




SPECIFICATION SHEET NO.	S0430 – RABS6S000RABS6	
ORIGINAL MFG/PART NO.	MDD Diodes/RABS6	
NEXTGEN PART CODE	RABS6S000RABS6	Indicate This Code For RFQ /Order
DATE	Apr. 30, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	<p>SMD Glass Passivated Fast Recovery Bridge Rectifiers, RABS Series, 4 Pads</p> <p>Repetitive Peak Reverse Voltage: 600V Max.</p> <p>Forward Rectified Current 1.0A Max.</p> <p>Operating Temp. Range -55°C ~+150°C</p> <p>Package in Tape/Reel, 5000pcs/Reel</p> <p>RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)</p>	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE		
Issued/Checked/Approved		
		
Effective Date: Apr. 30, 2025		

CUSTOMER APPROVE
Date:

MAIN FEATURE

- Glass Passivated Chip Junction
- Reliable Low-cost Construction Utilizing Molded Plastic Technique
- High Temperature Soldering Guaranteed: 260°C/10 Seconds At 5 Lbs., (2.3kg) Tension
- High Surge Current Capability
- Small Size, Simple Installation
- Surface Mount Package Ideally Suited For Automatic Insertion
- Leads Solderable Per MIL-STD-202 Method 208
- Meet MSL 1 Requirement
- Cross Competitors Parts and More.
- RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)



Image shown is a representation only. Exact specifications should be obtained from the product dimension.



APPLICATION

- For Printed Circuit Board

ELECTRICAL CHARACTERISTICS

- See Page 5 ~ Page 6 For Different Part Code.
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code RABS6S000RABS6 For RFQ and Order.

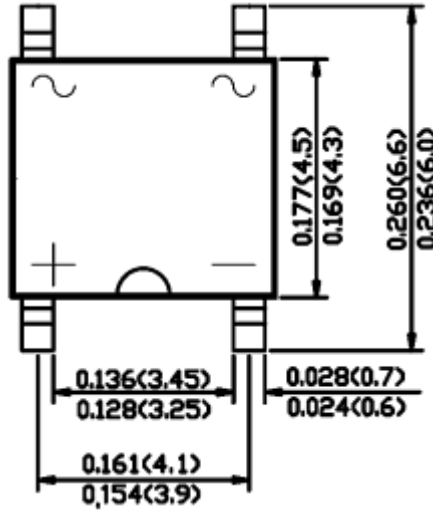
PART CODE GUIDE

RFQ
[Request For Quotation](#)

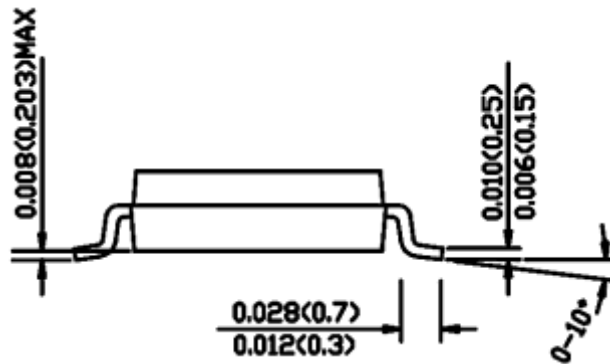
CODE	NAME	KEY SPECIFICATION OPTION
RABS	Product Series Code	SMD Glass Passivated Fast Recovery Bridge Rectifiers, Case ABS, 4 Pads
6	Repetitive Peak Reverse Voltage Code	2: 200V Max.; 4: 400V Max.; 6: 600V Max. 8: 800V Max. 10: 1000V Max.
S000	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
RABS6	Marking Code	Marking "RABS6"
XX	Special/Custom Parameters Code	Letter or Digits (A~Z, a~z or 0~9) for Special Parametric; Blank: N/A

