Low forward voltage Schottky Barrier Rectifier

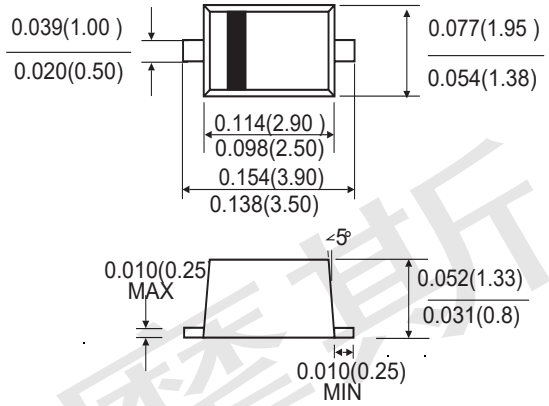
DSK24L 2A 40 V

RoHS COMPLIANT

Features

- Low forward voltage drop
- Deal for automated placement
- Low power loss, high efficiency
- High surge current capability
- Green molding compound as per IEC 61249 standard
- Lead free in compliance with EU RoHS 2.0
- AEC-Q101 qualified

SOD-123FL



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC SOD-123FL molded plastic
- Polarity: Color Band denotes cathode end
- Terminals: Solderable per MIL-STD-750, Method 2026

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2	A
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	50	A
Typical Junction Capacitance Measured at 1 MHz And Applied V_R = 4V	C_J	170	pF
Typical Thermal Resistance per diode	$R_{\theta JA}$ (1) $R_{\theta JC}$ (2) $R_{\theta JL}$ (2)	115 15 20	°C/W
Operating Junction Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Instantaneous forward voltage	V_F	I_F = 2 A, T_J = 25 °C			0.43	V
Reverse current	I_R (3)	V_R = 32 V, T_J = 25 °C	-	9.2	-	uA
		V_R = 40 V, T_J = 25 °C	-	-	250	
		V_R = 40 V, T_J = 125 °C	-	8.5	-	mA

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with mini pad
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm^2 copper pad area
3. Short duration pulse test used to minimize self-heating effect

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TYPICAL CHARACTERISTIC CURVES

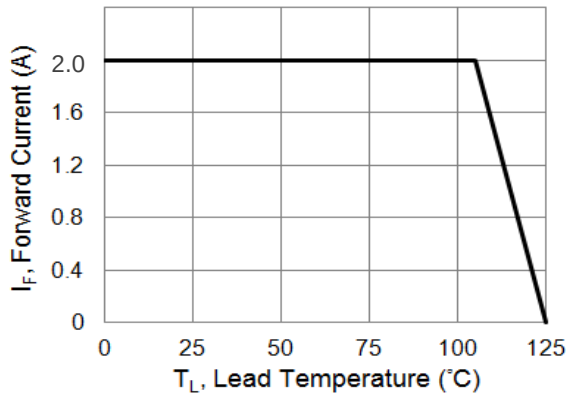


Fig.1 Forward Current Derating Curve

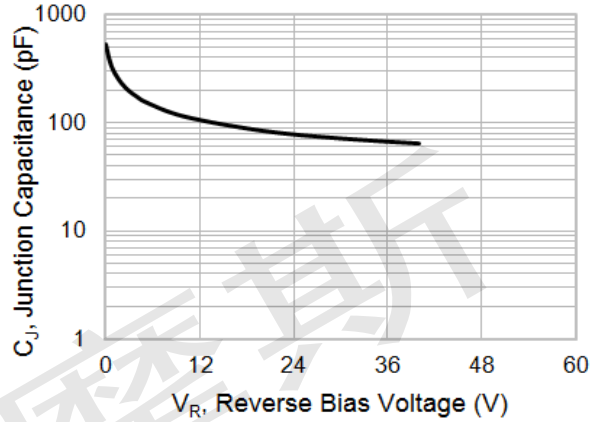


Fig.2 Typical Junction Capacitance

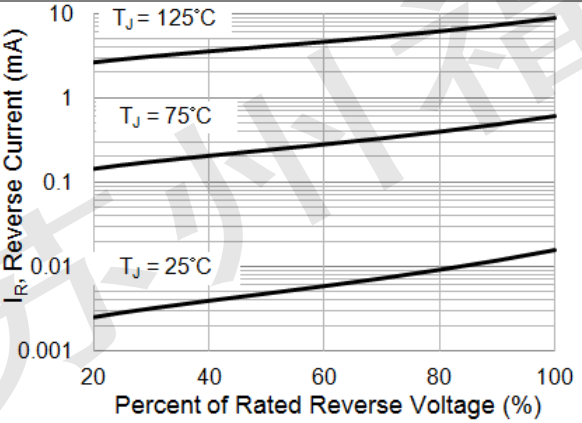


Fig.3 Typical Reverse Characteristics

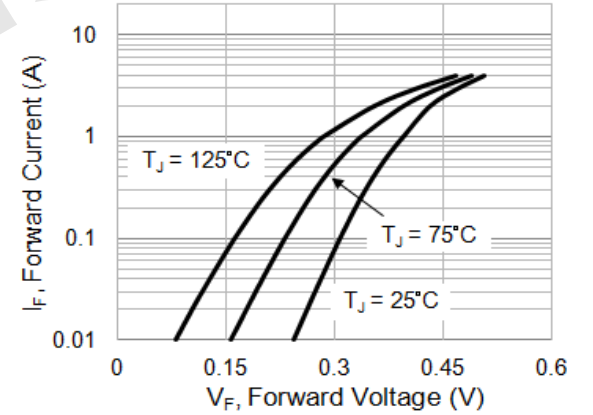


Fig.4 Typical Forward Characteristics

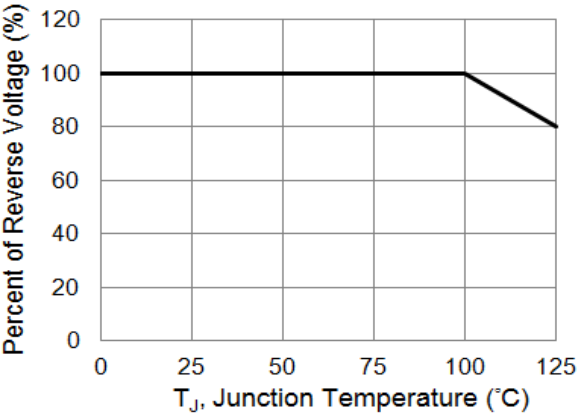


Fig.5 Operating Temperature Derating Curve

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