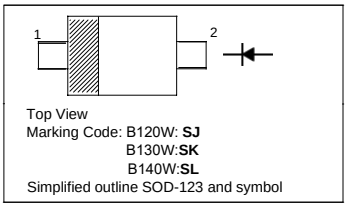
1A Surface Mount Schottky Barrier Diode

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
Marking Code: B120W: **SJ**
B130W:**SK**
B140W:**SL**
Simplified outline SOD-123 and symbol

Features:

For use in low voltage, high frequency inverters
Free wheeling, and polarity protection applications.

Absolute Maximum Ratings (T_a = 25 °C)

Parameter		Symbol	Value	Unit
Reverse Voltage	B120W B130W B140W	V_R	20 30 40	V
Average Forward Rectified Current		$I_{F(AV)}$	1	A
Non-Repetitive Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)		I_{FSM}	20	A
Power Dissipation		P_{tot}	500	mW
Operating Temperature Range		T_j	125	°C
Storage Temperature Range		T_{stg}	- 55 to + 125	°C

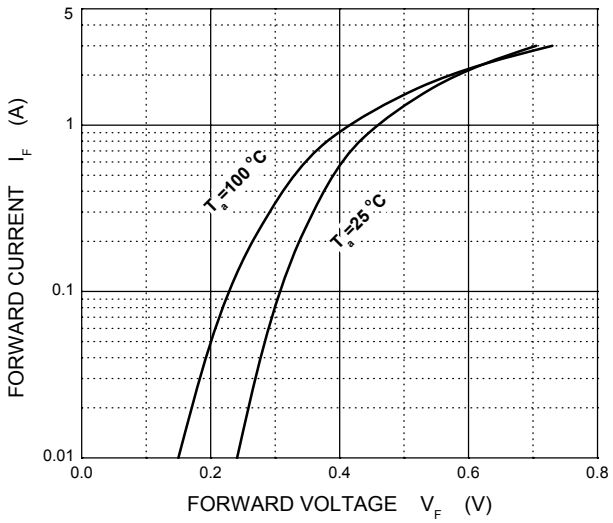
Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at I_R = 1 mA	B120W B130W B140W	$V_{(BR)R}$	20 30 40	- - -	V
Reverse Current at V_R = 20 V at V_R = 30 V at V_R = 40 V at V_R = 4 V at V_R = 6 V	 B120W B130W B140W B140W B140W	I_R	 - - - - -	 1 1 1 0.05 0.075	mA
Forward Voltage at I_F = 0.1 A at I_F = 1 A at I_F = 3 A	 B140W B120W B130W B140W B120W B130W B140W	V_F	 - - - - - - -	 0.45 0.45 0.55 0.6 0.75 0.875 0.9	V
Total Capacitance at V_R = 4 V, f = 1 MHz		C_{tot}	-	120	pF

