




<b>SPECIFICATION SHEET NO.</b>	S0512– M1A0000000S050	
<b>ORIGINAL MFG/PART NO.</b>	MDD Diodes/M1/SMAM100000S105	
<b>NEXTGEN PART CODE</b>	M1A0000000S050	Indicate This Code For <a href="#">RFQ</a> /Order
<b>DATE</b>	May. 12, 2025	
<b>REVISION</b>	A3	Updated With Most Recent Data
<b>DESCRIPTION AND MAIN PARAMETRICS</b>	<p>SMD General Purpose Rectifier, Case SMA, M Series, 2 Pads</p> <p>Repetitive Peak Reverse Voltage <math>V_{RRM}</math>: 50V Max.</p> <p>RMS Voltage <math>V_{RMS}</math>: 35V Max.</p> <p>Average Forward Rectified Current <math>I(AV)</math>: 1.0A Max.</p> <p>Operating Junction And Storage Temperature Range <math>T_J, T_{STG}</math> : -55°C ~+150°C</p> <p>Package in Tape, 5000pcs/Reel</p> <p>RoHS/RoHS III compliant, RoHS Annex III lead Exemption (Exempt per RoHS EU 2015/863) and Halogen Free (HF)</p>	
<b>CUSTOMER</b>		
<b>CUSTOMER PART NUMBER</b>		
<b>CROSS REF. PART NUMBER</b>		
<b>MEMO</b>		

<b>VENDOR APPROVE</b>
<div> <div>Issued/Checked/Approved</div> <div>    </div> </div>
Effective Date: May. 12, 2025

<b>CUSTOMER APPROVE</b>
Date:

## MAIN FEATURE

- The Plastic Package Carries Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated Junction chip
- Low Reverse Leakage
- High Forward Surge Current Capability
- High Temperature Soldering Guaranteed: 250° C/10 Seconds
- 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
- All Products Parameters are Subject To NextGen Components' Final Confirmation.

## HOW TO ORDER

- Please Follow Up Part Code Guide And Indicate NextGen Part Code M1A0000000S050 For RFQ and Order.

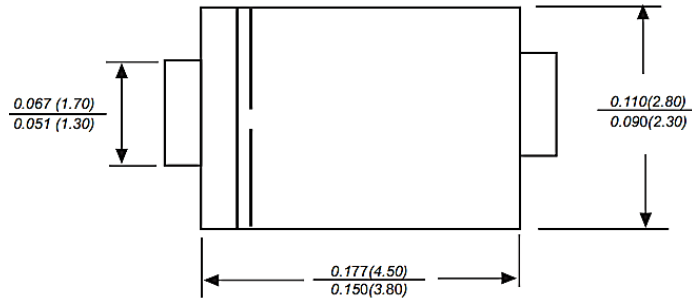
## PART CODE GUIDE

**RFQ**
[Request For Quotation](#)

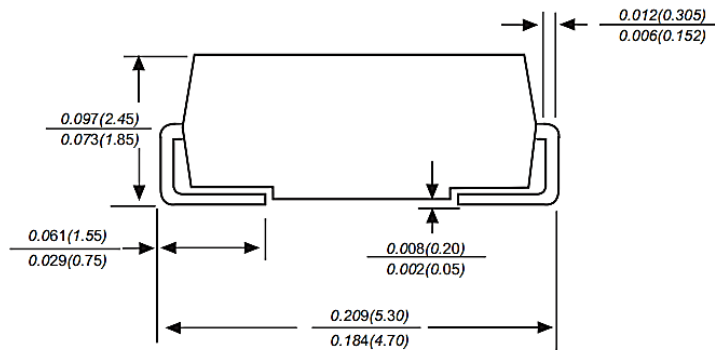
CODE	NAME	KEY SPECIFICATION OPTION
M	Product Series Code	SMD General Purpose Rectifier, M Series, 2 Pads
1	Max. RMS Voltage Code	1: 35V ; 2: 70V; 3: 140V; 4: 280V; 5: 420V; 6: 560V; 7: 700V
A	Case Code	A: SMA/DO-214AC
0000000S	Internal Control Code	Letter A~Z, a~z or digits (0~9)
050	Max. DC Blocking Voltage	050: 50V ; 100: 100V; 200: 200V; 400: 400V; 600: 600V; 800: 800V; 1000: 1000V
XX	Special/Custom Parameters	Blank: N/A; XX: Letter A~Z, a~z or digits (0~9) for Special/Custom Parameters

