

Description

General application schottky barrier diode, encapsulated in a SOD-323 leadless ultra small Surface-Mounted Device (SMD) plastic package.

Features

- Forward current: 1 A
- Reverse voltage: $V_R \geq 40$ V
- Low forward voltage: $V_F \leq 0.45$ V @100mA
- Low reverse current: $I_R \leq 100\mu\text{A}$ @ 40 V
- High reliability.

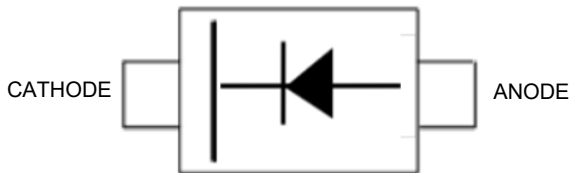
Mechanical Characteristics

- SOD-323 Small Outline Plastic Package
- Case Material: "Green" Molding Compound
- We declare that the material of product compliance with RoHS requirements

Applications

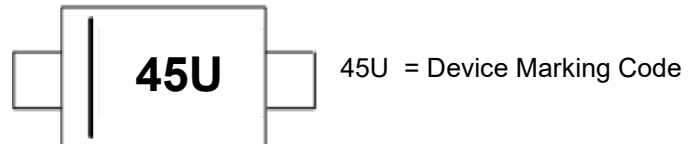
- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch Mode Power Supply (SMPS)
- Low power consumption applications
- Ultra high-speed switching
- LED backlight for mobile application

Equivalent Circuit and Pin Configuration



Circuit and Pin Schematic

Marking Information



Ordering Information

Part Number	Packaging	Reel Size
ASK45V1RD3	3000/Tape & Reel	7 inch

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Reverse voltage (repetitive peak)	V_{RM}	45	V
Reverse voltage (DC)	V_R	40	V
Average rectified forward current	I_O	1	A
Non-Repetitive Peak Forward Surge Current	I_{FSM}	5	A
Power Dissipation	P_D	320	mW
Thermal resistance	$R_{\theta JA}$	310	$^\circ\text{C/W}$
Junction Temperature	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	TYP	Max	Unit	Test Condition
Reverse Current	I_R			100	μA	$V_R=40\text{V}$
Forward Voltage	V_F		0.31	0.45	V	$I_F=100\text{mA}$
Junction Capacitance	C_j		90		pF	$V_R=0\text{V}, f=1\text{MHz}$

