



RABS201 THRU RABS210

VOLTAGE RANGE

50 to 1000 Volts

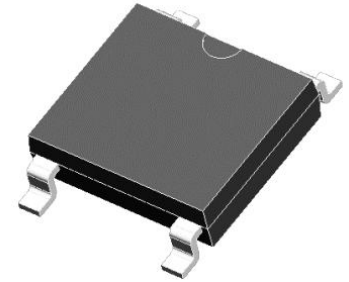
CURRENT

2.0 Ampere

Features

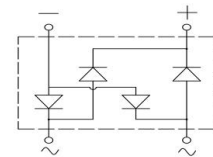
- Fast recovery glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC

ABS



Mechanical Data

- Case: Molded plastic body
- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity: Molded on body
- Weight: 0.003 ounce, 0.10 grams



Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOL	RAB S201	RAB S202	RAB S203	RAB S204	RAB S206	RAB S208	RAB S210	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current $T_L=100^\circ\text{C}$	$I_{(AV)}$	2.0							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	70							Amps
Maximum Instantaneous Forward Voltage @ 2.0A	V_F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5.0							μA
	$T_A = 125^\circ\text{C}$	100							
Maximum Reverse Recovery Time $T_J=25^\circ\text{C}$ (Note 3)	T_{RR}	150				250	500		nS
Typical Junction Capacitance (Note 1)	C_J	30							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	26							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	65							
Operating Junction Temperature Range	T_J, T_{STG}	(-55 to +150)							$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 15mm*12mm*1.6mm AL pad attach 195mm*110mm*10mm steel plate.
3. Reverse Recovery Test Conditions: $I_f=0.5\text{mA}$, $I_r=1.0\text{mA}$, $I_{rr}=0.25\text{A}$
4. The typical data above is for reference only



Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

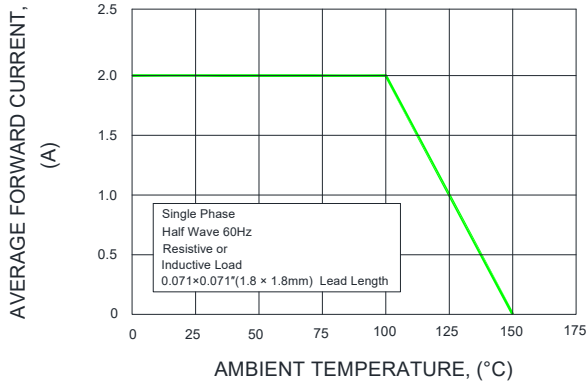


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

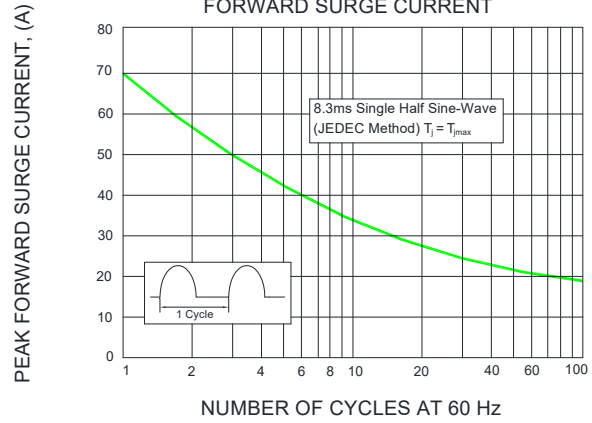


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

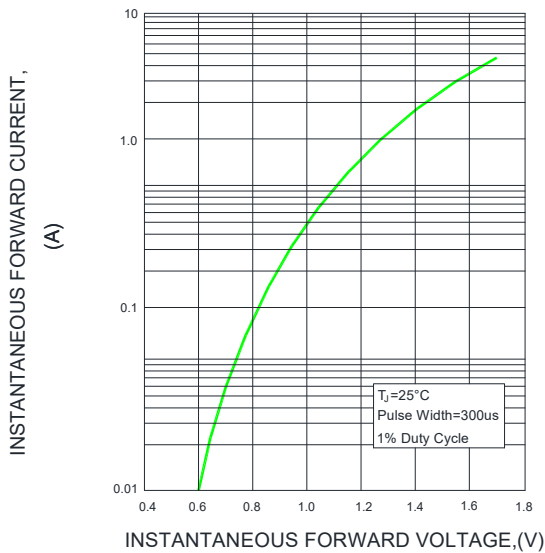


FIG.4-TYPICAL REVERSE CHARACTERISTICS

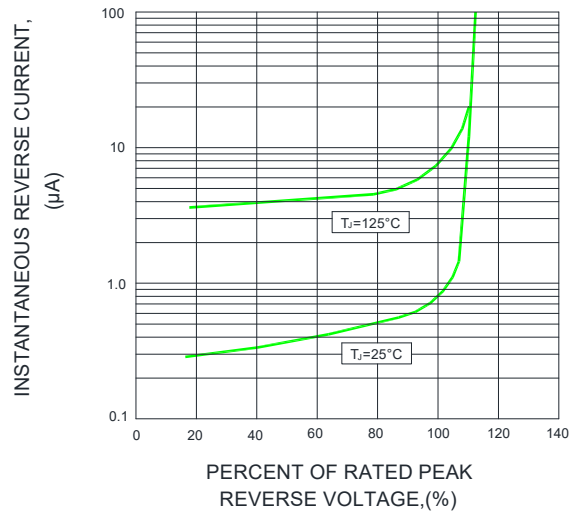


FIG.5-TYPICAL JUNCTION CAPACITANCE

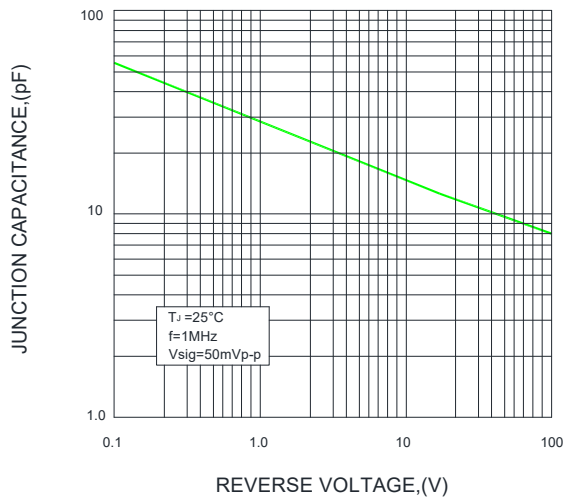
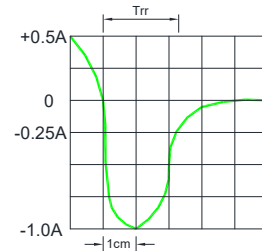
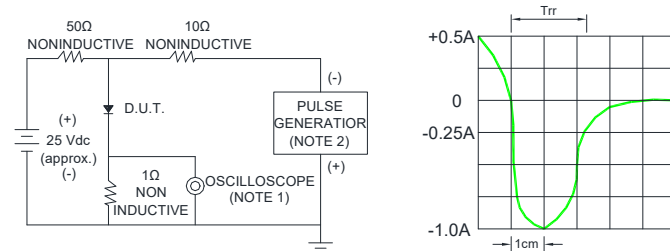


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time = 7ns max. Input Impedance = 1 magohm. 22pF
- 2. Rise time = 10ns max. Source Impedance = 50 ohms

SET TIME BASE FOR 50/100ns/cm

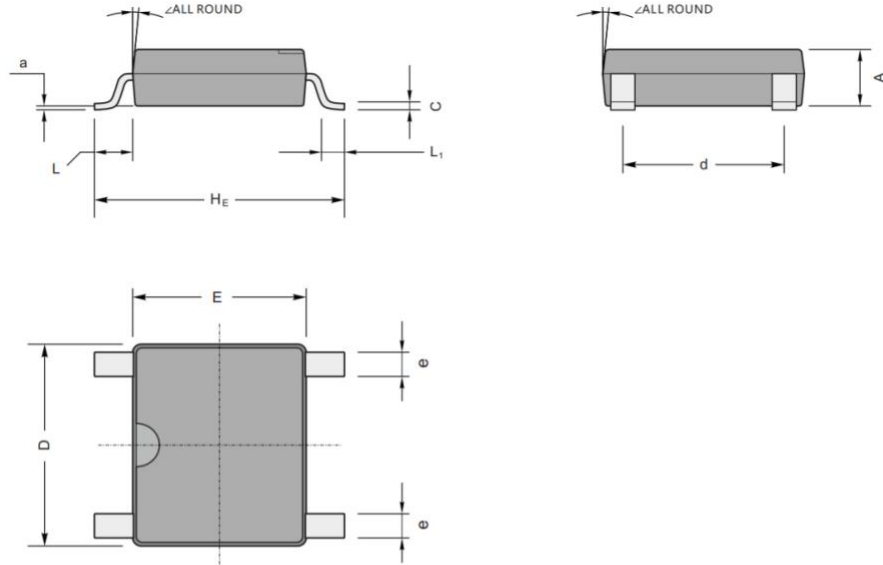


SURFACE MOUNT FAST RECOVERY RECTIFIER BRIDGE

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 CURRENT 2.0 Ampere

Package Outline Dimensions in inches (millimeters)

