



## TO-277 Plastic-Encapsulate Diode

### SBDV1060TA SCHOTTKY BARRIER RECTIFIER

#### MAIN CHARACTERISTICS

$I_O$	<b>10A</b>
$V_{RRM}$	<b>60V</b>
$T_j$	<b>150 °C</b>
$V_{F(typ)}$	<b>0.50V (@<math>T_j=125^{\circ}C</math>)</b>

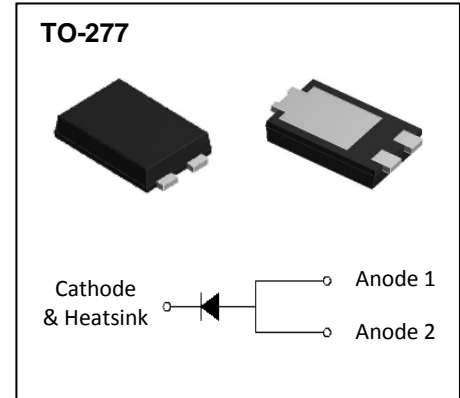
#### FEATURES

- Low Power Loss, High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

#### MARKING



SBDV1060TA= Device code  
XXXX= Code



#### MAXIMUM RATINGS ( $T_a=25^{\circ}C$ unless otherwise noted )

Symbol	Parameter	Value	Unit
$V_{RRM}$	Peak repetitive reverse voltage	60	V
$V_{RWM}$	Working peak reverse voltage		
$V_R$	DC blocking voltage		
$V_{R(RMS)}$	RMS reverse voltage	42	V
$I_O$	Average rectified output current	10	A
$I_{FSM}$	Non-Repetitive peak forward surge current (8.3ms half sine wave)	120	A
$R_{\theta JC}$	Thermal resistance from junction to case	5	$^{\circ}C/W$
$R_{\theta JA}$	Thermal resistance from junction to ambient	80	$^{\circ}C/W$
$T_j$	Junction temperature	150	$^{\circ}C$
$T_{stg}$	Storage temperature	-55~+150	$^{\circ}C$

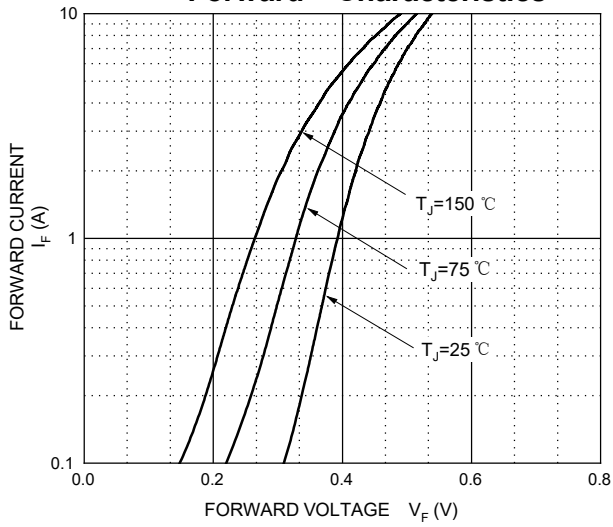
#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{(BR)}$	$I_R=1mA$	60			V
Reverse current	$I_R$	$V_R=60V$	$T_j=25^{\circ}C$	2.0	100	$\mu A$
			$T_j=125^{\circ}C$	2.5		mA
Forward voltage	$V_F$	$I_F=10A$	$T_j=25^{\circ}C$	0.55	0.6	V
			$T_j=125^{\circ}C$	0.50		V

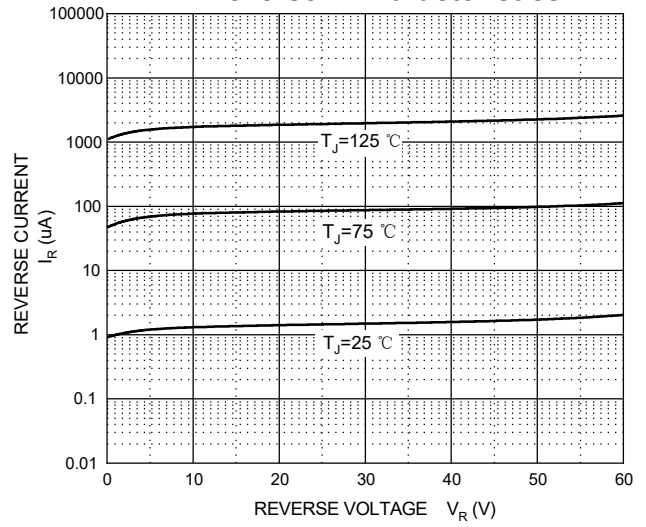
\*Pulse test: pulse width  $\leq 300\mu s$ , duty cycle  $\leq 2.0\%$ .

