



## JSTDF140A

### 1A Schottky Barrier Rectifier

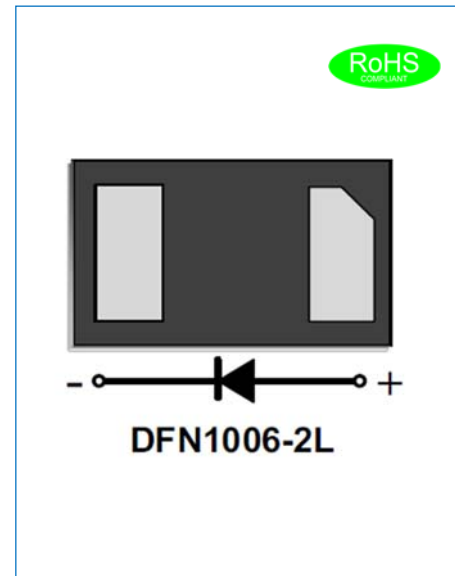
Rev.1.3

#### 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

- ✧ Low current rectification
- ✧ Switch mode power supply
- ✧ Inverse polarity protection
- ✧ Low power consumption applications



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

Parameter	Symbol	JSTDF140A	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 @ $t_P=8.3ms$	$I_{FSM}$	7	A
Operating junction temperature	$T_j$	125	°C
Storage temperature range	$T_{stg}$	-55 to +125	°C

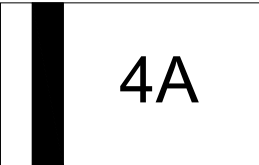
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

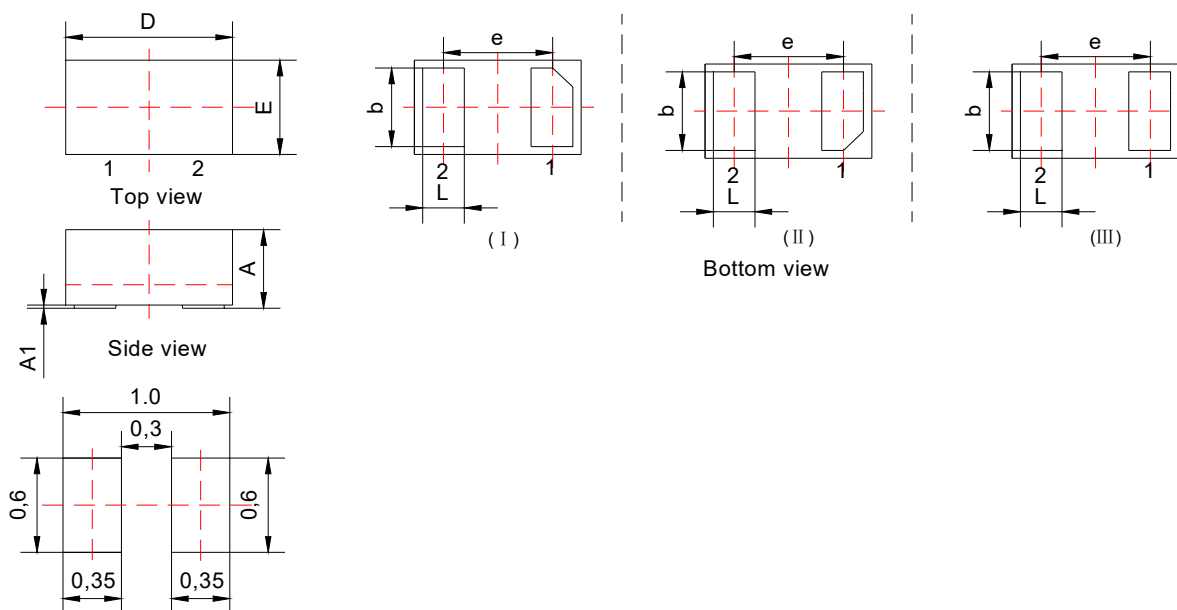
Parameter		Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 1\text{mA}$	$V_{BR}$	40	-	-	V
Forward voltage	$I_F = 0.1\text{A}$	$V_F$	-	0.35	0.38	V
	$I_F = 0.2\text{A}$		-	0.38	0.42	
	$I_F = 0.5\text{A}$		-	0.46	0.49	
	$I_F = 0.7\text{A}$		-	0.52	0.55	
	$I_F = 1\text{A}$		-	0.58	0.61	
Reverse leakage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

**THERMAL RESISTANCES**

Symbol	Parameter	JSTDF140A	Unit
$R_{th(j-a)}$	Junction to ambient	400	$^{\circ}\text{C}/\text{W}$