DIMENSION - Unit: mm, Case ABS, Inch/mm

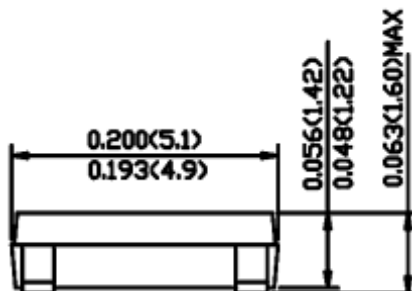
Top View



Side View

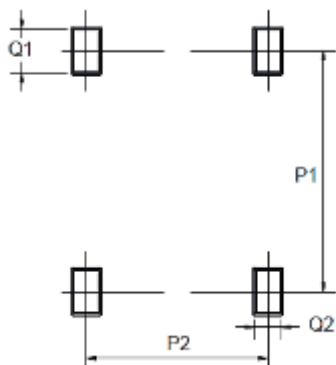


Side View

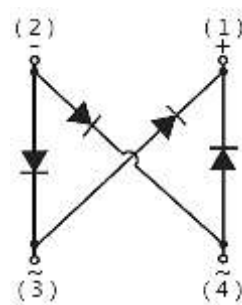


Recommend Pad Layout - Tolerance: $\pm 0.05\text{mm}$

Circuit Diagram



Symbol	Min. (mm)
P1	5.72
P2	4.00
Q1	1.00
Q2	0.90



MECHANICAL CHARACTERISTICS

CASE	FLAMMABILITY RATING	TERMINALS	MARKING
JEDEC ABS molded plastic body	UL 94V-0	Solder plated, solderable per MIL-STD-750, Method 2026	See Marking list For different part code

ABSOLUTE MAX. RATING & CHARACTERISTICS - $T_A = 25^\circ\text{C}$ unless otherwise specified, For Reference Only

PARAMETER		SYMBOLS	VALUE	UNITS
Max. Average Forward Rectified Current	On Glass-epoxy P.C.B.(Note 3)	IF(AV)	0.8	A
	On Aluminum Substrate (Note 4)		1.0	
Max. DC Reverse Current Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	IR	5	μA
	$T_A = 100^\circ\text{C}$		500	
Typical Thermal Resistance (Note 3)		R θ JL	25	$^\circ\text{C/W}$
		R θ JA	75	
Maximum Reverse Recovery Time (Note 4)		t _{rr}	500	ns
Operating Temperature Range		T _J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range		T _{STG}	-55 ~ +150	$^\circ\text{C}$

ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25°C

PART CODE	MAX. REPETITIVE PEAK REVERSE VOLTAGE	MAX. RMS VOLTAGE	MAX. BLOCKING VOLTAGE	PEAK FORWARD SURGE CURRENT, 8.3MS SINGLE HALF SINE- WAVE SUPERIMPOSED ON RATED LOAD	MAX. INSTANTANEOUS FORWARD VOLTAGE DROP PER LEG @0.4A	MARKING LIST
	VRRM	VRMS	VDC	IFSM	VF	
	V	V	V	A	V	
RABS2S000RABS2	200	140	200	30	1.30	RABS2
RABS4S000RABS4	400	280	400	30	1.30	RABS4
RABS6S000RABS6	600	420	600	30	1.30	RABS6
RABS8S000RABS8	800	560	800	30	1.30	RABS8
RABS10S0RABS10	1000	700	1000	30	1.30	RABS10

Note

1. Ratings at 25 C ambient temperature unless otherwise specified.
2. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.
3. On glass epoxy PCB mounted on 0.05*0.05" (1.3*1.3mm) pads
4. On aluminum substrate PCB with on area of 0.80*0.8" (20*20mm) mounted on 0.05*0.05" (1.3*1.3mm) solder pads
5. Thermal resistance form junction to ambient and junction to lead mounted on P.C.B. with 0.2X0.2" (5X5mm) copper pads.
6. Reverse recovery condition IF=0.5A,IR=1.0A,Irr=0.25A.

RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

FIG.1 FORWARD DERATING CURVE

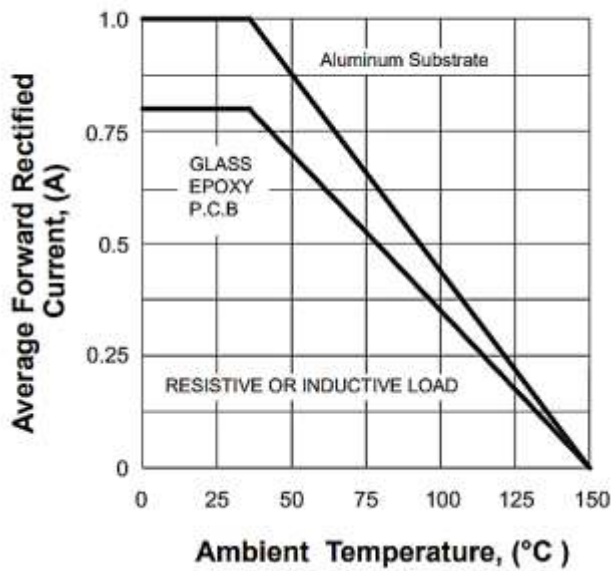
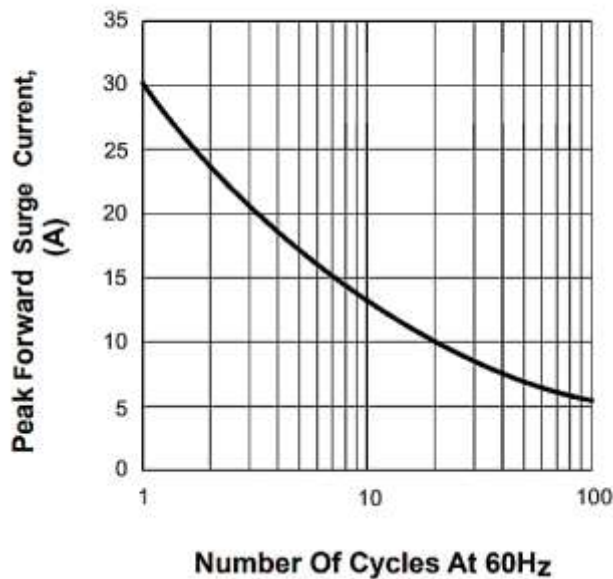