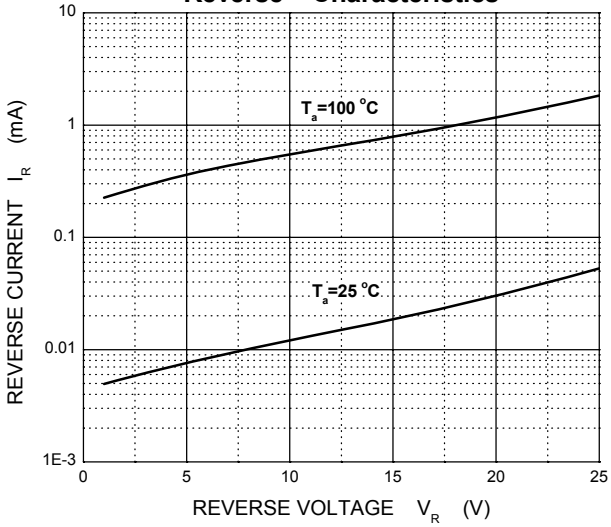
B120W

Typical Characteristics

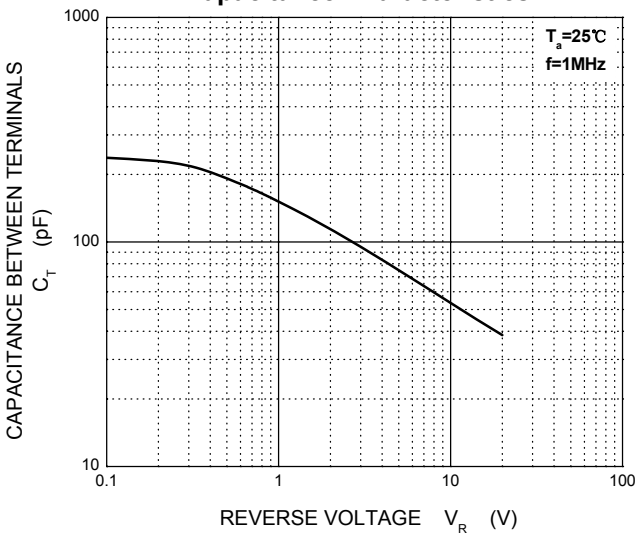
Forward Characteristics



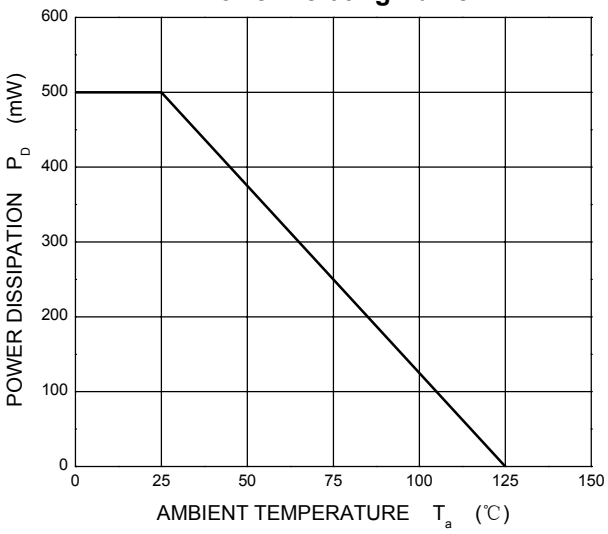
Reverse Characteristics



Capacitance Characteristics

