



1.0A Surface Mount Schottky Barrier Rectifier - 40 ~ 200 V

FEATURES

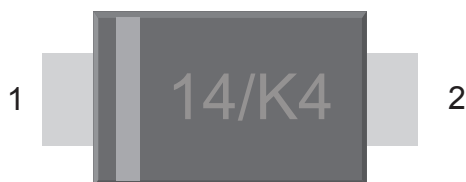
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Moisture Sensitivity Level 1

MECHANICAL DATA

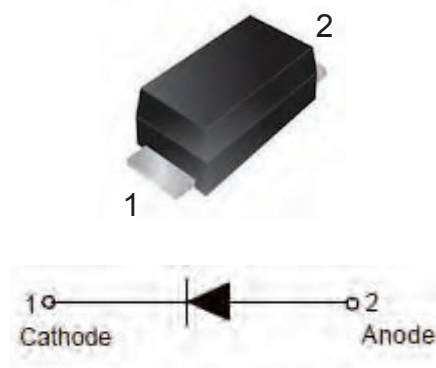
- Case : Molded plastic, SOD-123S
- Polarity : Shown above
- Terminals : Plated terminals, solderable per MIL-STD-750, Method 2026
- Epoxy : UL94-V0 rated flame retardant

SOD-123S PACKAGE

Marking : Please See Table
Ex : SS14S



SCHEMATIC & PIN CONFIGURATION



Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified
Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

RATINGS	SYMBOL	SS14S	SS16S	SS110S	SS115SL	SS115S	SS120S	UNITS
Max. Reverse Breakdown Voltage	V _{RM}	40	60	100	150	150	200	Volts
Maximum RMS Volts	V _{RMS}	28	42	70	105	105	140	Volts
Maximum DC Blocking Voltage	V _{DC}	40	60	100	150	150	200	Volts
Maximum Average forward output rectified current	I _(AV)	1.0						Amps
Peak forward surge current 8.3ms singlesine-wave superimposed on rated load(JEDECMethod)	I _{FSM}	30						Amps
Typical junction capacitance (NOTE 1)	C _J	110	80					pF
Typical Thermal resistance	R _{BJC}	45						°C/W
	R _{BJA}	200						
Operating Storage Temperature Range	T _J	-55 ~ +125		-55 ~ +150				°C
Storage Temperature Range	T _{STG}	-55 ~ +150						°C

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

CHARACTERISTICS		SYMBOL	SS14S	SS16S	SS110S	SS115SL	SS115S	SS120S	UNITS
Marking Code			14/K4	D16/D6	D110/D110U/S110	D115U	D115/D15	D120/D20	
Max. Forward Voltage(Condition:IF=1A)		V _F	0.55	0.7	0.85	0.9	0.92	0.95	Volts
Max. Forward Voltage(Condition:IF=0.5A)			0.45	0.55	0.75	0.82	0.85	0.87	
Max. DC Reverse Current rated DC blocking voltage per leg	@T _A = 25°C	I _R	0.2			0.05			mAmps
	@T _A = 100°C		10		5	2			

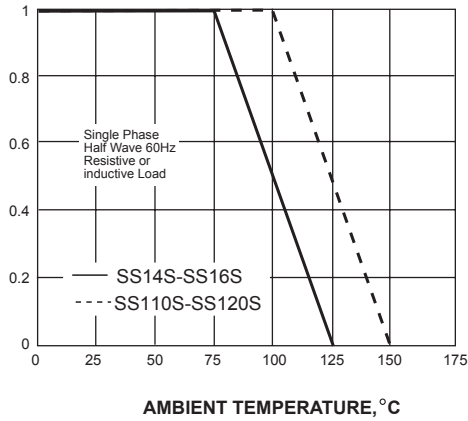
Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.



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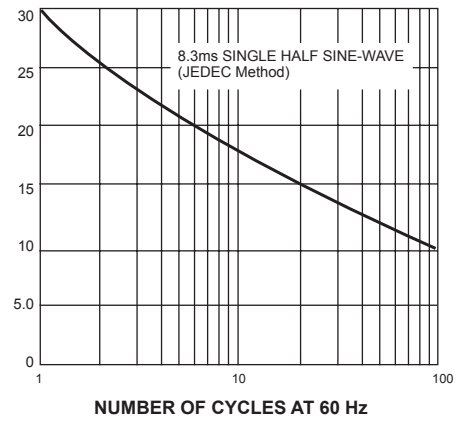
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