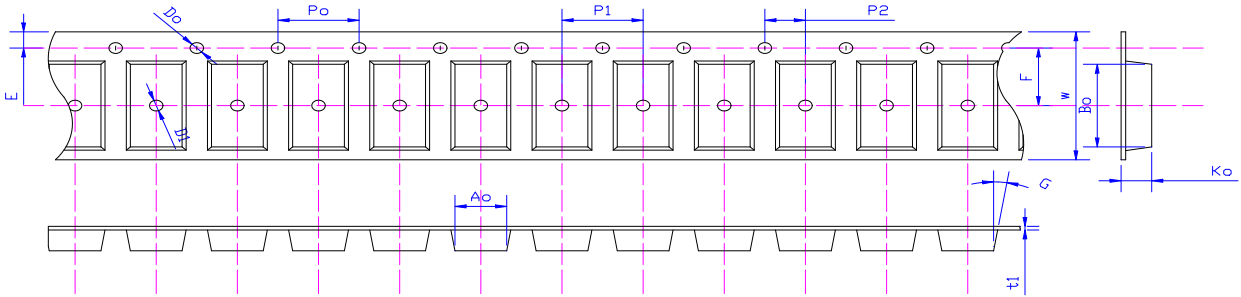


UNIT		A	C	D	E	HE	d	e	L	L ₁	a	∠
mm	max	1.5	0.25	5.2	4.5	6.5	4.2	0.7	0.95	0.6	0.2	7°
	min	1.3	0.15	4.9	4.2	6.0	3.8	0.5				
mil	max	59	8.7	205	177	256	165	28	37	24	8	
	min	51	5.9	193	166	236	150	20				



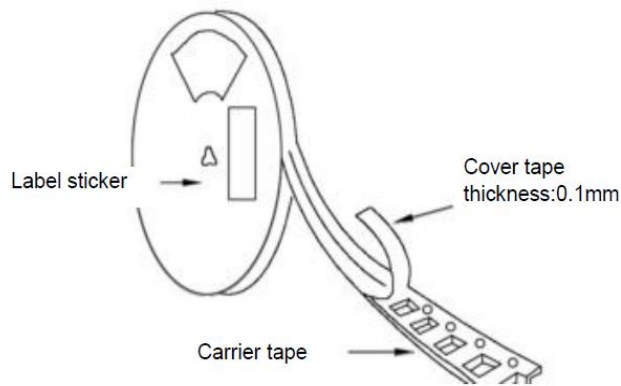
Packing Requirments

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	t1
ABS	5.31±0.10	6.68±0.10	1.59±0.10	4.00±0.1	12.0±0.10	0.30±0.02

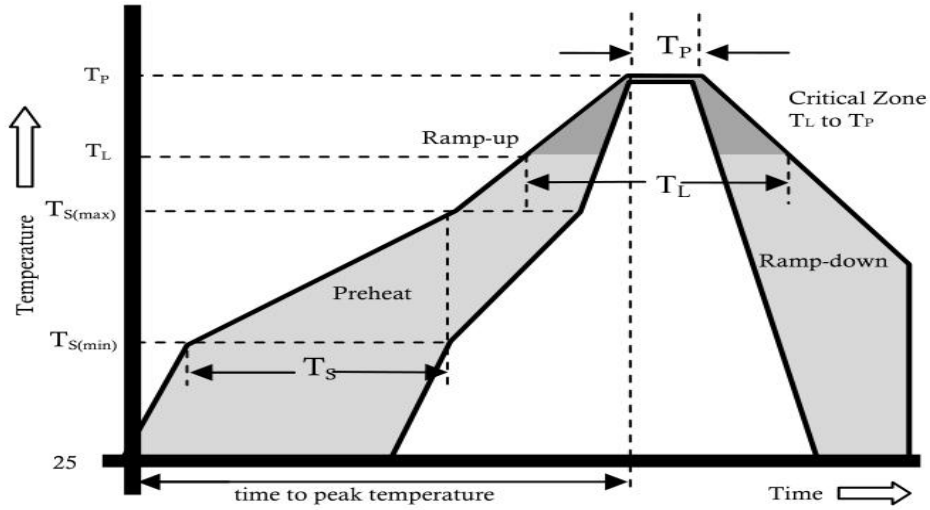
- 13 "antistatic plastic reel



DEVICE TYPE	13" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
ABS	5000	2	8	80000



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_P)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



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