RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SR1045P

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

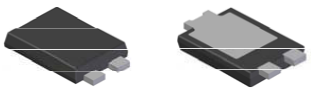
VOLTAGE 45 Volts CURRENT 10.0 Amperes

FEATURES

* Low Profile Design for Smart Phone Charger
* Ideal for SMT Mounting
* High Forward Surge Capability
* Low Forward Voltage Drop
* Excellent High Temperature Stability

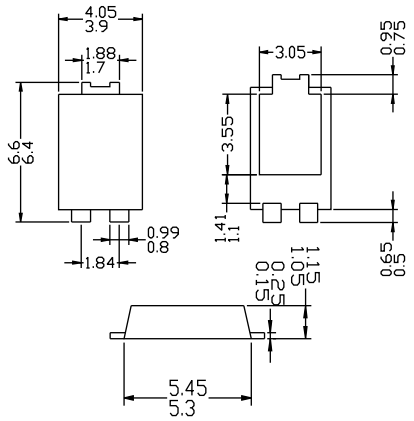
MECHANICAL DATA

* Epoxy: Device has UL flammability classification 94V-O
* Weight: 0.086 grams (approximate)
* Halogen-free



Top View Bottom View

DO-277



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, resistive or inductive load.

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

RATINGS	SYMBOL	SR1045P	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	Volts
Maximum RMS Voltage	V_{RMS}	31.5	Volts
Maximum DC Blocking Voltage	V_{DC}	45	Volts
Max Avg Forword Rectify Current at Ambient Temp needs To be corrected to Lead Temperature,TL	I_O	10	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	300	Amps
Typical Current Square Time	I^2T	373.5	A^2S
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	15	°C/W
	$R_{\theta JL}$	5	
Operating Temperature Range VR≤ 80%VRRM VR≤ 50%VRRM DC Forward Mode	T_J	-65 to + 150 ≤ 180 ≤ 200	°C
Storage Temperature Range	T_{STG}	-65 to + 175	°C

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

CHARACTERISTICS		SYMBOL	SR1045P	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC		V_F	.45	Volts
Maximum Instantaneous Forward Voltage at 10.0A DC			.47	
Maximum Average Reverse Current	@T_A = 25°C	I_R	0.1	mA
at Rated DC Blocking Voltage	@T_A = 100°C		15	mA

NOTES : 1. Thermal Resistance : Mounted on PCB.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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RATING AND CHARACTERISTICS CURVES (SR1045P)