FIG.2 PEAK FORWARD SURGE CURRENT



RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25°C Unless Otherwise Specified.

FIG.3 TYPICAL FORWARD CHARACTERISTICS

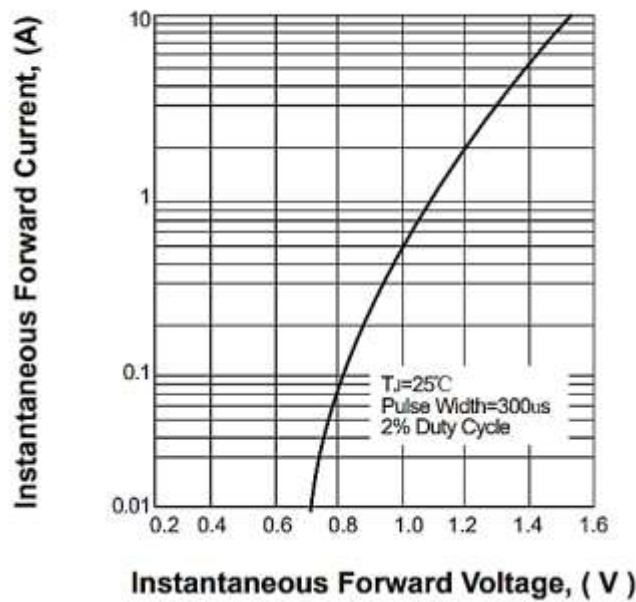
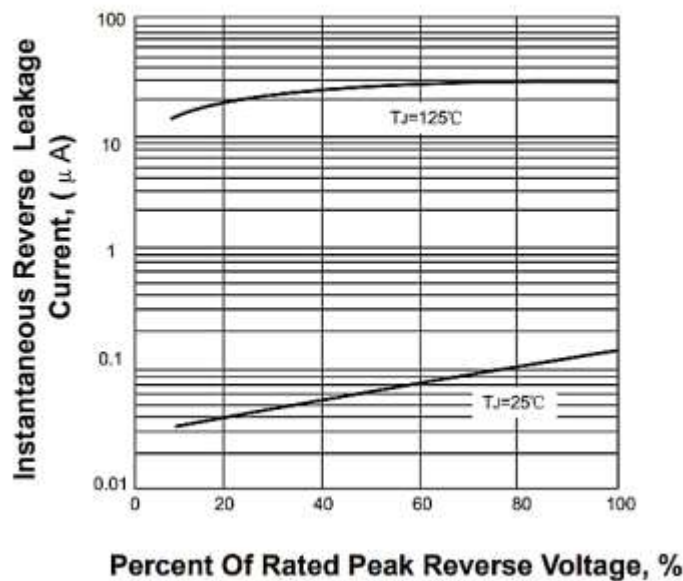
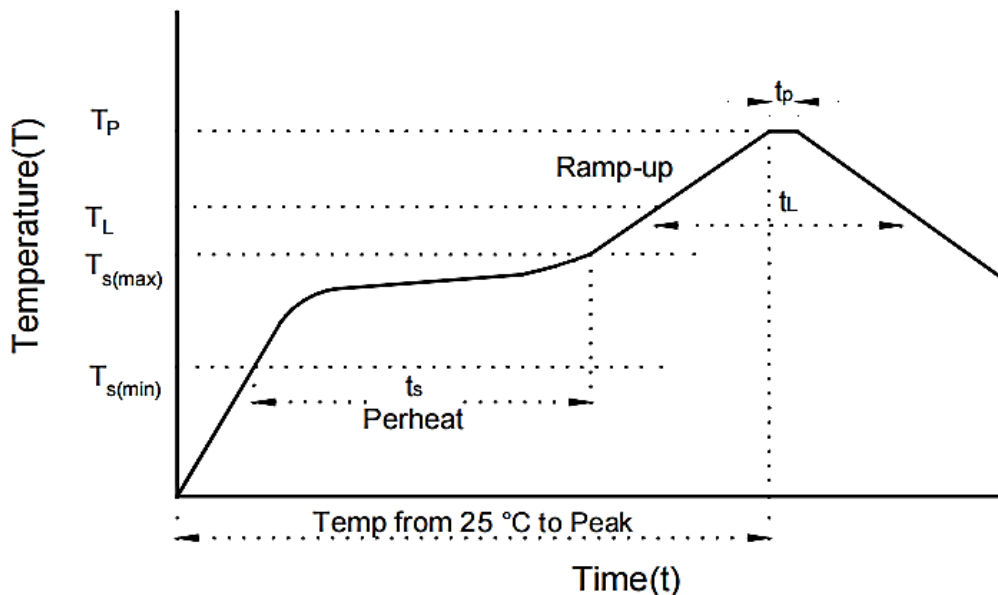


