

1.0Amp. Surface Mount Schottky Barrier Diodes

CSOD5819AS2

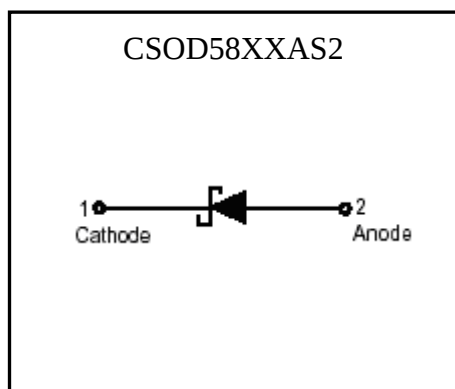
Features

- For surface mounted applications.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- Plastic material used carries Underwriters Laboratory Flammability Classification 94V-0
- Low leakage current
- High surge capability
- High temperature soldering: 250°C/10 seconds at terminals
- Exceeds environmental standards of MIL-S-19500/228
- RoHS compliant package

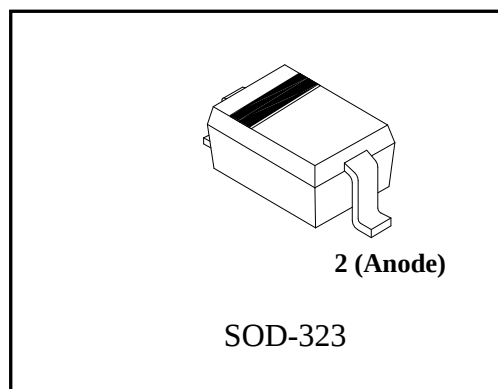
Mechanical Data

- Case: Molded plastic, JEDEC SOD-323.
- Terminals: Pure tin plated, Solderable per MIL-STD-750 method 2026
- Polarity: Indicated by cathode band.
- Weight: 4.507 mg approximately

Symbol

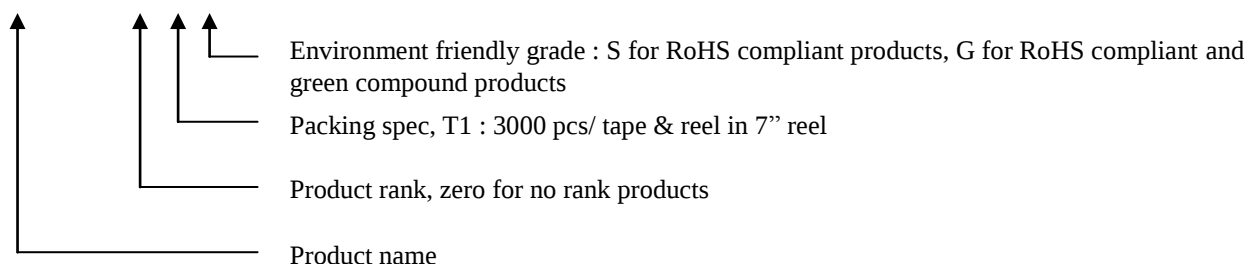


Outline



Ordering Information

Device	Package	Shipping
CSOD5819AS2-0-T1-G	SOD-323 (Pb-free lead plating and halogen-free package)	3000 pcs / Tape & Reel



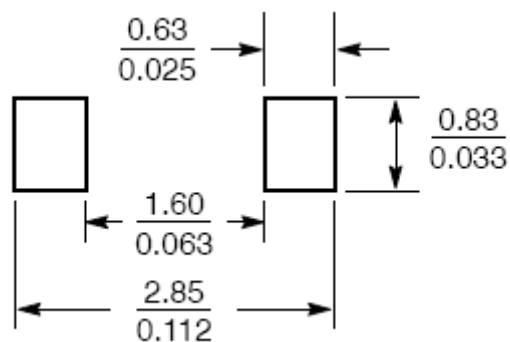
Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Limits	Units
Repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_R	40	V
Maximum instantaneous forward voltage, $I_F=1A$ (Note 1)	V_F	0.5	V
Average forward rectified current	I_O	1	A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	15	A
Maximum DC reverse current $V_R=40V, T_J=25^{\circ}C$ (Note 1) $V_R=40V, T_J=125^{\circ}C$ (Note 1)	I_R	0.3 10	mA mA
Power Dissipation	P_D	250	mW
Maximum thermal resistance, Junction to ambient	$R_{th,JA}$	500(typ)	$^{\circ}C/W$
Diode junction capacitance @ $f=1MHz$ and applied 5V reverse voltage	C_D	55 (typ)	pF
Storage temperature range	T_{stg}	-65 ~ +175	$^{\circ}C$
Operating temperature range	T_J	-50 ~ +150	$^{\circ}C$

