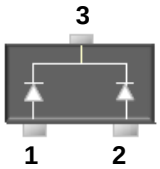
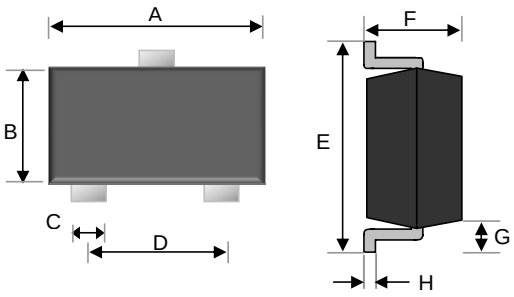
TAIWAN SEMICONDUCTOR

RB495D
40V, 350mA, SMD Schottky Diode

Small Signal Diode



SOT-23



Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.110	0.118
B	1.20	1.40	0.047	0.055
C	0.30	0.50	0.012	0.020
D	1.80	2.00	0.071	0.079
E	2.25	2.55	0.089	0.100
F	0.90	1.20	0.035	0.047
G	0.550 REF		0.022 REF	
H	0.08	0.19	0.003	0.010

Features

- ✧Epitaxial planar die construction
- ✧Surface device type mounting
- ✧Mositure sensitivity level 1
- ✧Matte tin (Sn) lead finishe with Nickel (Ni) underplate
- ✧Pb-free version and RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code.

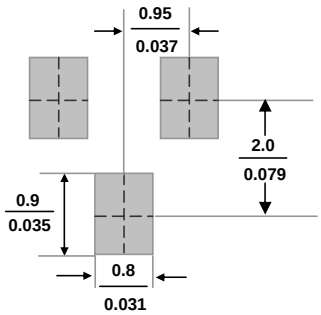
Mechanical Data

- ✧Case : SOT- 23 small outline plastic package
- ✧Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guranteed
- ✧High temperature soldering guaranted: 260℃/10s
- ✧Weight: 0.008 grams (approximate)
- ✧Marking:D3Q

Ordering Information

Part No.	Packing Code	Package	Packing	Marking
RB495D	RF	SOT-23	3K / 7" Reel	D3Q
RB495D	RFG	SOT-23	3K / 7" Reel	D3Q

Suggested PAD Layout



Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power dissipation	P_D	200	mW
Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Reverse Voltage	V_R	25	V
Mean Forward Current	I_O	350	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I_{FSM}	1.5	A
Junction Temperature	T_J	125	℃
Storage Temperature Range	T_{STG}	-40 ~+125	℃

Note 1: Mean output current per element: $I_O/2$.

Note 2: The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary despending on application.

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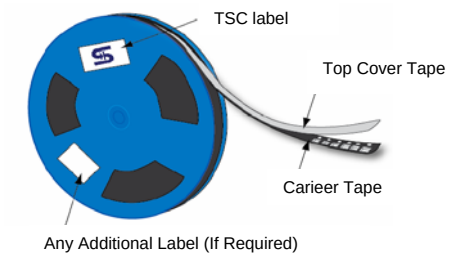
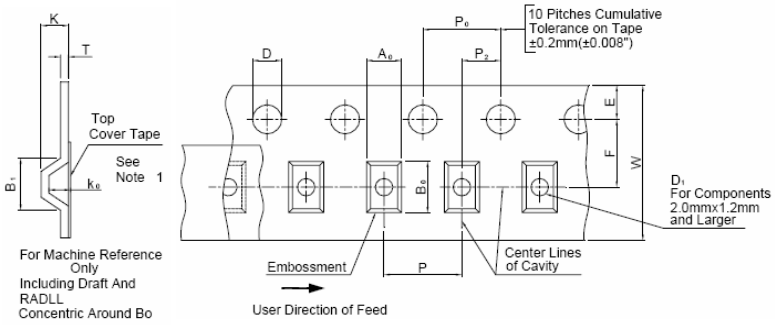
Electrical Characteristics

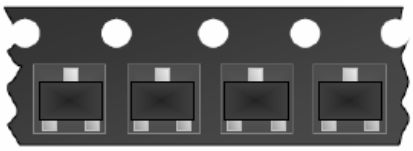
Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	I_R= 100uA	$V_{(BR)}$	40	-	V
Forward Voltage	I_F= 10mA	V_F	-	0.32	V
	I_F= 200mA		-	0.55	
Reverse Leakage Current	V_R= 25V	I_R	-	70	uA
Junction Capacitance	V_R=0, f=1.0MHz	C_J	-	50.0	pF

