

KDSH143A9
SCHOTTKY BARRIER DIODE
Product Applications

Silicon epitaxial planar Schottky diode with an elevated maximum operating temperature is designed for applications in impulse devices, high-frequency voltage transducers, oscillators, sensors, and other units of telecommunication equipment.

The KDSH143A9 Schottky diode is designed as a replacement for pn-junction FREDs, such as BAT18, BAL74, BAR74, KD409, KD907.

Similar design-technological and functional counterparts are BAT41, BAT54, BAT62, BAT81, BAT18, BAL74.

Product Features

- Low Forward Voltage (0.4 V)
- Low Reverse Current (less than 1.0 μ A at $T_A = 125^\circ\text{C}$)
- Low Capacitance
- Low Reverse Recovery Charge
- Operating Temperature Range - 45 to + 125 $^\circ\text{C}$
- Lead Finish Sn-Bi
- Weight not more than 0.1g

Package Type

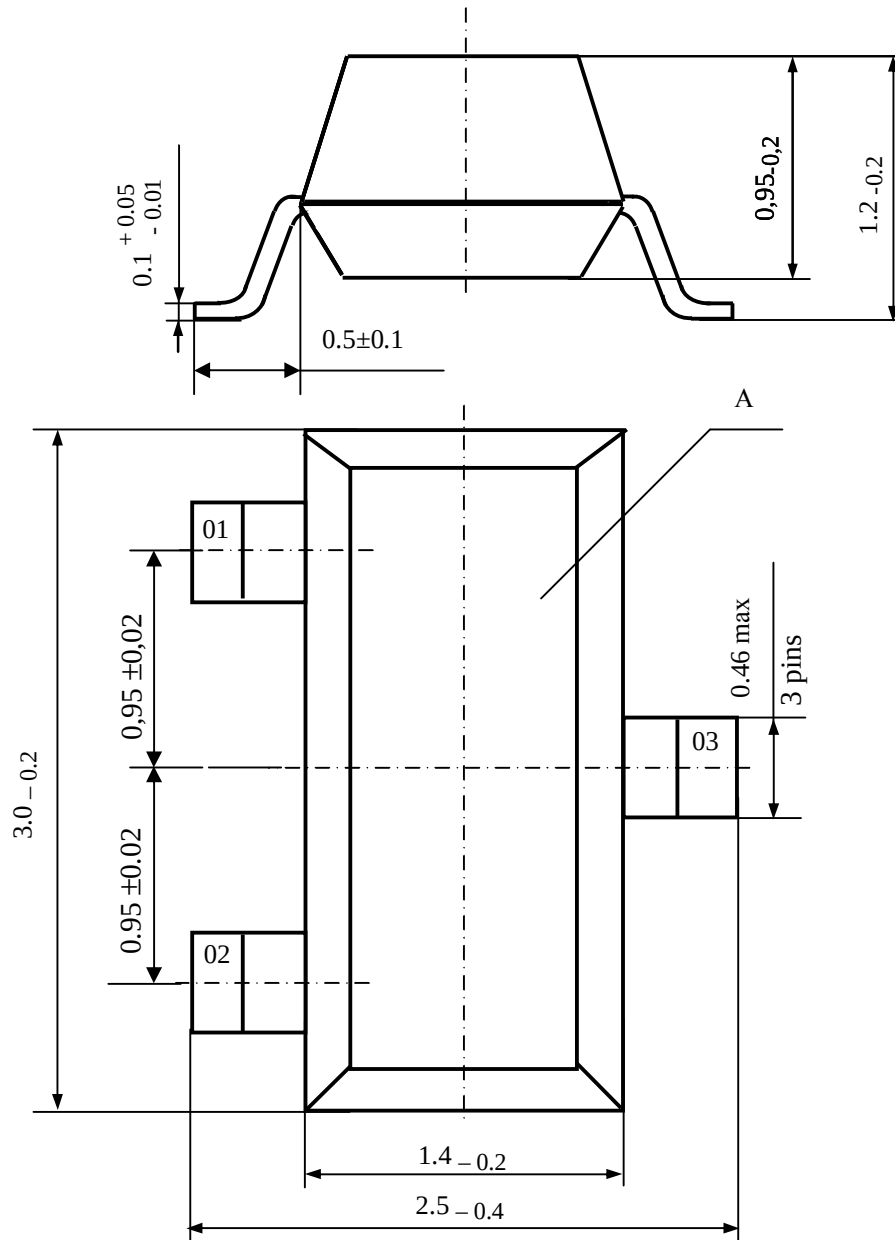
Plastic Sot-23 (see Appendix)

Electrical Characteristics (for product acceptance and delivery)

Parameter (Test Conditions), Unit	Symbol	Value			T_A , $^\circ\text{C}$
		not less than	typ	not more than	
Continuous Reverse Current ($V_R = 45\text{ V}$), μA	I_R	–	0.005	0.2	25 $\pm$ 10
Continuous Reverse Current ($V_R = 45\text{ V}$), μA	I_R	–	0.5	10	125 $\pm$ 5
Continuous Reverse Current ($V_R = 15\text{ V}$), μA	I_R	–	0.01	1.0	-45 $\pm$ 3
Continuous Forward Voltage ($I_F = 1.0\text{ mA}$), V	V_F	–	0.51	0.56	25 $\pm$ 10
Continuous Forward Voltage ($I_F = 1.0\text{ mA}$), V	V_F	–	0.4	0.48	125 $\pm$ 5
Continuous Forward Voltage ($I_F = 1.0\text{ mA}$), V	V_F	–	0.6	0.68	-45 $\pm$ 3
Continuous Forward Voltage ($I_F = 50.0\text{ mA}$), V	V_F	–	0.87	1.0	25 $\pm$ 10
Continuous Forward Voltage ($I_F = 50.0\text{ mA}$), V	V_F	–	0.77	0.9	125 $\pm$ 5
Continuous Forward Voltage ($I_F = 50.0\text{ mA}$), V	V_F	–	0.98	1.2	-45 $\pm$ 3
Total Capacitance of Diode, pF ($V_R = 0\text{ V}$, $f = 1\text{ MHz}$)	C_{tot}	–	1.4	2.0	25 $\pm$ 10

KDSH143A9**SCHOTTKY BARRIER DIODE****Maximum Permissible Electrical Operating Conditions**

Parameter (Test Conditions), Unit	Symbol	Spec
Maximum Permissible Continuous Reverse Voltage, V	$V_{R\ max}$	45
Maximum Permissible Continuous Forward Current, mA	$I_{F\ max}$	50
Maximum Permissible Pulsed Forward Current ($t_{pulse} \leq 10\ ms$, $Q \geq 2$), mA	$I_{F\ (pulsed)\ max}$	100
Maximum Permissible Forward Power Dissipation ($T_A = 125^\circ C$), W	$P_{F\ max}$	0.045
Thermal Resistance, Junction to Ambient, $^\circ C/W$	$R_{\theta\ JA}$	550
Maximum Permissible Junction Temperature, $^\circ C$	$T_{J\ max}$	175

KDSH143A9
SCHOTTKY BARRIER DIODE
Outline Drawing of the Diode in a Sot-23 Plastic Package


1) A – marking surface.

2) Pin description: 01-Anode; 02 – not used; 03 – Cathode.