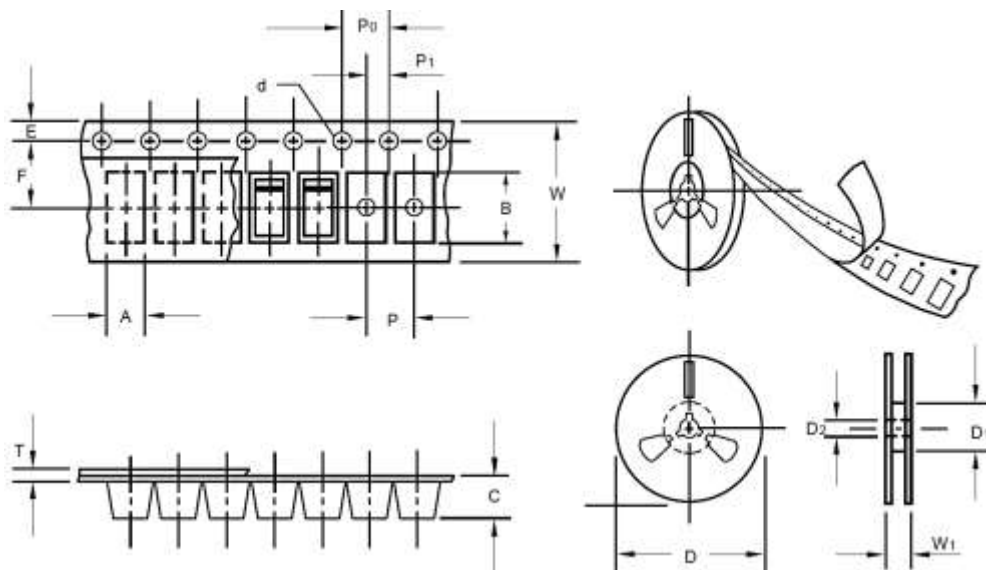
FIG.4 TYPICAL REVERSE CHARACTERISTICS



SUGGESTED REFLOW PROFILE - For Reference Only


PROFILE FEATURE		PB-FREE ASSEMBLY
Average Ramp-up Rate (T_L Max to T_p)		3°C/second Max
Preheat	Temperature Min (T_s Min.)	150°C
	Temperature Max (T_s Max.)	200°C
	Time (t_s Min. to t_s Max.)	60 ~ 180 seconds
Time maintained above	Temperature (T_L)	217°C
	Time (t_L)	60 ~ 150 seconds
Peak/Classification Temperature (T_p)		260 °C
Time within 5°C of actual Peak Temperature (t_p)		10 seconds Max.
Ramp-down Rate		6 °C /Second Max.
Time 25 °C to Peak Temperature		8 Minutes Max.
Suggest reflow times		3 Times Max.

TAPE/REEL - Unit: mm, All Devices are packed in accordance with EIA standard RS-481-A and specifications



ITEM	SYMBOL	TOLERANCE	ABS
Carrier width	A	0.1	2.8
Carrier Length	B	0.1	5.33
Carrier Depth	C	0.1	2.36
Sprocket hole	d	0.05	1.5
7"Reel outside diameter	D	2	330
7"Reel inner diameter	D1	Min.	50
Feed hole diameter	D2	0.5	13
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.5
Punch hole pitch	P	0.1	4
Sprocket hole pitch	P0	0.1	4
Embossment center	P1	0.1	2
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12
Reel width	W1	1	18
Qty. Per Reel (pcs)	5000		

IMPORTANT NOTES AND DISCLAIMER

1. **ROHS COMPLIANCE:** The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU RoHS Directive (EU) 2015/863 EC (RoHS3). RoHS Test Report for this product can be obtained at Download Center.
2. **REACH COMPLIANCE:** REACH substances of high concern (SVHCs) information is available for this product. Since the European Chemical Agency (ECHA) has published notice of their intent to frequently revise the SVHC listing for the foreseeable future, REACH Test Report for this product can be obtained at Download Center.
3. All Product parametric performance is indicated in the Electrical Characteristics for the listed herein test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.
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