Typical Characteristics

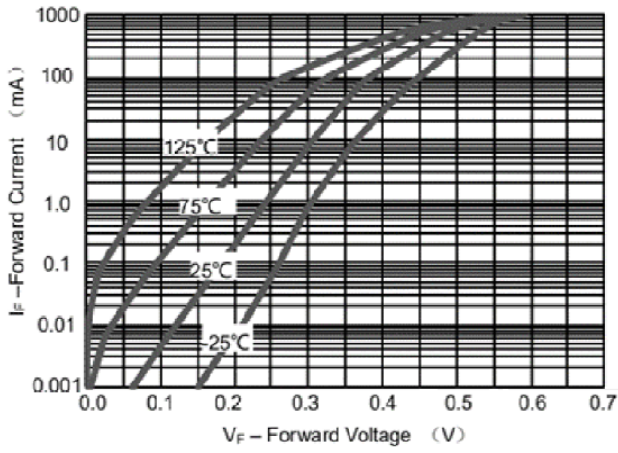


Fig 1. Forward Voltage

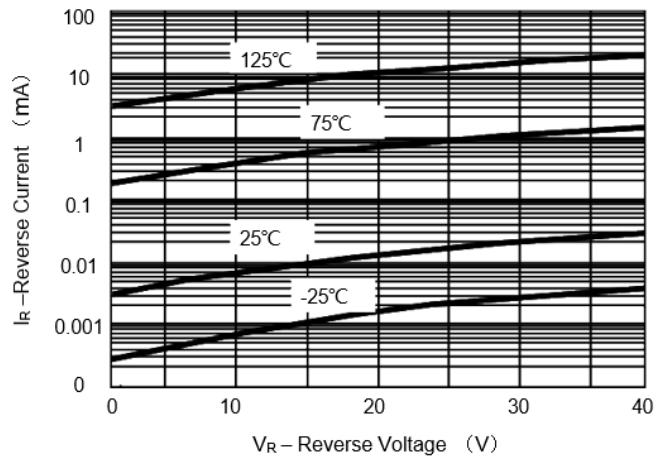


Fig 2. Leakage Current

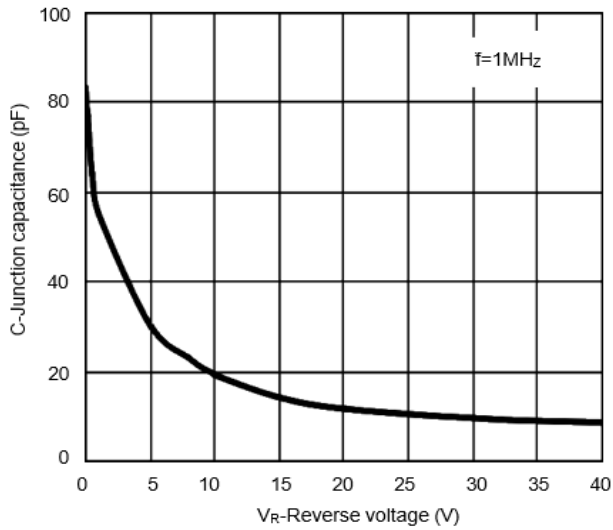
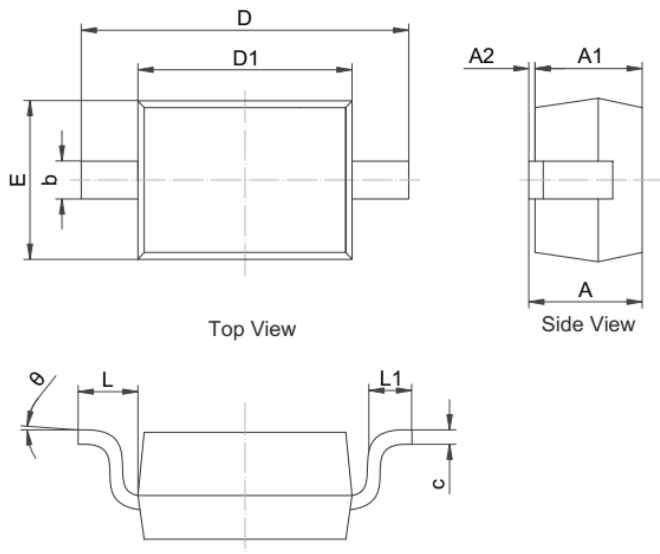


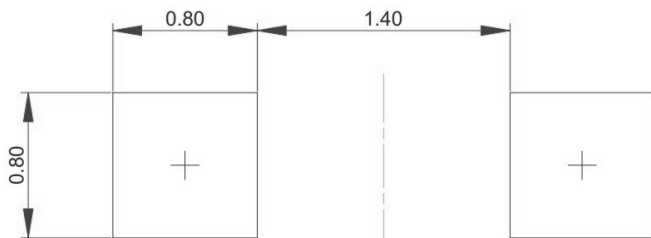
Fig 3. Capacitance vs. Reverse voltage

SOD-323 Package Outline Drawing



SYM	MILLIMETERS		
	MIN	NOM	MAX
A	0.800	--	1.100
A1	0.800	--	0.900
A2	0.000	--	0.100
b	0.250	--	0.400
c	0.080	--	0.177
D1	1.600	1.700	1.800
D	2.300	--	2.800
E	1.150	--	1.400
L	0.475REF		
L1	0.100	--	0.500
Θ	0°	--	8°

Suggested Land Pattern



Unit: mm

Contact Information

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