secos

Elektronische Bauelemente

SD101AWS THRU SD101CWS

VOLTAGE 40V ~ 60V

0.015AMP Surface Mount Schottky Barrier Rectifiers

● FEATURES

. Low forward voltage drop
. Guard ring construction for transient protection
. Negligible reverse recovery time
. Low reverse capacitance
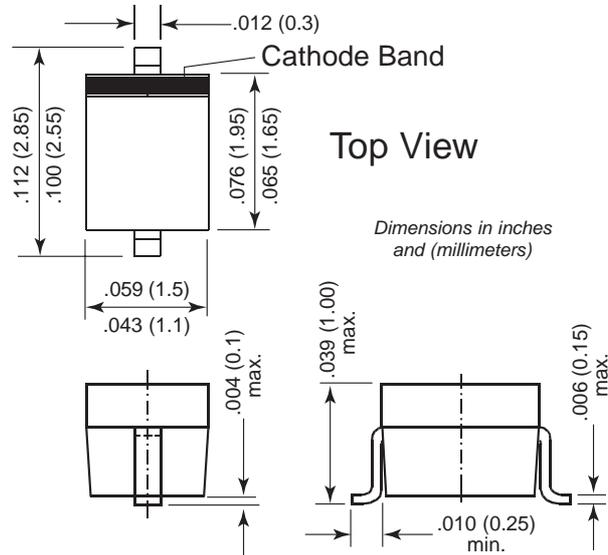
● MECHANICAL DATA

. Case: SOD-323, Molded plastic
. Epoxy: UL 94V-0 rate flame retardant
. Metallurgically bonded construction
. Polarity: Color band denotes cathode end
. Mounting position: Any

SOD-323

.012 (0.3)
Cathode Band
.112 (2.85) .100 (2.55)
.076 (1.95) .065 (1.65)
Top View
.059 (1.5) .043 (1.1)
.004 (0.1) max.
.039 (1.00) max.
.006 (0.15) max.
.010 (0.25) min.

*Dimensions in inches and (millimeters)*

● MAXIMUM RATINGS

Rating 25 ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	SD101CWS	SD101BWS	SD101AWS	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	40	50	60	V
Working Peak Reverse Voltage	V_{RWM}	40	50	60	
Maximum DC Blocking Voltage	V_R	40	50	60	
RMS Reverse Voltage	$V_{R(RMS)}$	28	35	42	
Forward Continuous Current (Note1)	I_{FM}	15			mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0s	I_{FSM}	2.0			A
Power Dissipation (Note 1)	Pd	200			mW
Thermal Resistance, Junction to Ambient Air (Note1)	RθJA	625			/ W
Operating Temperature Range	T_j	-65 ~ +125			
Storage Temperature Range	T_{STG}	-65 ~ +125			

Electrical Ratings @TA=25°C.

Parameter		Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse Breakdown Voltage	SD101AWS SD101BWS SD101CWS	$V_{(BR)R}$	60 50 40			V	I_R=10µA I_R=10µA I_R=10µA
Forward voltage	SD101AWS SD101BWS SD101CWS SD101AWS SD101BWS SD101CWS	V_F			0.41 0.40 0.39 1.00 0.95 0.90	V	I_F=1.0mA I_F=1.0mA I_F=1.0mA I_F=15mA I_F=15mA I_F=15mA
Reverse current	SD101AWS SD101BWS SD101CWS	I_{RM}			0.2	µA	V_R=50V V_R=40V V_R=30V
Capacitance between terminals	SD101AWS SD101BWS SD101CWS	C_T			2.0 2.1 2.2	pF	V_R=0V,f=1.0MHz
Reverse Recovery Time		trr			1.0	ns	I_F=I_R=5mA Irr=0.1XI_R,R_L=100Ω