Notes : 1.Pulse test, pulse width=300 μ sec, 2% duty cycle

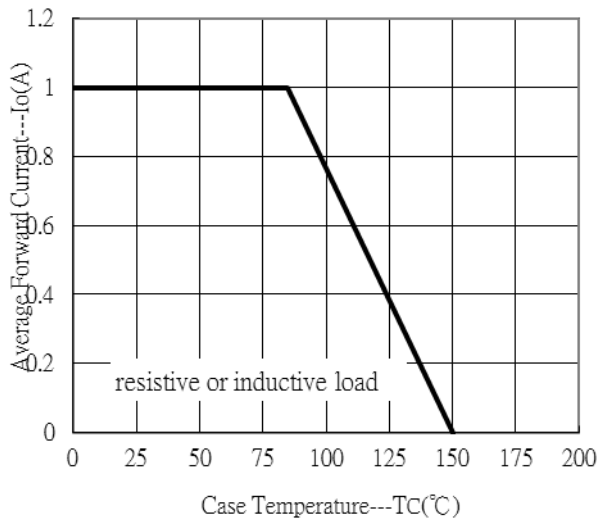
Recommended Footprint



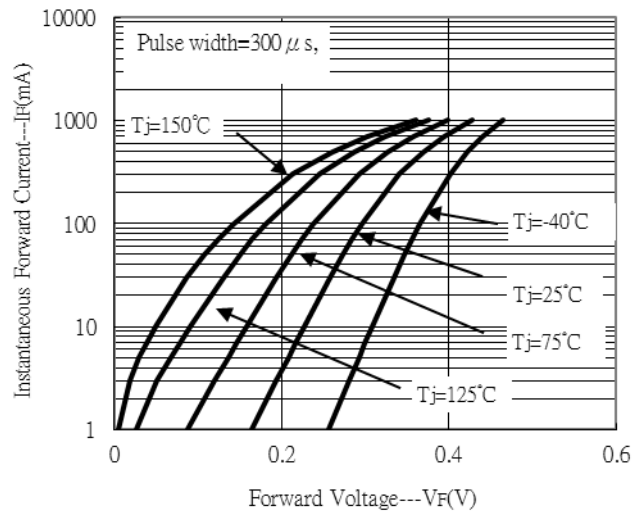
mm
inch

Characteristic Curves

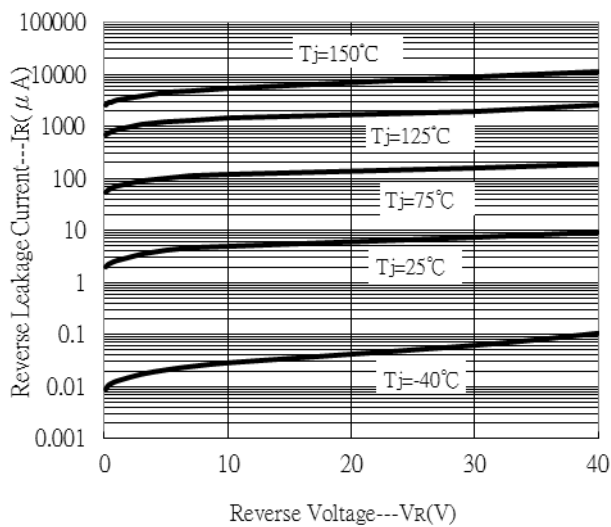