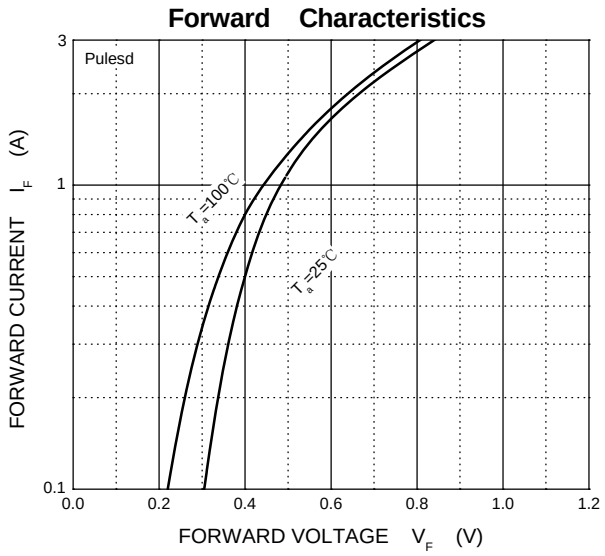


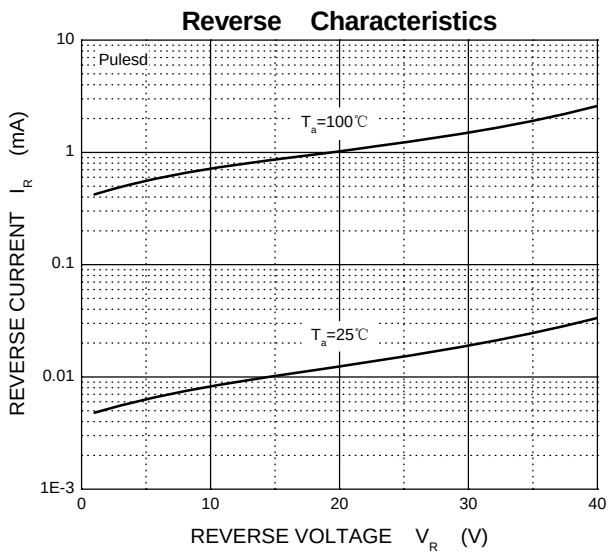
Power Derating Curve

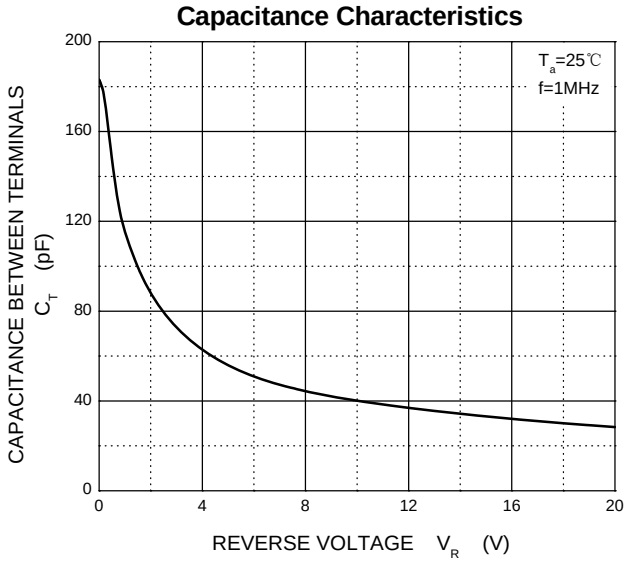


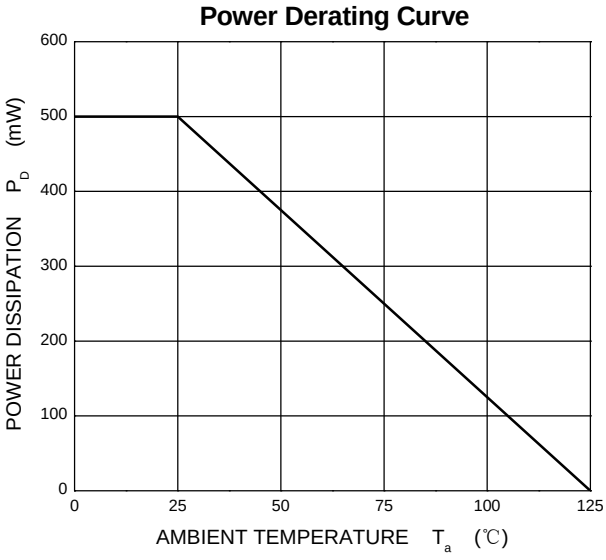
Typical Characteristics

B130W



