SPECIFICATION SHEET

SMD SINGLE PHASE BRIDGE RECTIFER ABS SERIES

SPECIFICATION SHEET NO.	S0429 – ABS6S00000ABS6	
ORIGINAL MFG/PART NO.	MDD Diodes/ABS6/ABS6000000S160	
NEXTGEN PART CODE	ABS6S00000ABS6	Indicate This Code For RFQ /Order
DATE	Apr. 29, 2025	
REVISION	A3	Updated With Most Recent Data
DESCRIPTION AND MAIN PARAMETRICS	SMD Single Phase Glass Passivated Bridge Rectifiers, ABS Series, 4 Pads Repetitive Peak Reverse Voltage: 600V Max. Forward Current 1.0A Max. Operating Temp. Range -55°C ~+150°C Package in Tape/Reel, 5000pcs/Reel RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)	
CUSTOMER		
CUSTOMER PART NUMBER		
CROSS REF. PART NUMBER		
MEMO		

VENDOR APPROVE
Issued/Checked/Approved NextGen Components, Inc. Mandy Xu NextGen Components, Inc. Ruby Zhang NextGen Components, Inc. Jack Zhang
Effective Date: Apr. 29, 2025

CUSTOMER APPROVE
Date:

MAIN FEATURE

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

- Glass Passivated Chip Junction
- Reverse Voltage - 200 to 1000 V
- Forward Current - 1A
- High Surge Current Capability
- Surface Mount Package Ideally Suited for Automatic Insertion
- 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)

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 ABS6S00000ABS6 For RFQ and Order.

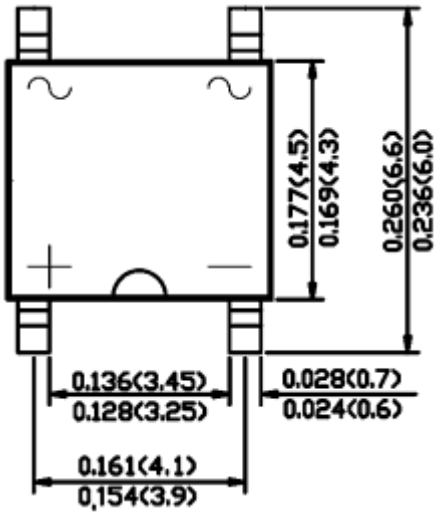
PART CODE GUIDE

RFQ
Request For Quotation

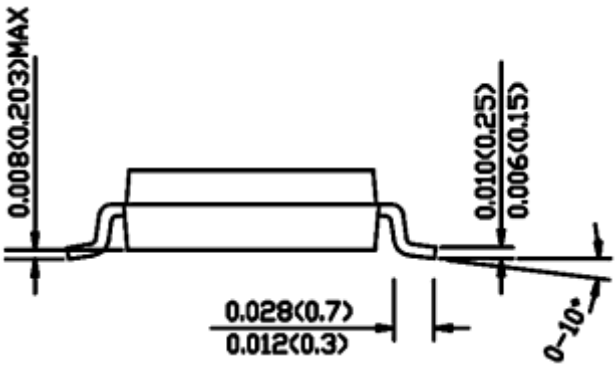
CODE	NAME	KEY SPECIFICATION OPTION
ABS	Product Series Code	SMD Single Phase Glass Passivated Bridge Rectifiers, Case ABS, 4 Pads
6	Repetitive Peak Reverse Voltage Code	2: 200V Max.; 4: 400V Max.; 6: 600V Max. 8: 800V Max. 10: 1000V Max.
S00000	Internal Control Code	Letter or Digits (A~Z, a~z or 0~9)
ABS6	Marking Code	Marking “ABS6”
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

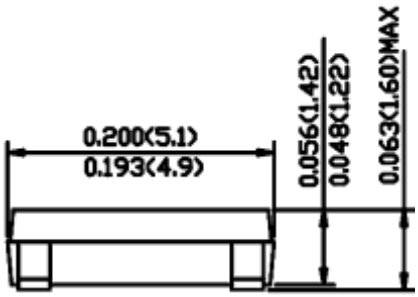
Top View



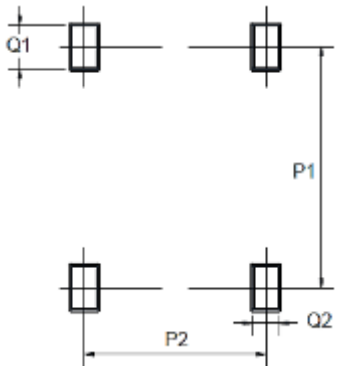
Side View



Side View

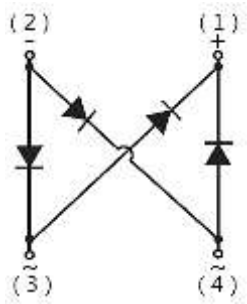


Recommend Pad Layout - Tolerance: ±0.05mm



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

Circuit Diagram



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°C unless otherwise specified, For Reference Only