# Typical Characteristics

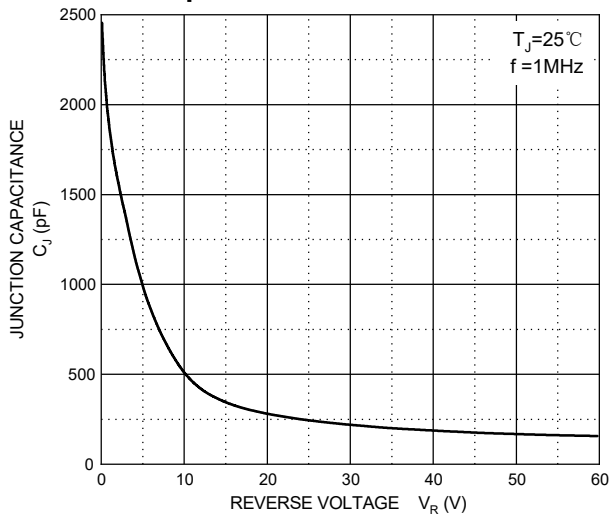
### Forward Characteristics



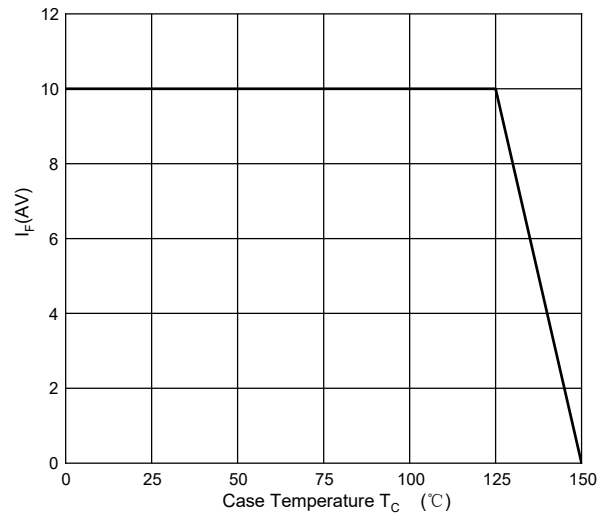
### Reverse Characteristics



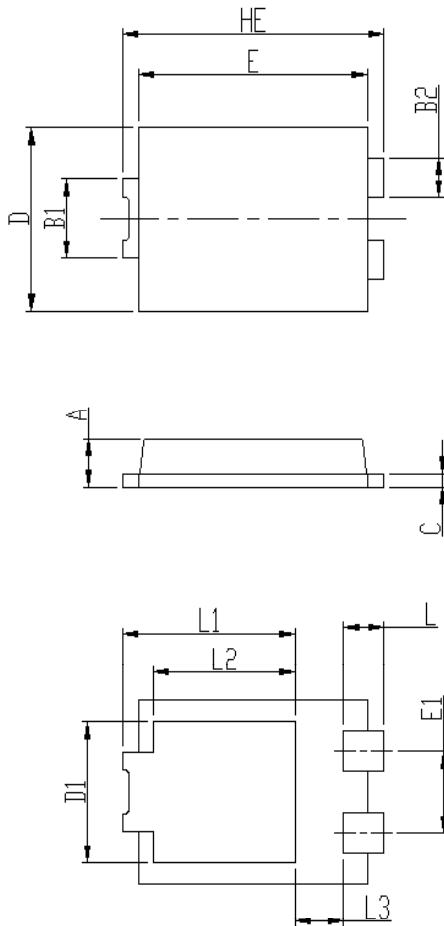
### Capacitance Characteristics



### FORWARD CURRENT DERATING CURVE

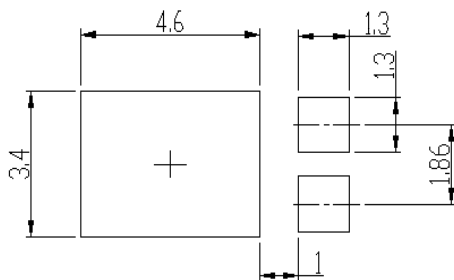


## TO-277 Package Outline Dimensions



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
HE	6.4	6.6	0.252	0.260
E	5.6	5.8	0.220	0.228
D	4.1	4.3	0.161	0.169
B1	1.7	1.9	0.067	0.075
B2	0.8	1	0.031	0.039
A	1.05	1.2	0.041	0.047
C	0.25	0.4	0.012	0.016
L	0.85	1.1	0.033	0.043
L1	4.2	4.4	0.165	0.173
L2	3.52 Typ.		0.139 Typ.	
L3	1.1	1.4	0.043	0.055
D1	3	3.3	0.118	0.130
E1	1.86 Typ.		0.073 Typ.	