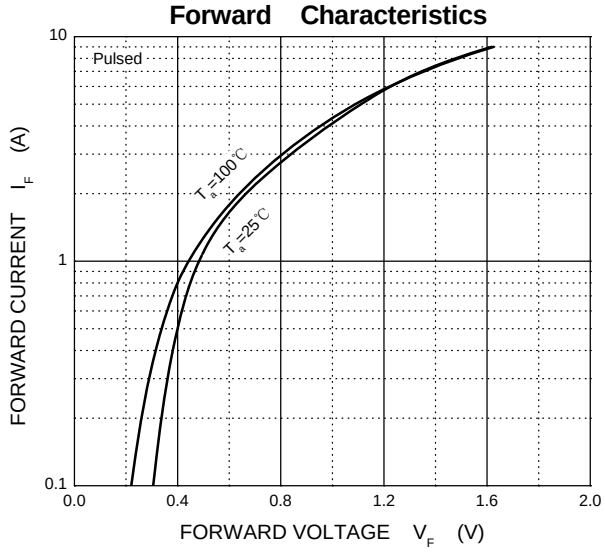


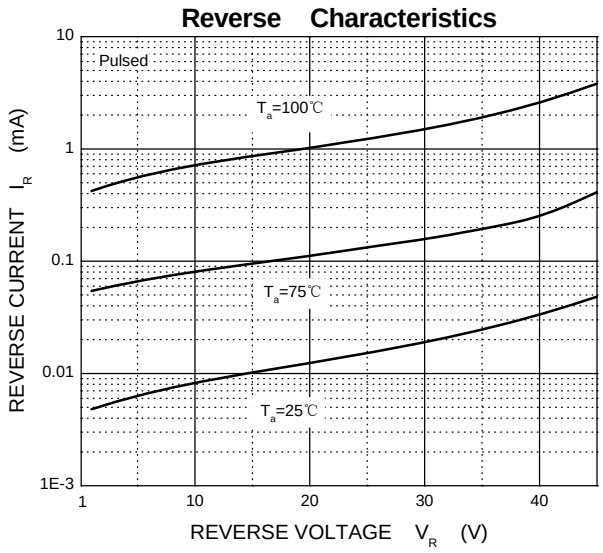


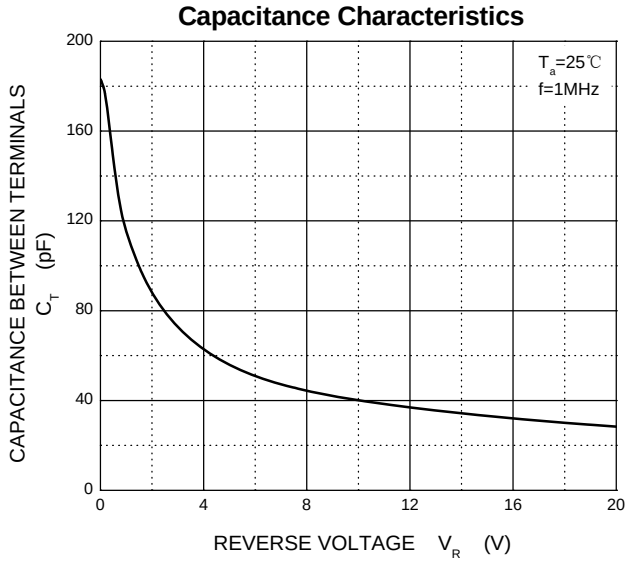


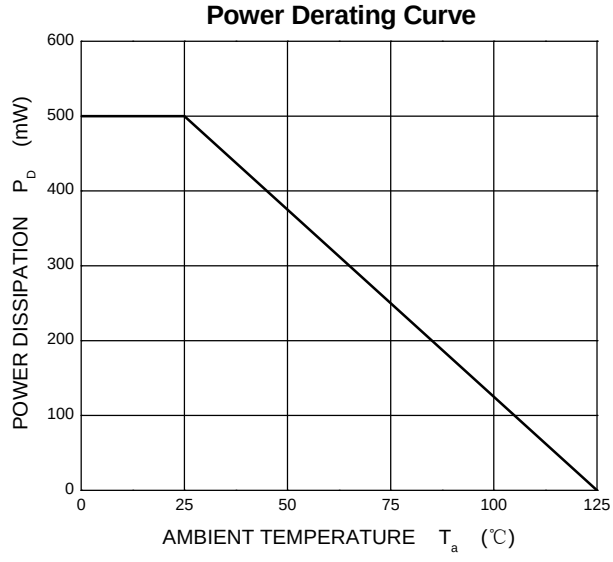
Typical Characteristics

B140W



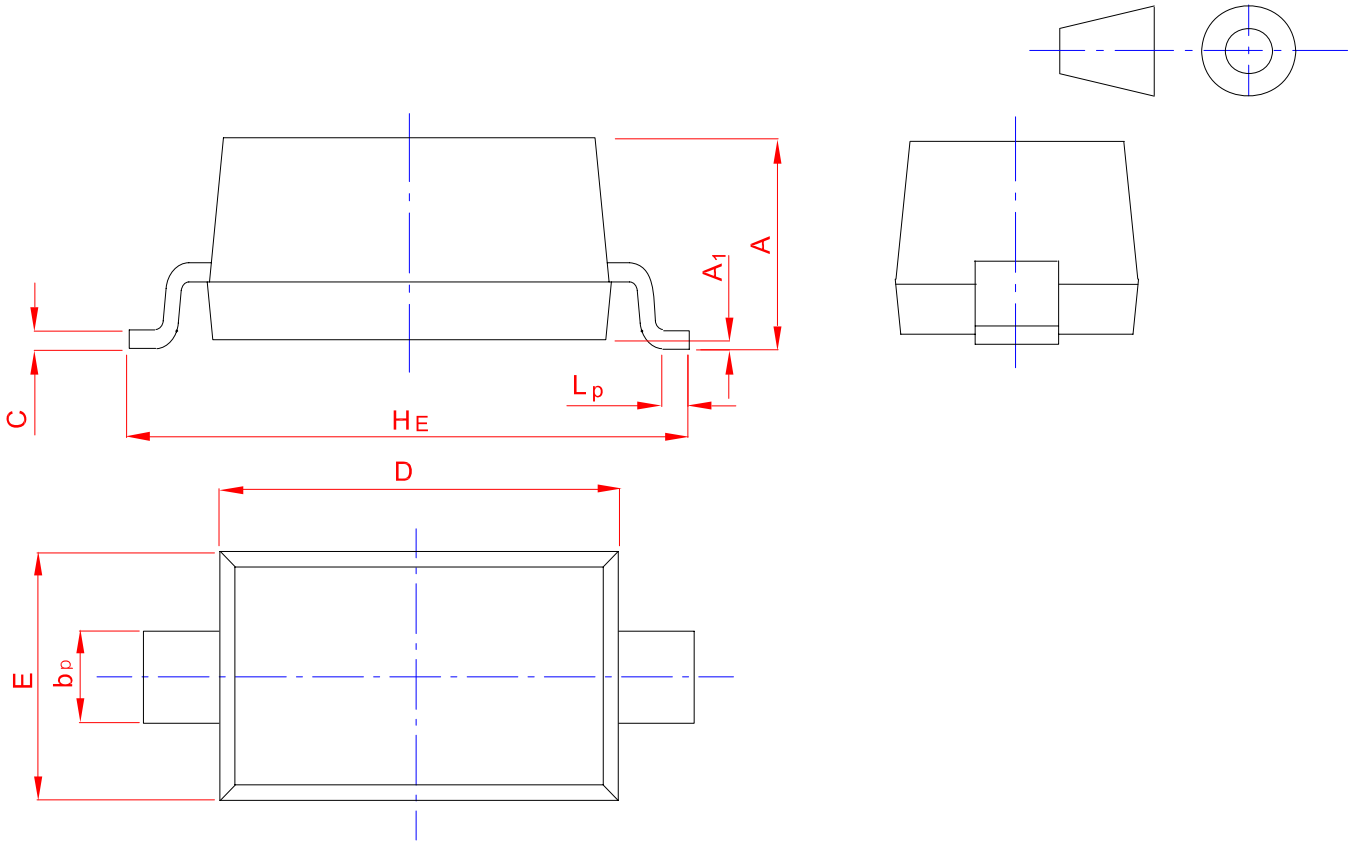






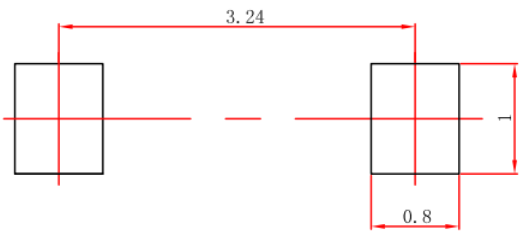
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SOD-123**



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20

SOD-123 SUGGESTED PAD LAYOUT

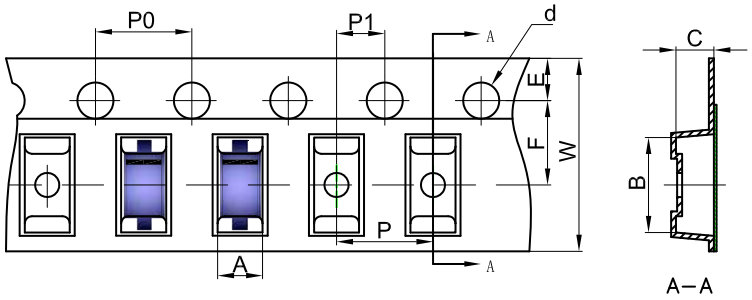


Note:

