Elektronische Bauelemente

SCS4148WS

Surface Mount Fast Switching Diode

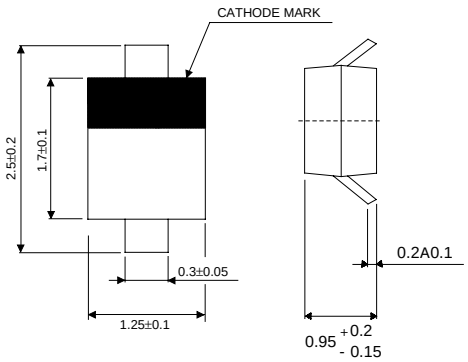
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

SOD-323 (SC-76)

● FEATURES

- Fast switching speed
- Ultra-Small surface mount package
- For general purpose switching applications
- High conductance
- Also available in lead free version



● MECHANICAL DATA

Marking: T4

- Case: SOD-323, Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Metallurgically bonded construction
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.004 grams

● 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	VALUE	UNITS
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0 μs @ t = 1.0 s	I_{FSM}	2.0 1.0	A
Power Dissipation (Note 1)	P_D	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R_{JA}	625	°C / W
Operating and Storage Temperature Range	T_J, T_{STG}	+125, - 65 ~ +150	°C

Elektronische Bauelemente

SCS4148WS

Surface Mount Fast Switching Diode

● ELECTRICAL CHARACTERISTICS (Ta=25℃)

TYPE NUMBER	SYMBOL	Min.	Max.	UNITS	Test Condition
Reverse Breakdown Voltage	V_{RM}	75	-	V	I_R = 1.0μA
Forward Voltage (Note 2)	V_{FM}	-	0.715 0.855 1.0 1.25	V	I_F = 1.0mA I_F = 10mA I_F = 50mA I_F = 150mA
Peak Reverse Current (Note 2)	I_{RM}	-	1.0 50 30 25	μA μA μA nA	V_R = 75V V_R = 75V, T_J = 150℃ V_R = 25V, T_J = 150℃ V_R = 20V
Total Capacitance	C_T	-	2.0	pF	V_R = 0, f = 1.0MHz
Reverse Recovery Time	t_{rr}	-	4.0	ns	I_F = I_R = 10mA, I_{rr} = 0.1x I_R, R_L = 100Ω

NOTES:
1. Part mounted on FR-4 PC board with recommended pad layout,
2. Short duration test pulse used to minimize self-heating effect.

● RATING AND CHARACTERISTIC CURVES

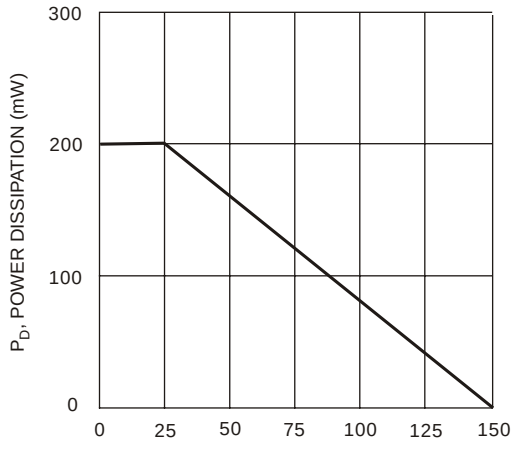


Fig. 1 Power Derating Curve

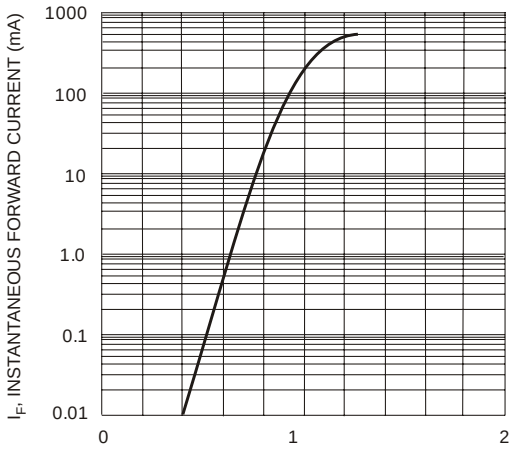


Fig. 2 Forward Characteristics

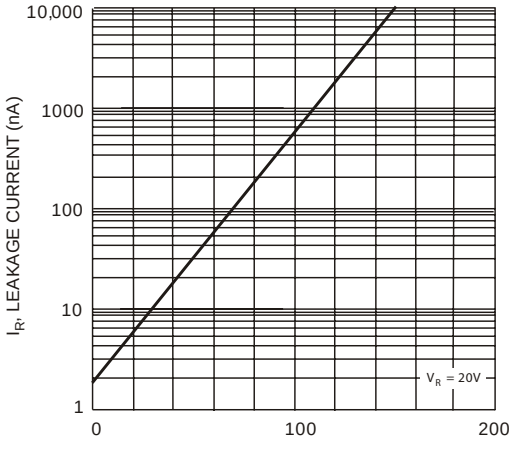


Fig. 3 Leakage Current vs Junction Temperature