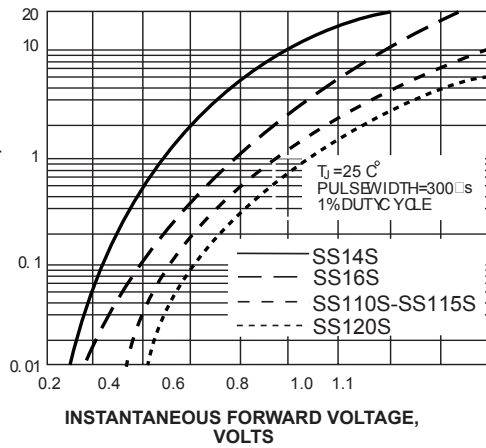
PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



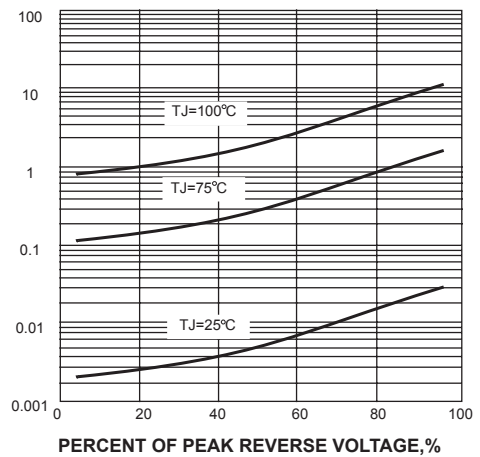
INSTANTANEOUS FORWARD
CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



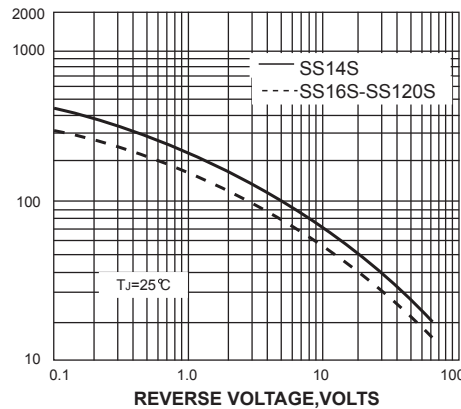
INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