Forward Current Derating Curve



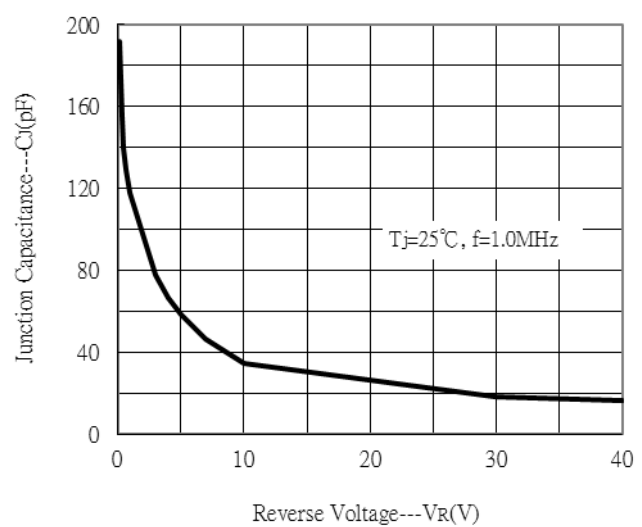
Forward Current vs Forward Voltage



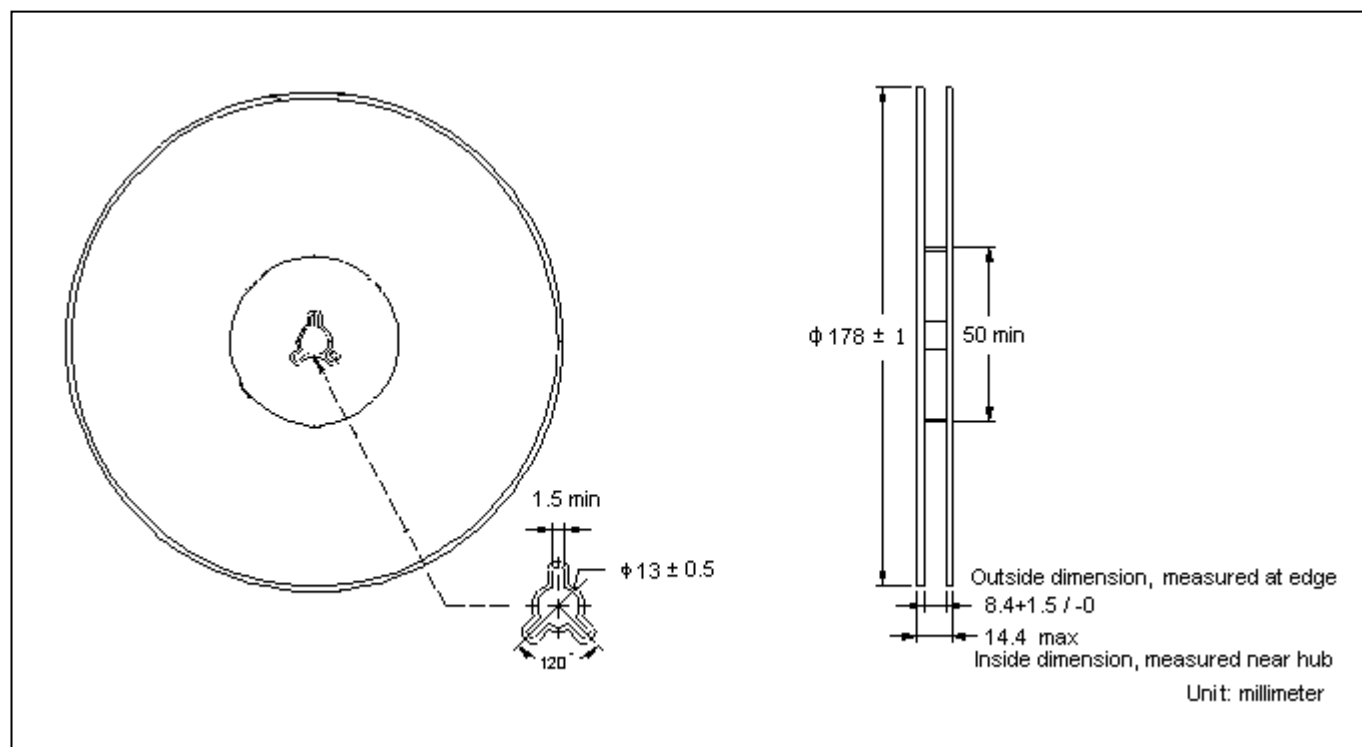
Reverse Leakage Current vs Reverse Voltage