PARAMETER		SYMBOLS	VALUE	UNITS
Average Rectified Output Current at Tc = 125 °C		IF(AV)	1	A
Max. DC Reverse Current Rated DC Blocking Voltage	T_A = 25 °C	I_R	5	µA
	T_A=100 °C		50	
	T_A = 125℃		100	
Typical Thermal Resistance （Note4）		$R_{\theta JA}$	72	°C/W
		$R_{\theta JC}$	20	
Typical Junction capacitance （Note3）		CJ	13	pF
Operating and Storage Temperature Range		T_J,T_{STG}	-55 ~+ 150	°C

ELECTRICAL PARAMETERS – FOR DIFFERENT PART CODE- Ta = 25℃

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 @1A	MARKING LIST
	V_{RRM}	V_{RMS}	V_{DC}	I_{FSM}	V_F	
	V	V	V	A	V	
ABS2S00000ABS2	200	140	200	35	1.1	ABS2
ABS4S00000ABS4	400	280	400	35	1.1	ABS4
ABS6S00000ABS6	600	420	600	35	1.1	ABS6
ABS8S00000ABS8	800	560	800	35	1.1	ABS8
ABS10S000ABS10	1000	700	1000	35	1.1	ABS10

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. Measured at 1MHz and applied reverse voltage of 4 V D.C.
4. Mounted on glass epoxy PC board with 4×1.5"×1.5" （3.81×3.81 cm） copper pad.

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

Fig.1 Average Rectified Output Current Derating Curve

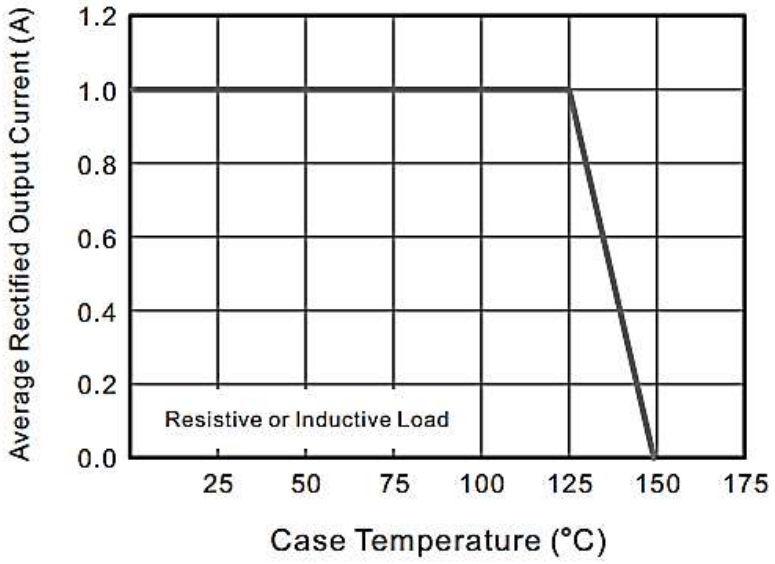
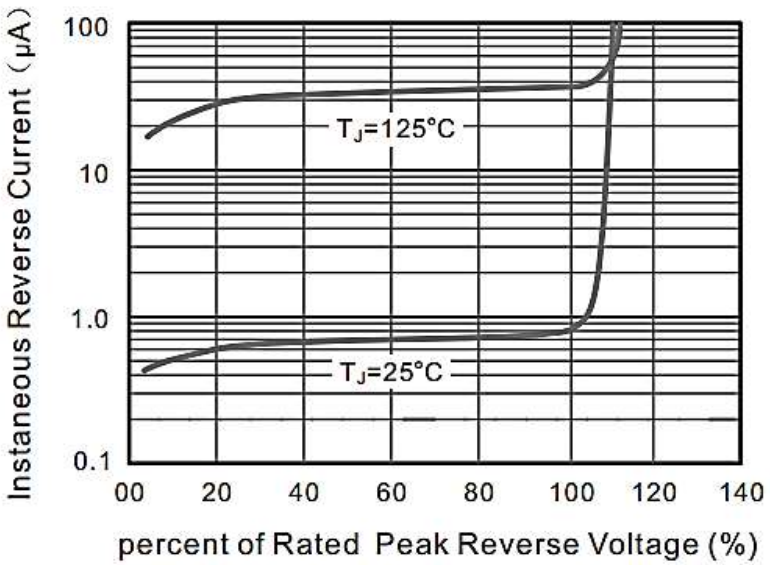


