

**SOT-323 SURFACE MOUNT SCHOTTKY  
BARRIER DIODE**

**FEATURES**

- \* Low forward voltage drop
  - \* Fast switching
  - \* Ultra - small surface mount package
  - \* PN Junction guard ring for transient and ESD protection
- Marking: KL7

**MECHANICAL DATA**

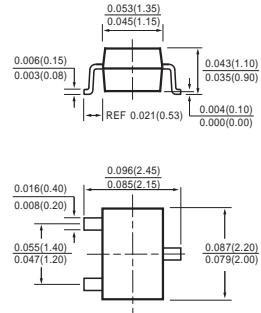
- \* Case: Molded plastic
- \* Epoxy: UL 94V-O rate flame retardant
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.006 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.



**SOT-323**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS** ( @ TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	VALUE	UNITS
Peak repetitive reverse voltage	V <sub>RRM</sub>	30	V
working peak reverse voltage	V <sub>RWM</sub>	30	
DC blocking voltage	V <sub>R</sub>	30	
Forward continuous current (Note 1)	I <sub>F</sub>	200	μA
Repetitive peak forward current (Note 1)	I <sub>FRM</sub>	300	μA
Forward surge current (Note 1) @ t < 1.0 s	I <sub>FSM</sub>	600	μA
Power dissipation (Note 1)	P <sub>D</sub>	200	μW
Thermal resistance, Junction to ambient air (Note 1)	R <sub>JA</sub>	625	K/Ω
Operating and storage temperature range	T <sub>J</sub> , T <sub>stg</sub>	-65--+125	°C

**ELECTRICAL CHARACTERISTICS** ( @ TA = 25°C unless otherwise noted )

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNITS	
Reverse breakdown voltage (I <sub>RS</sub> = 100μA)	V <sub>(BR)R</sub>	30	-	-	V	
Forward voltage (Note 2)	V <sub>F</sub>	(I <sub>F</sub> = 0.1mA)	-	-	240	mV
		(I <sub>F</sub> = 1mA)	-	-	320	
		(I <sub>F</sub> = 10mA)	-	-	400	
		(I <sub>F</sub> = 30mA)	-	-	500	
		(I <sub>F</sub> = 100mA)	-	-	1000	
Reverse leakage current (V <sub>R</sub> = 25V) (Note 2)	I <sub>R</sub>	-	-	2.0	μA	
Junction capacitance (V <sub>R</sub> = 1.0V, f= 1.0MHz)	C <sub>j</sub>	-	-	10	pF	
Reverse recovery time (I <sub>F</sub> =10mA through I <sub>R</sub> =10mA to I <sub>R</sub> =1.0mA, R <sub>L</sub> =100 Ω)	t <sub>rr</sub>	-	-	5.0	ns	

**Notes:** 1. Valid provided that terminals are kept at ambient temperature.  
2. t<sub>p</sub> < 300μs, duty cycle < 2%.

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