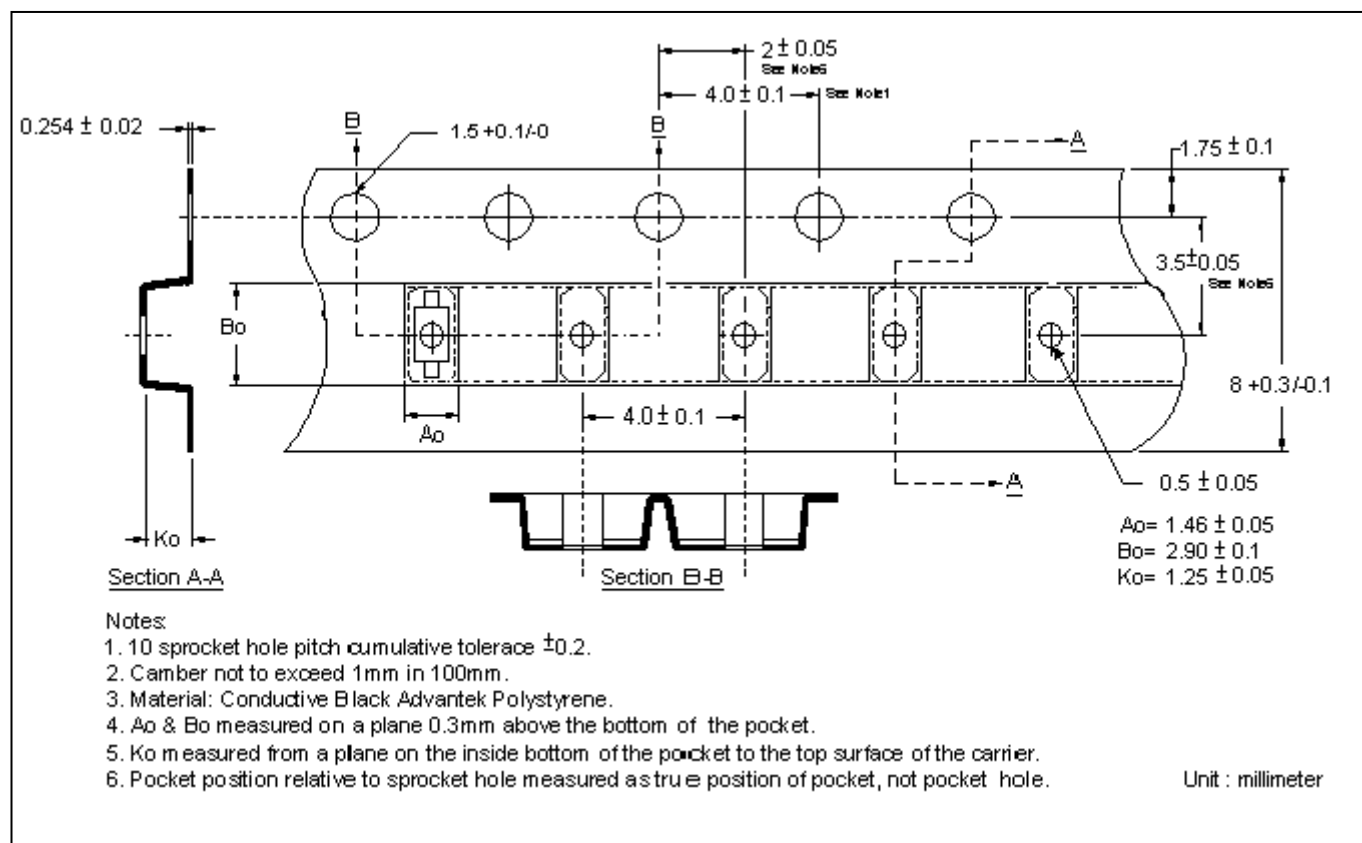
Junction Capacitance vs Reverse Voltage



Reel Dimension



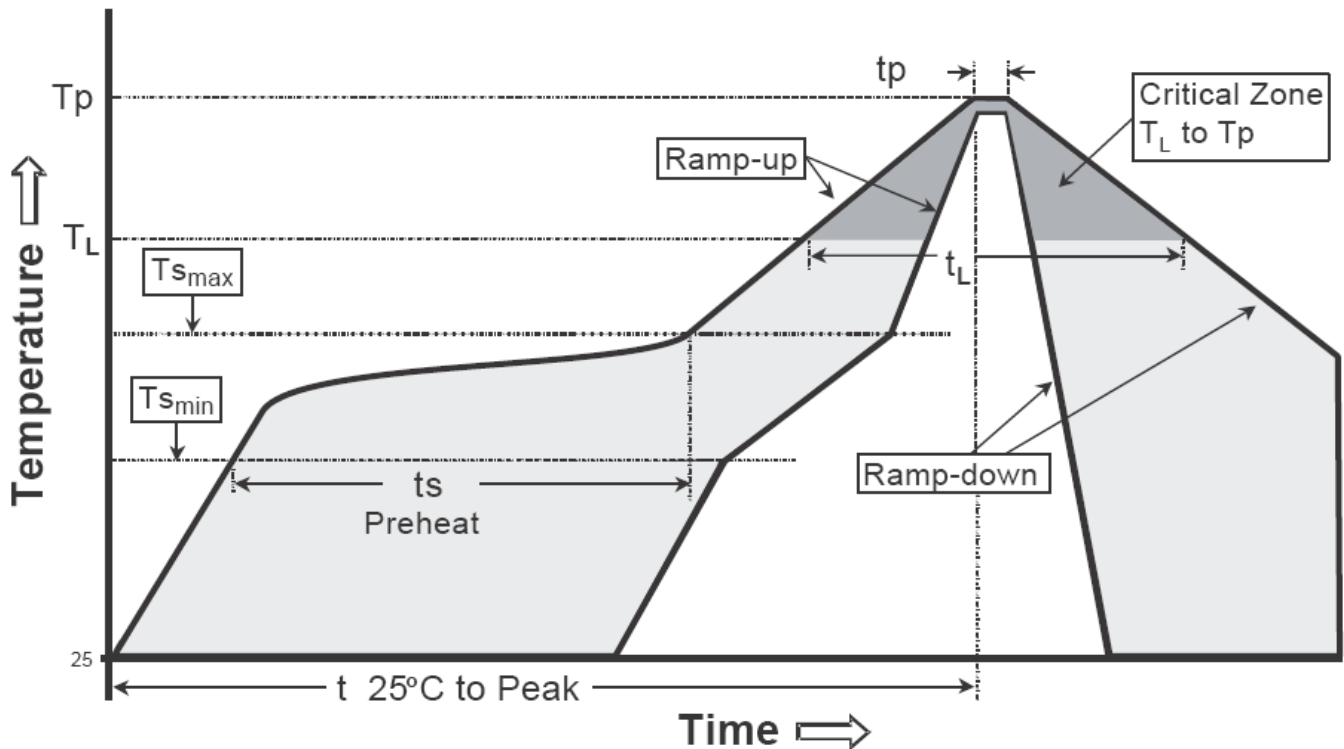
Carrier Tape Dimension



Recommended wave soldering condition

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

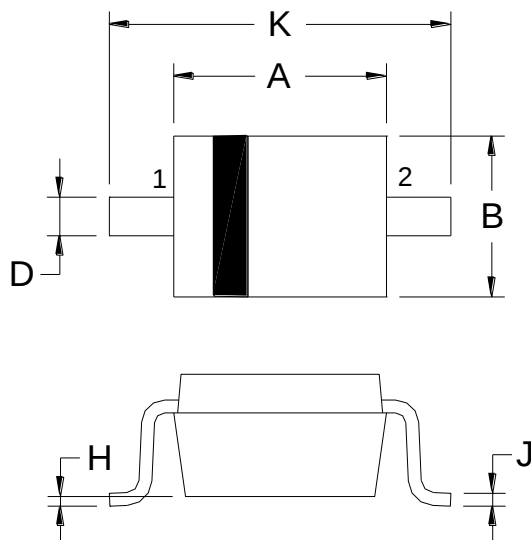
Recommended temperature profile for IR reflow



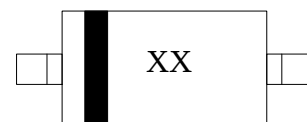
Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (T_{smax} to T_p)	3°C/second max.	3°C/second max.
Preheat -Temperature Min(T_{smin}) -Temperature Max(T_{smax}) -Time(t_{smin} to t_{smax})	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (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(t_p)	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



Marking:



Style: Pin 1.Cathode 2.Anode

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

Type	Marking Code
CSOD5819AS2	S4

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: Pure tin plated.
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0.

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