Fig.2 Typical Reverse Characteristics



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

Fig.3 Typical Instaneous Forward Characteristics

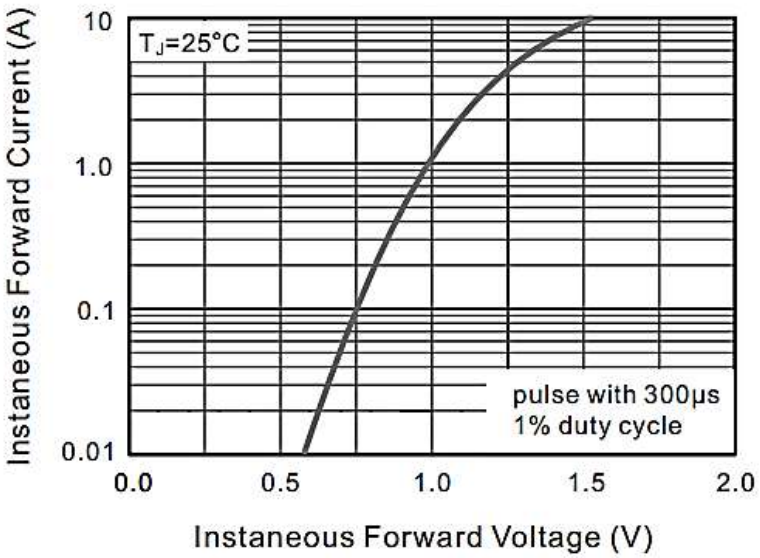
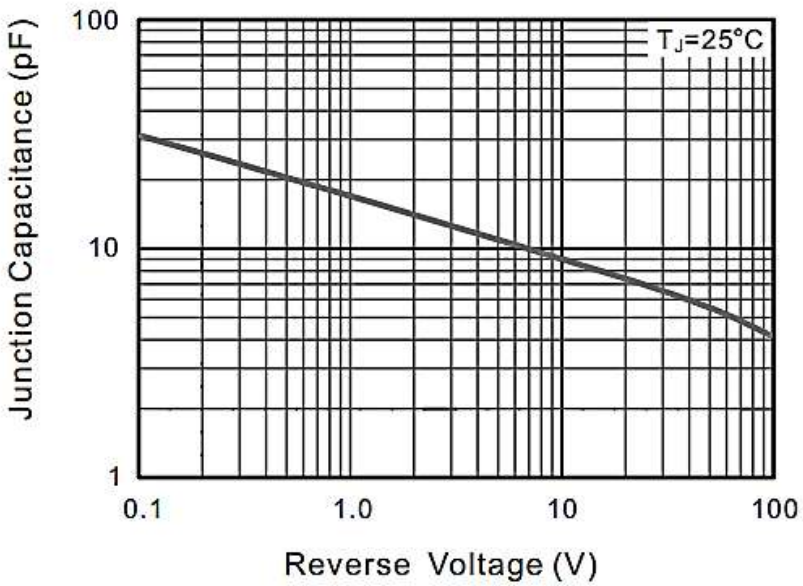
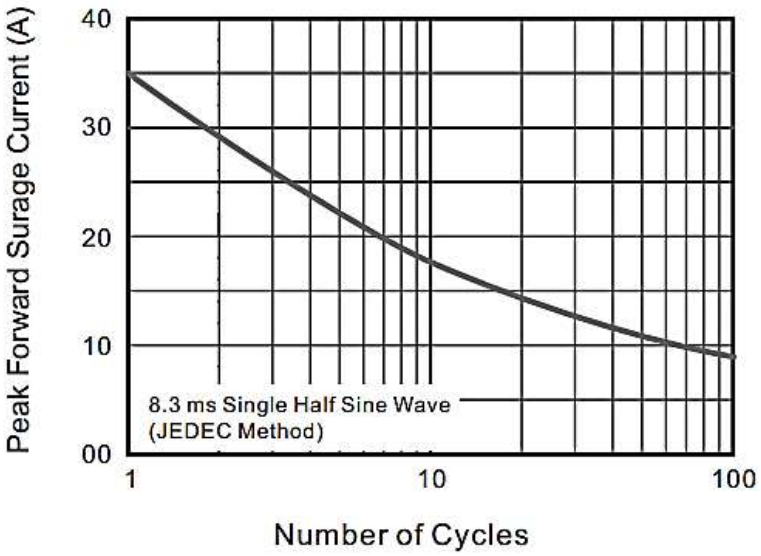