Carrier & Reel specification

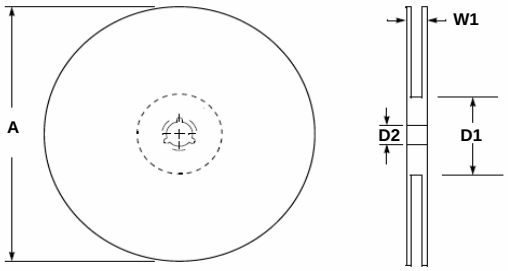


Item	Symbol	Dimension(mm)
Carrier depth	K	2.40 Max.
Sprocket hole	D	1.50 +0.10
Reel outside diameter	A	178 ± 1
Reel inner diameter	D1	50 Min.
Feed hole width	D2	13.0 ± 0.5
Sprocke hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocke hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.10
Overall tape thickness	T	0.6 Max.
Tape width	W	8.30 Max.
Reel width	W1	14.4 Max.





User direction of Feed



Note 1: A0, B0, and K0 are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max. The component cannot rote more than 10o within the determined cavity.

Note 2: If B1 exceeds 4.2 mm(0.165") for 8 mm embossed tape, the tape may not feed through all tape feeders.

Small Signal Diode

Rating and Characteristic Curves

FIG 1 Typical Forward Characteristics

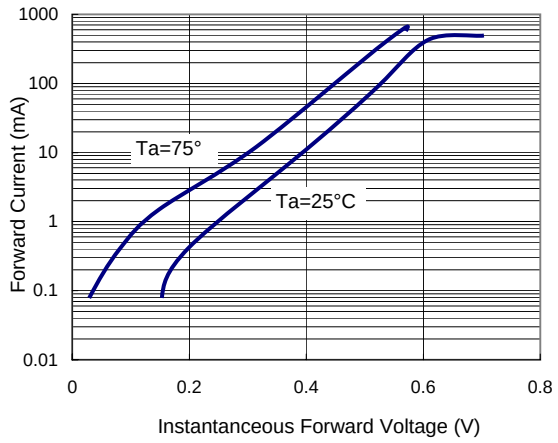


FIG 2 Reverse Current vs Reverse Voltage

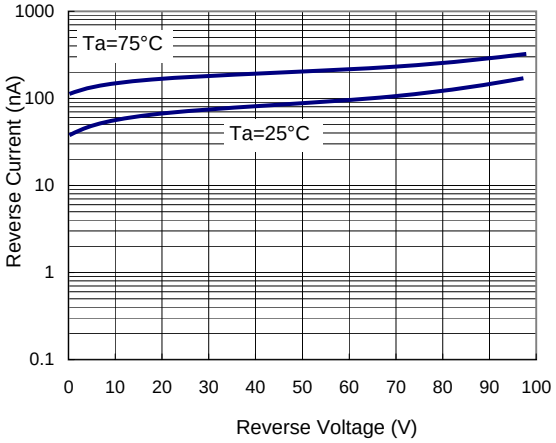


FIG 3 Admissible Power Dissipation Curve

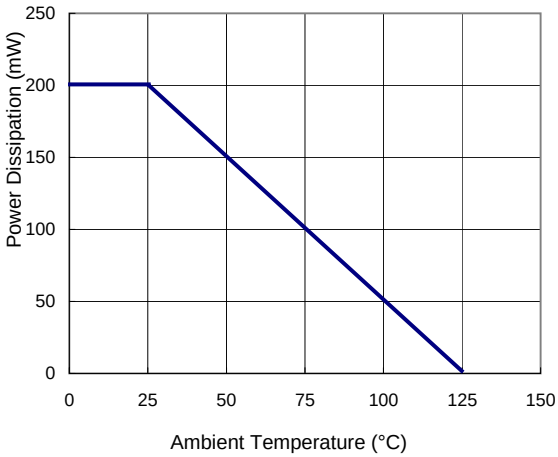


FIG 4 Typical Junction Capacitance