1. Controlling dimension in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purpose only.

SOD-123 Tape and Reel

SOD-123 Embossed Carrier Tape

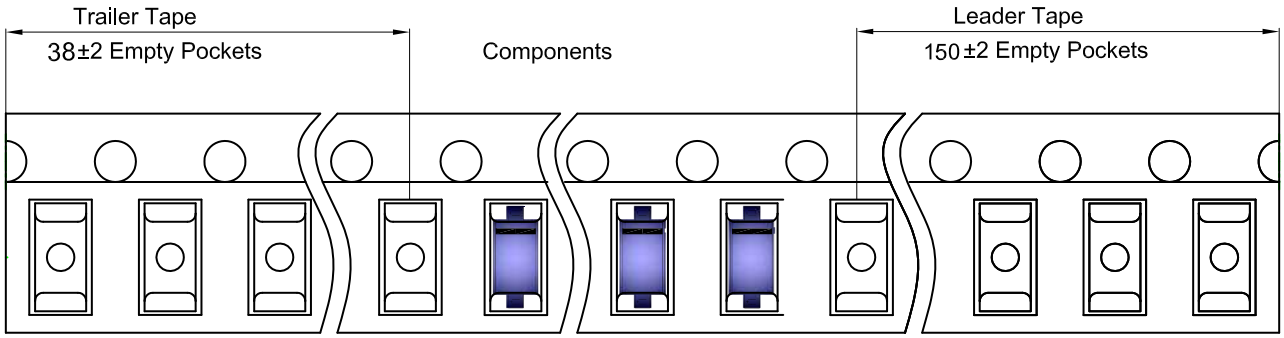


Packaging Description:

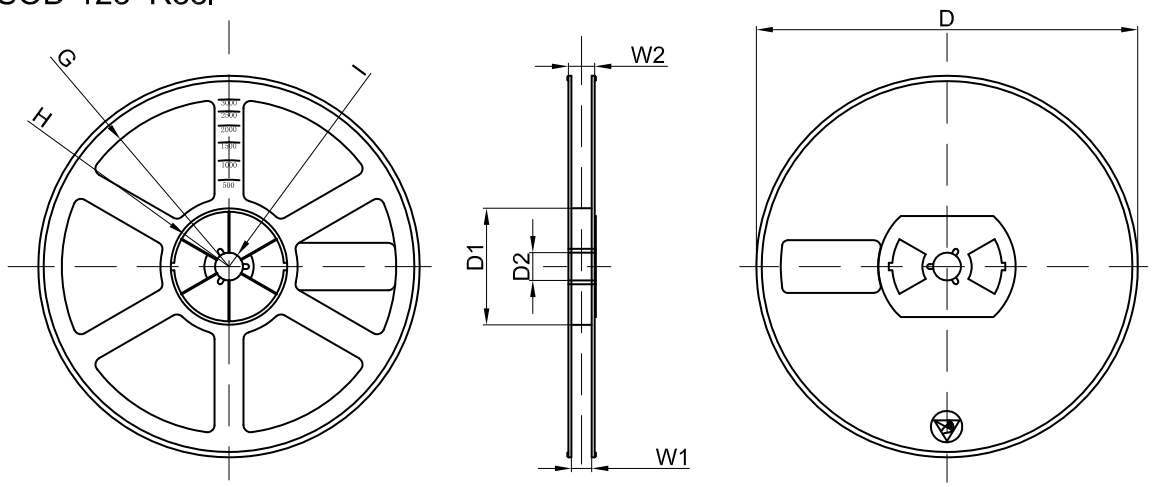
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm 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
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOD-123 Tape Leader and Trailer



SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	24,000 pcs	190×180×105	120,000 pcs	544×200×199	