Marking Code: SD101AWS=S1, SD101BWS=S2, SD101CWS=S3

SeCoS

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f = 1.0MHz
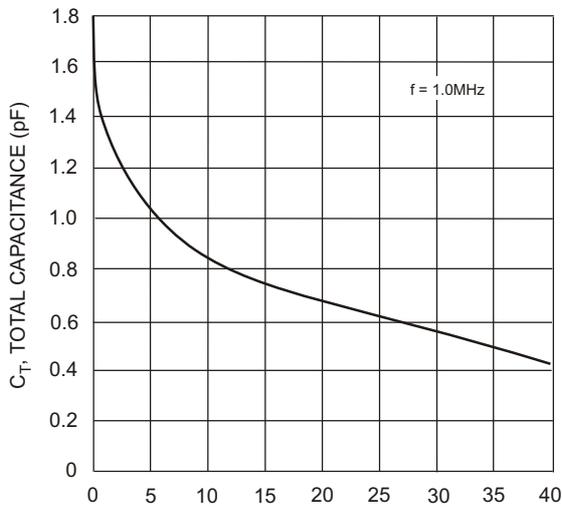
V_R, REVERSE VOLTAGE (V)
Fig. 1 Typical Capacitance
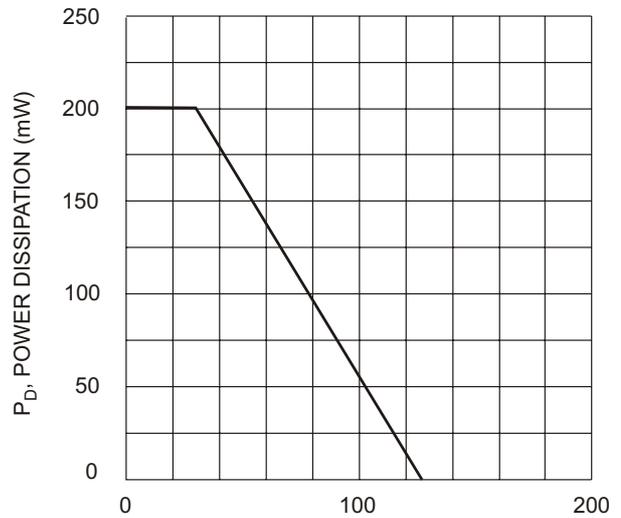
T_A, AMBIENT TEMPERATURE (°C)
Fig. 2 Power Derating Curve, Total Package

T_A = 125ºC
T_A = 75ºC
T_A = 25ºC
T_A = 0ºC
T_A = -40ºC
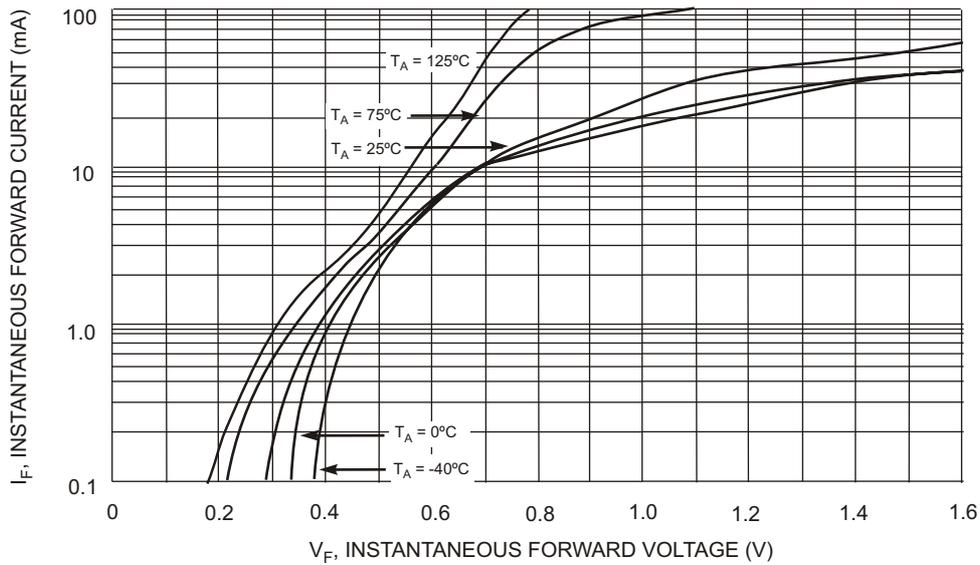
V_F, INSTANTANEOUS FORWARD VOLTAGE (V)
Fig. 3Typical Forward Characteristics

T_A = 125ºC
T_A = 75ºC
T_A = 25ºC
T_A = 0ºC
T_A = -40ºC
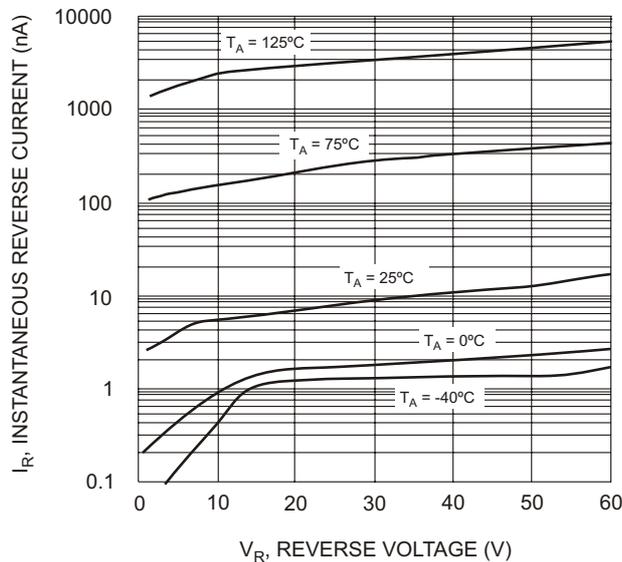
V_R, REVERSE VOLTAGE (V)
Fig4.Typical Reverse Characteristics