



JSTD5140A

1A Schottky Barrier Rectifier

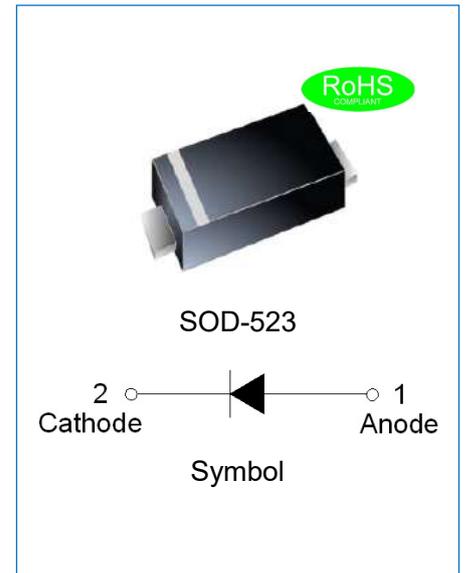
Rev.1.1

DESCRIPTION

- ✧ Trench MOS schottky technology
- ✧ Low forward voltage
- ✧ Low current leakage
- ✧ Plastic package has underwriters laboratories flammability classification 94V-0
- ✧ For surface mounted applications in order to optimize board space
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive

APPLICATIONS

- ✧ Case: SOD-523 molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end



ABSOLUTE MAXIMUM RATING (Rating at 25°C ambient temperature unless otherwise specified.)

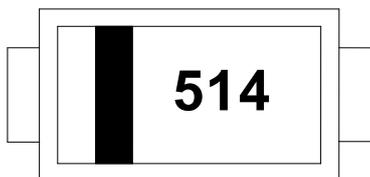
Parameter	Symbol	JSTD5140A	Unit
Peak repetitive peak reverse voltage	V_R	40	V
Mean rectifying current	I_o	1	A
Power dissipation	P_D	200	mW
Maximum average forward current	$I_{F(AV)}$	1.0	A
Non-Repetitive peak forward surge current @t=8.3ms	I_{FSM}	7	A
Operating junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55 to +125	°C

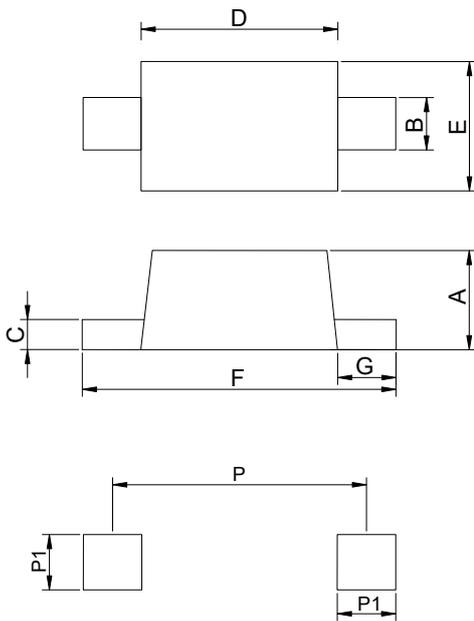
ELECTRICAL CHARACTERISTICS(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R=1\text{mA}$	V_{BR}	40	-	-	V
Forward voltage	$I_F=0.1\text{A}$	V_F	-	0.35	0.38	V
	$I_F=0.2\text{A}$		-	0.38	0.42	
	$I_F=0.5\text{A}$		-	0.46	0.49	
	$I_F=0.7\text{A}$		-	0.52	0.55	
	$I_F=1\text{A}$		-	0.58	0.61	
Reverse voltage leakage current	$V_R=40\text{V}$	I_R	-	10	40	μA

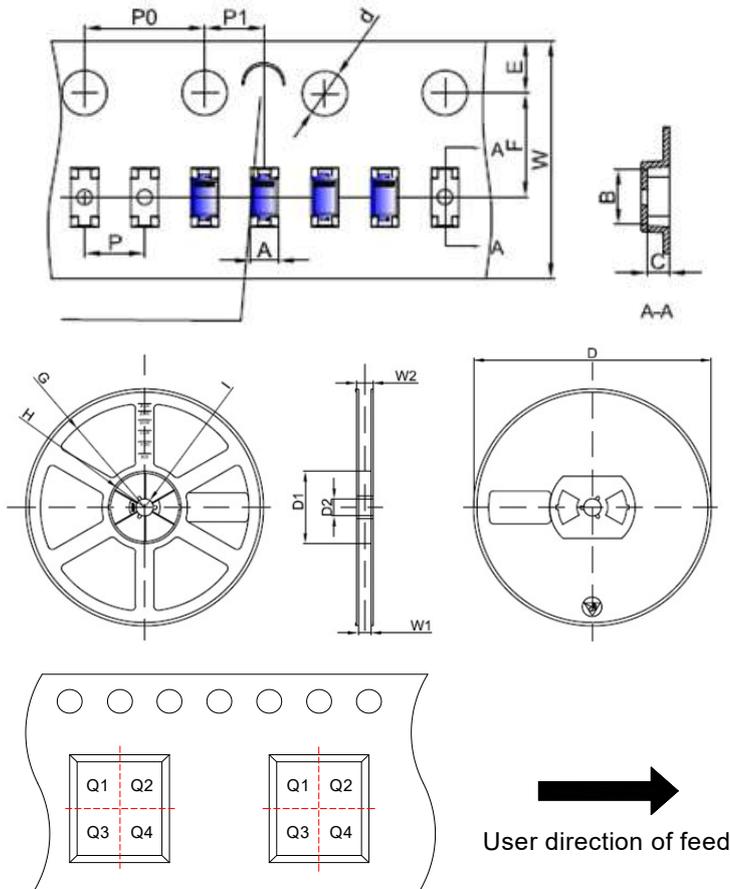
THERMAL RESISTANCES

Symbol	Parameter	JSTD5140A	Unit
$R_{th(j-a)}$	Thermal resistances from junction to ambient	400	$^{\circ}\text{C/W}$

MARKING


PACKAGE MECHANICAL DATA

Land Pattern

Symbol	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	0.50	0.61	0.77	0.020	0.024	0.030
B	0.25	0.30	0.40	0.010	0.012	0.016
C	0.07	0.13	0.20	0.003	0.005	0.008
D	1.10	1.20	1.30	0.043	0.047	0.051
E	0.70	0.80	0.90	0.028	0.031	0.035
F	1.50	1.60	1.70	0.059	0.063	0.067
G	0.15	0.20	0.25	0.006	0.008	0.010
P1	0.60			0.024		
P	1.42			0.056		

TAPE AND REEL SPECIFICATION-SOD-523


Pin 1 quadrant:Q1&Q2

Packaging Description:

SOD-523 parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 5,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Symbol	Millimeters	Inches
	Typ.	Typ.
A	0.95	0.037
B	1.92	0.076
C	0.73	0.029
d	Φ1.50	Φ0.059
E	1.75	0.069
F	3.50	0.138
P0	4.00	0.157
P	2.00	0.079
P1	2.00	0.079
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JSTD5140A	SOD-523	5,000	7 inch reel pack

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