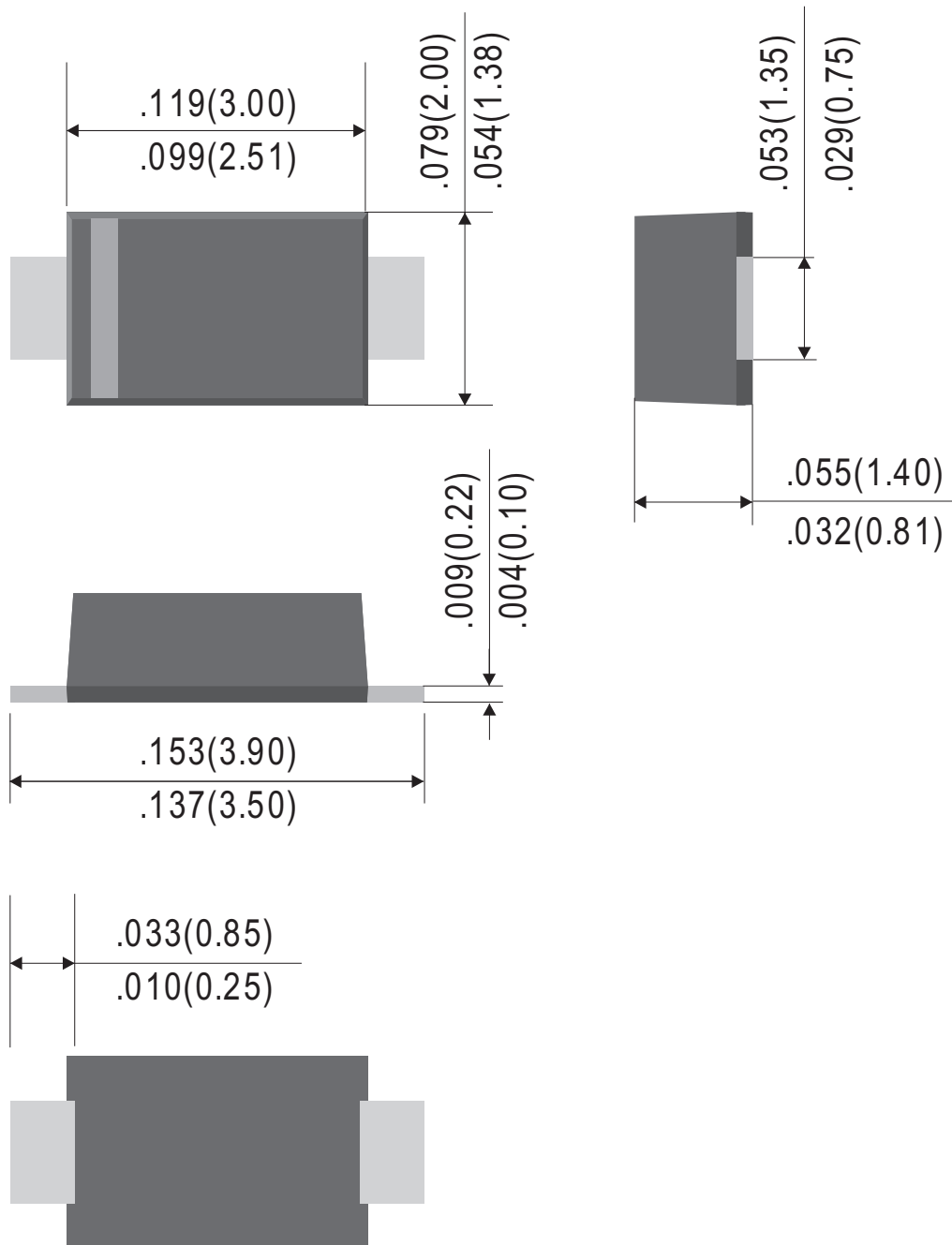
FIG. 5-TYPICAL JUNCTION CAPACITANCE





Outline Drawing

SOD-123S



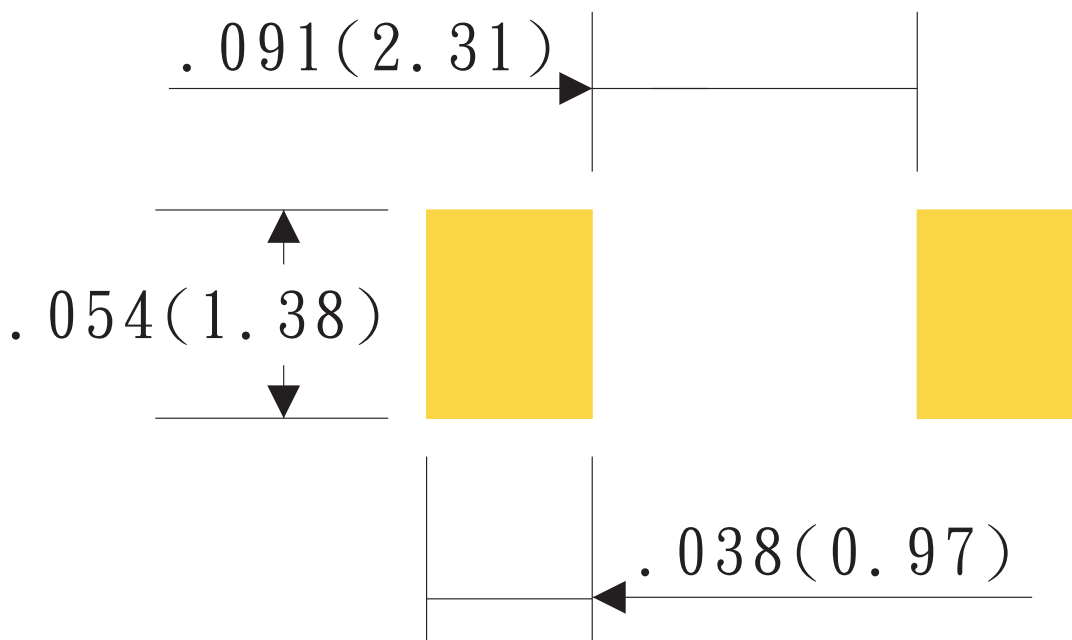
Dimensions in inches and (millimeters)

Rev.F



Suggested Soldering Pad Layout

SOD-123S



Dimensions in inches and (millimeters)

