	0.0157	0.25	0.40	K	0.0906	0.1063	2.30	2.70

Notes: 1.Controlling dimension : millimeters.
2.Lead thickness specified per L/F drawing with solder plating.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ;pure tin plated
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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