## TO-277 Suggested Pad Layout



### Note:

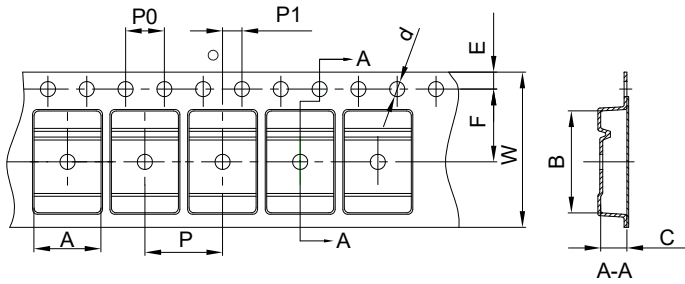
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

### NOTICE

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# TO-277 Tape and Reel

## TO-277 Embossed Carrier Tape

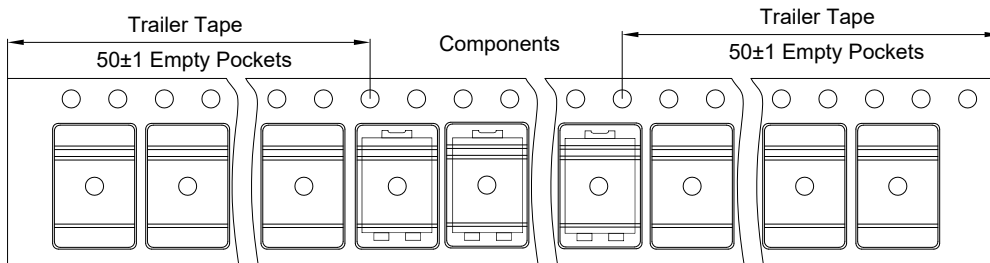


### Packaging Description:

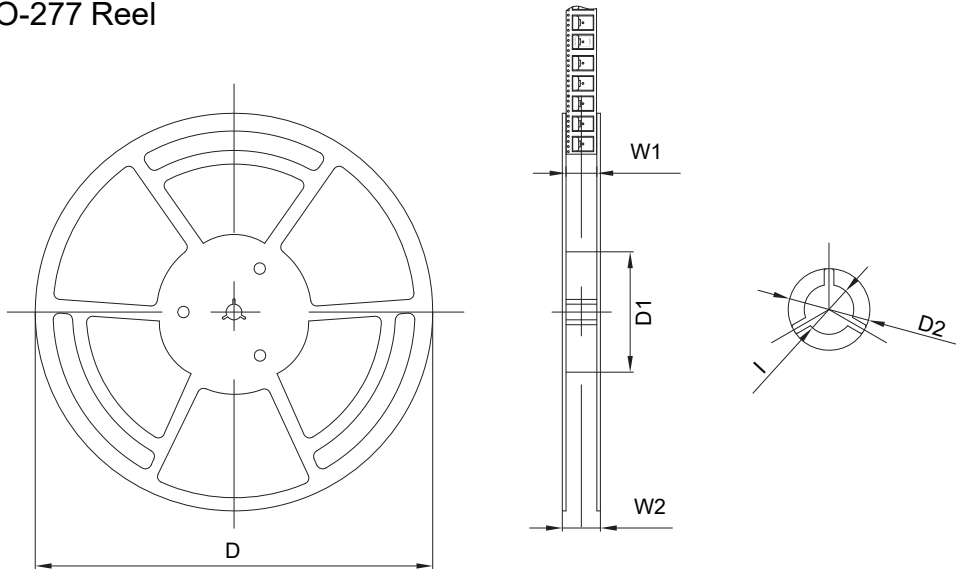
TO-277 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Hear Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 5000 units per 13" or 33.0 cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
TO-277	4.50	6.80	1.35	Φ1.50	1.75	5.50	4.00	8.00	2.00	12.00

## TO-277 Tape Leader and Trailer



## TO-277 Reel



Dimensions are in millimeter						
Reel	D	D1	D2	W1	W2	I
13" Dia	330.00	100.00	Φ20.80	12.40	14.30	Φ13.00

Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
5000 pcs	13 inch	10000 pcs	338×338×40	80000 pcs	355×355×370