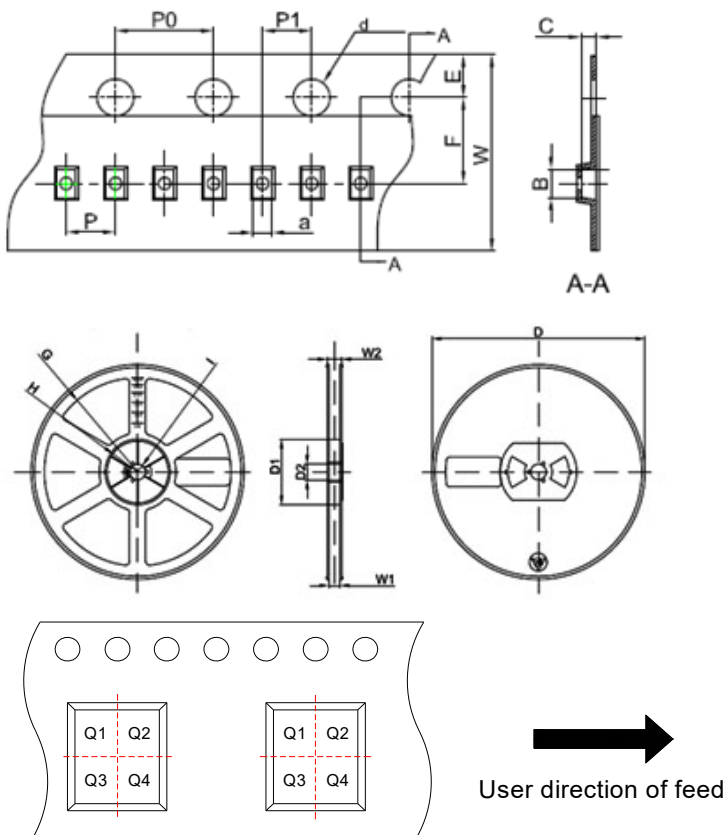
**MARKING**

Part Number	Marking Code
JSTDF140A	

**PACKAGE MECHANICAL DATA**


Recommended soldering footprint(mm)

Symbol	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.40	0.50	0.55	0.016	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.65BSC			0.026BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.20	0.25	0.30	0.008	0.010	0.012

**TAPE AND REEL INFORMATION-DFN1006-2L**


Pin 1 quadrant:Q1&amp;Q2

**Packaging Description:**

DFN1006-2L 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 10,000units 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	0.66	0.026
B	1.15	0.045
C	0.66	0.026
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
JSTDF140A	DFN1006-2L	10,000	7 inch reel pack



### CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

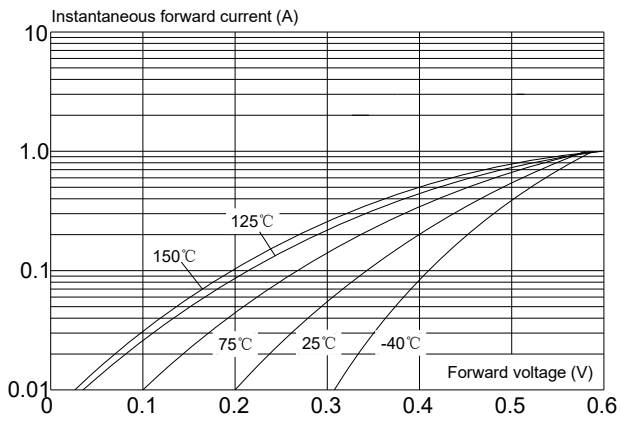


FIG.2: Typical reverse characteristics

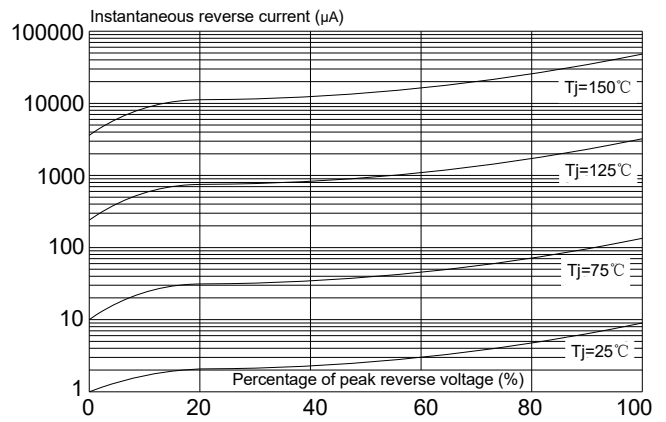


FIG.3: Maximum non-repetitive peak forward surge current

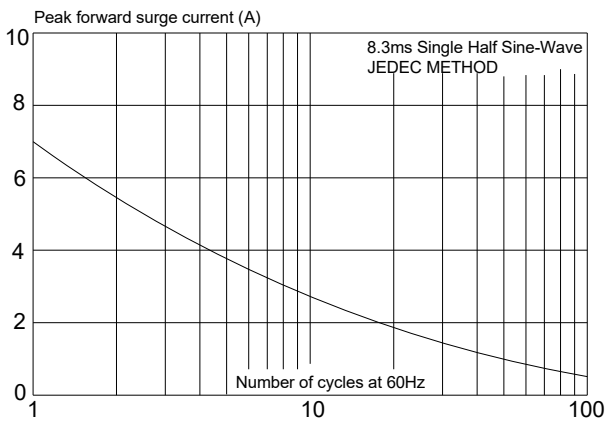
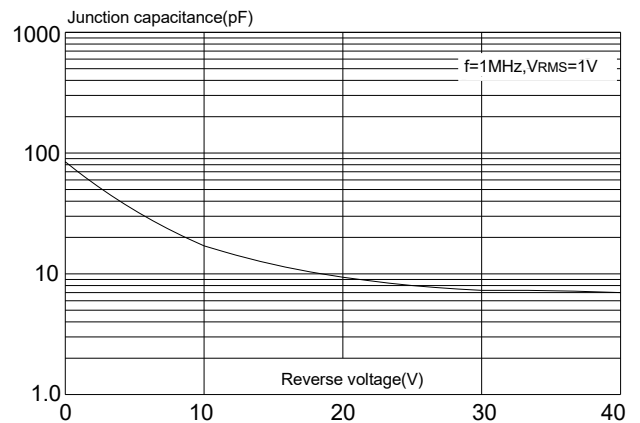


FIG.4: Typical junction capacitance






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