Fig.4 Typical Junction Capacitance



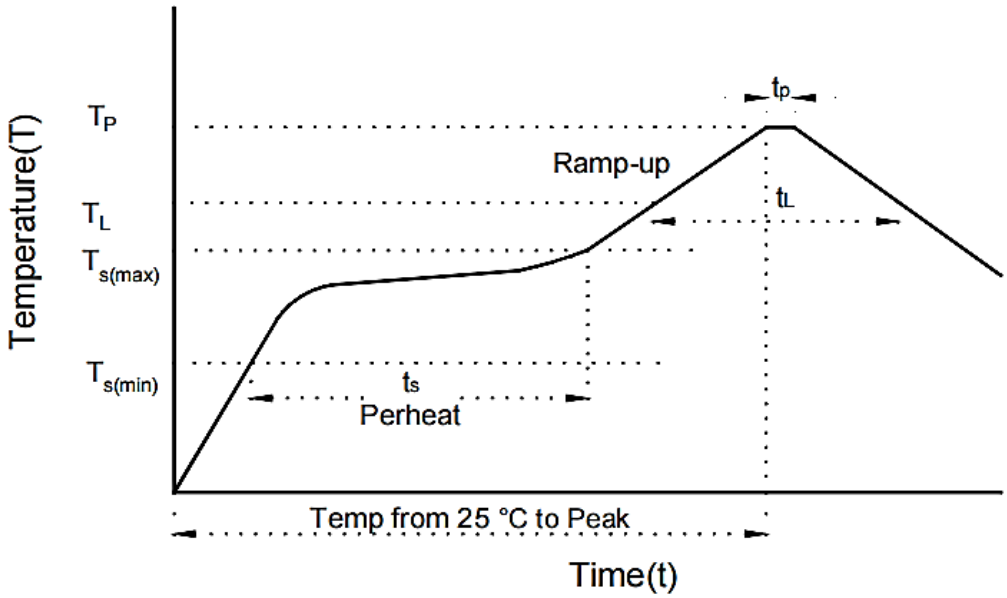
RATINGS AND CHARACTERISTICS CURVES- For Reference Only, Ta=25℃ Unless Otherwise Specified.

Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



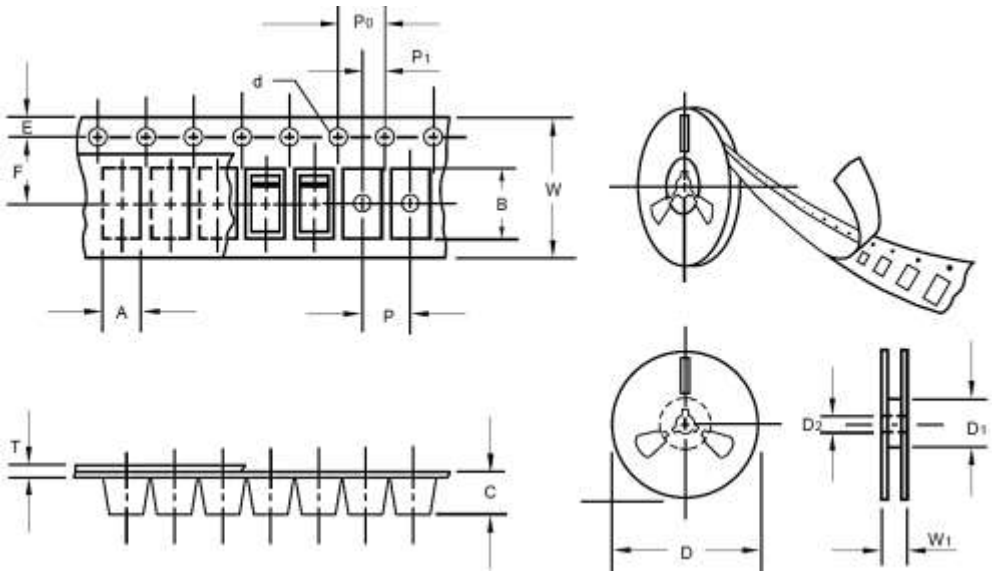
The curve above is for reference only.

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 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 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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