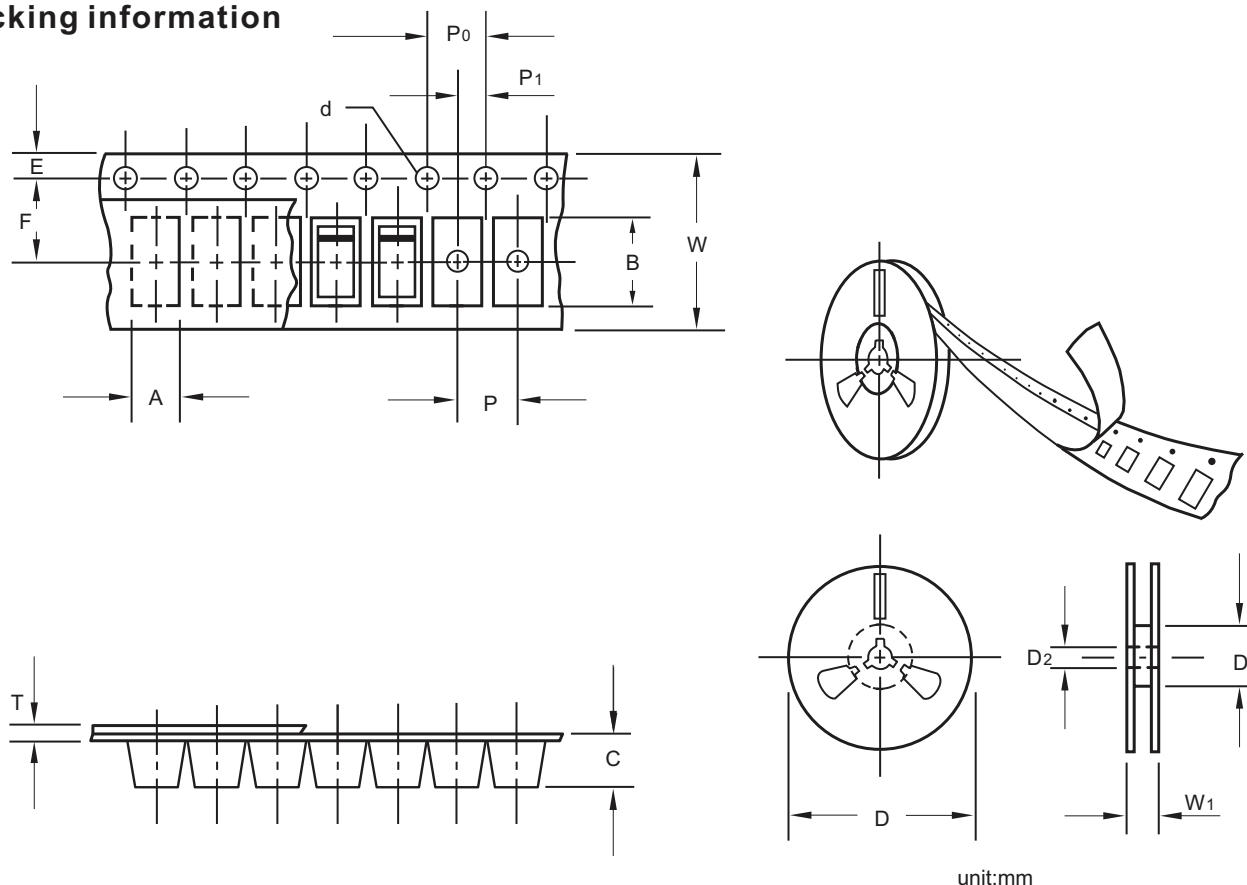
RevB

Reel Taping Sepecification - Surface Mount Device/SOD-123R

Reel packing

Package	Tape Pitch	Reel	Tape Space	Reel Dia	Box	Carton
	(m/m)	EA	(m/m)	(inch)	EA	EA
SOD-123S	4	3,000	178	7	24,000	120,000
		3,000	178	7	21,000	252,000

Packing information



Item	Symbol	Tolerance	SOD-123S
Carrier width	A	0.1	2.00
Carrier length	B	0.1	3.85
Carrier depth	C	0.1	1.10
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D ₁	1.0	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	1.0	62.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	8.00
Reel width	W ₁	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.



Ordering Information:

Device PN	Marking ⁽⁴⁾	Packing
Part Number -T ⁽¹⁾ H ⁽²⁾ -WS ⁽³⁾	Page.1 Table	Tape&Reel: 3 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Packing code suffix "G" for RoHS product ; Packing code Suffix "H" for halogen free product
All materials and products supplied comply with the U.S. Toxic Substances Control Act statement, PBT Chemicals

(3) WS : Willas brand abbreviation, Label Type does not display

(4) There may be additional marking, which relates to the lot trace code information (data code and vendor code), the logo or the environmental category on the device

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