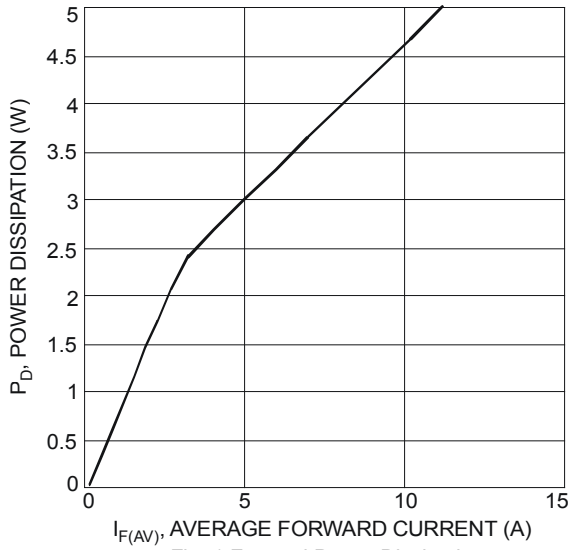


Fig. 1 Forward Power Dissipation

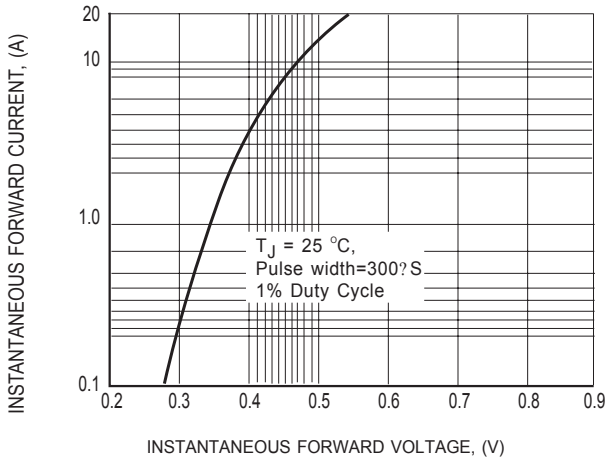


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

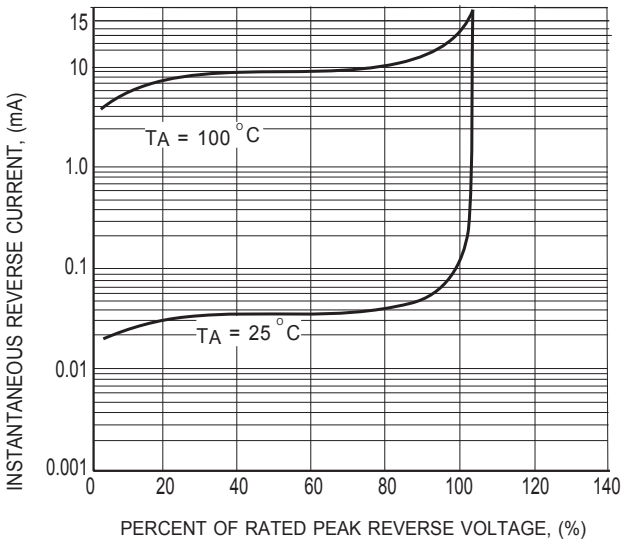


FIG.3 TYPICAL REVERSE CHARACTERISTICS

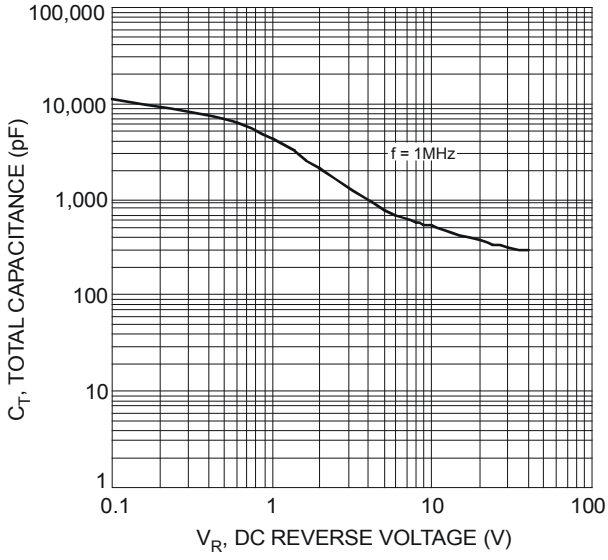


Fig. 4 Total Capacitance vs. Reverse Voltage

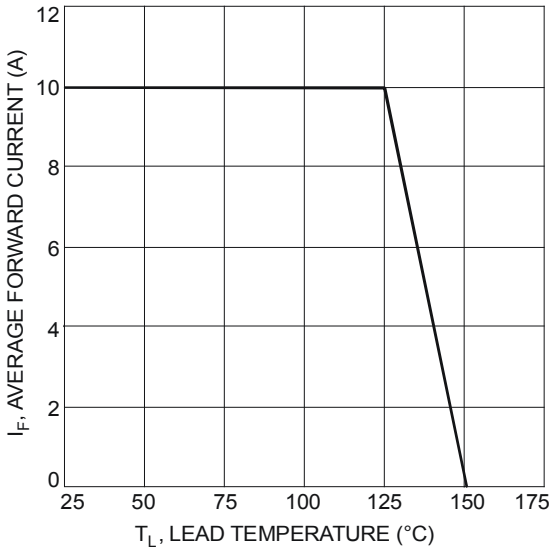
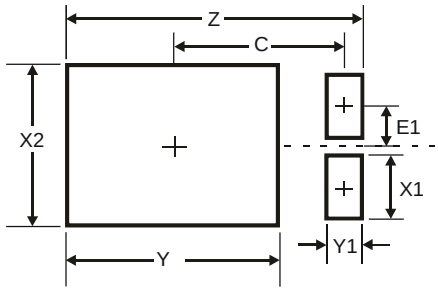


Fig. 5 Forward Current Derating Curve

Recommendation of Mounting Pad Layout



Dimensions	Value (in mm)
Z	6.6
X1	1.4
X2	3.6
Y1	0.8
Y2	4.7
C	3.87
E1	0.9

Dimensions in millimeters

REEL TAPING SPECIFICATIONS FOR SURFACE MOUNT DEVICES-FLAT MELF (DO-277)

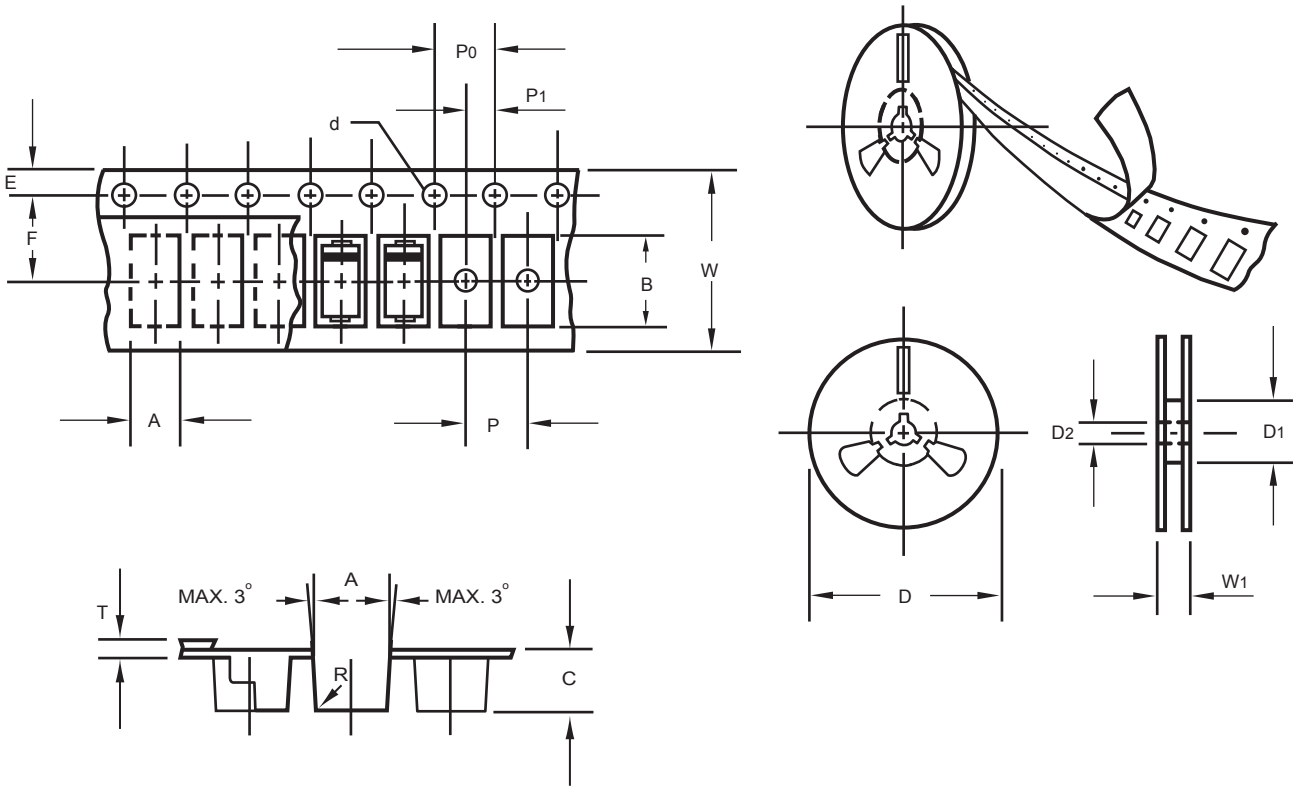
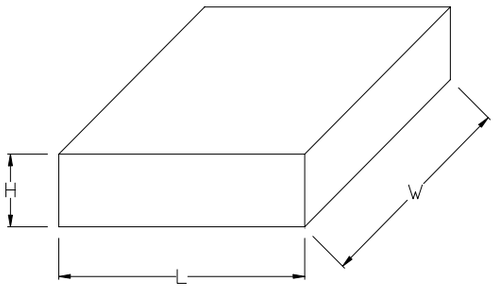


Fig.: Configuration of FLAT MELF TAPING
(DO-277)

ITEM	SYMBOL	DO-277 mm(inch)
Carrier width	A	5.45 ± 0.1(0.179 ± 0.004)
Carrier length	B	6.80 ± 0.1 (0.268 ± 0.004)
Carrier depth	C	1.33 ± 0.1 (0.052 ± 0.004)
Sprocket hole	d	1.5 ± 0.1 (0.059 ± 0.004)
Reel outside diameter	D	178 ± 2.0 (7.0 ± 0.079)
Reel inner diameter	D_1	50 Min.
Feed hole diameter	D_2	13 ± 0.5 (0.512 ± 0.020)
Stroket hole position	E	1.75 ± 0.1 (0.069 ± 0.004)
Punch hole position	F	5.50 ±0.05 (0.217 ±0.002)
Punch hole pitch	P	8.0 ± 0.1 (0.315 ± 0.004)
Sprocket hole pitch	P_0	4.0 ± 0.1 (0.157 ± 0.004)
Embossment center	P_1	2.00 ±0.05 (0.079± 0.002)
Totall tape thickness	T	0.28± 0.02 (0.011 ± 0.001)
Tape width	W	12.00^{+}0.3 (0.472 + 0.012) 12.00 − 0.1 (0.472 − 0.004)
Reel width	W_1	16.8 ± 2.0 (0.661 ± 0.079)

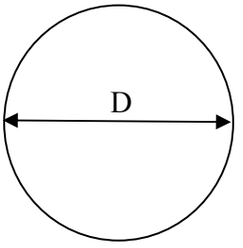
Note: 1.Devices are packed in accordance with EIA standard RS-481-A and specification given above.

1. BOX



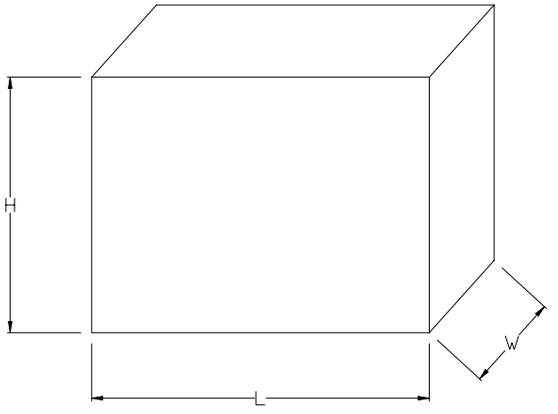
Packing Code	L (mm)	W (mm)	H (mm)
-T/W	338	338	40

2. REEL



Packing Code	D (mm)
-T/W	330

3. CARTON



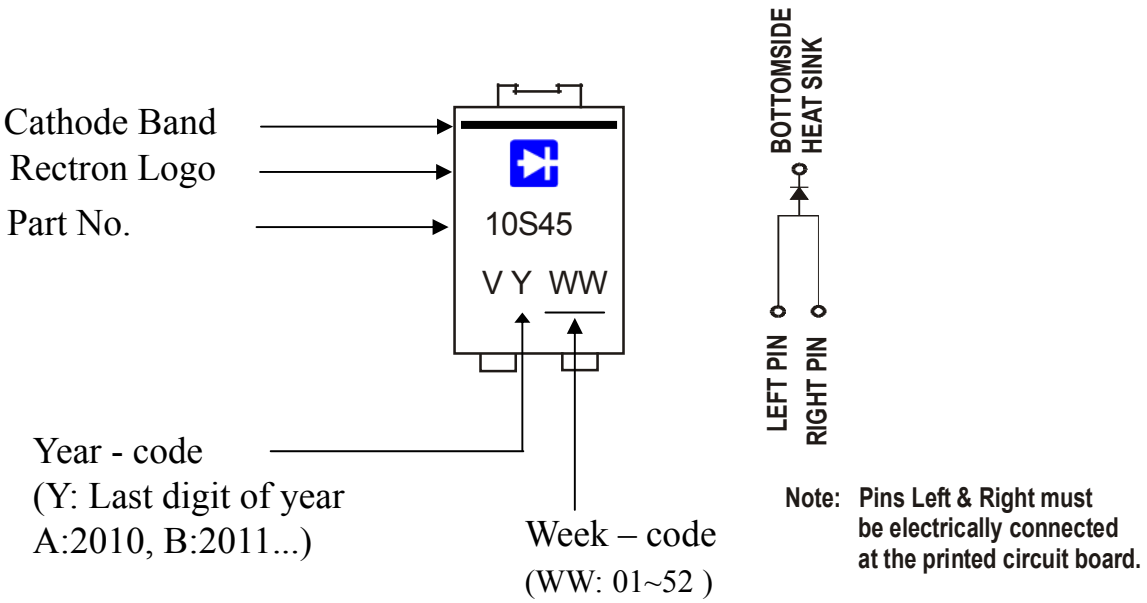
Packing Code	L (mm)	W (mm)	H (mm)
-T/W	360	355	360

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-277	-T/W	5,000	10,000	---	---	330	360*355*360	80,000	15.29

Marking Description



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