**DIMENSION** - Unit: Inch (mm) SMA/DO-214AC, Outline

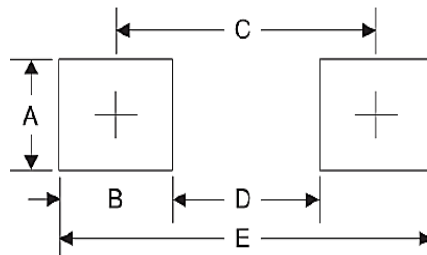
Top View



Side View



Recommend Pad Layout



SYMBOL	A	B	C	D	E
Unit (Inch)	0.066	0.060	0.095	0.086	0.215
Unit (mm)	1.68	1.52	3.93	2.41	5.45

**MECHANICAL DATA**

CASE	TERMINALS	POLARITY	MOUNTING POSITION	WEIGHT PER PIECE
JEDEC DO-214AC/SMA Molded plastic body	Solder plated, solderable per MIL-STD-750,Method 2026	Polarity Symbol Marking On Body	Any	0.0019 Ounce, 0.055 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 current derate by 20%.

PARAMETER		SYMBOLS	VALUE			UNITS
			MIN.	TYPICAL	MAX.	
Average Forward Rectified Current		I <sub>AV</sub>			1.0	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed On Rated Load		I <sub>FSM</sub>			30	A
Instantaneous Forward Voltage at 1.0A		V <sub>F</sub>			1.1	V
DC Reverse Current At Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>			5	μA
	T <sub>A</sub> =125°C				50	
Junction Capacitance (Note 1)		C <sub>J</sub>		15		pF
Thermal Resistance (Note 2)		R <sub>θJA</sub>		75		°C/W
Operating Junction And Storage Temperature Range		T <sub>J</sub> , T <sub>STG</sub>	-55		+150	°C

**Notes**

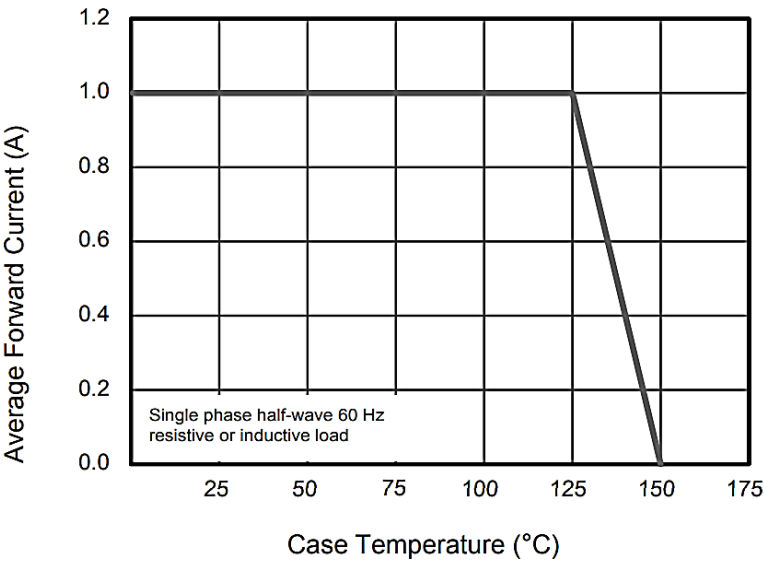
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. P.C.B. mounted with 2.0x2.0”(2.54x2.54cm) copper pad areas

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

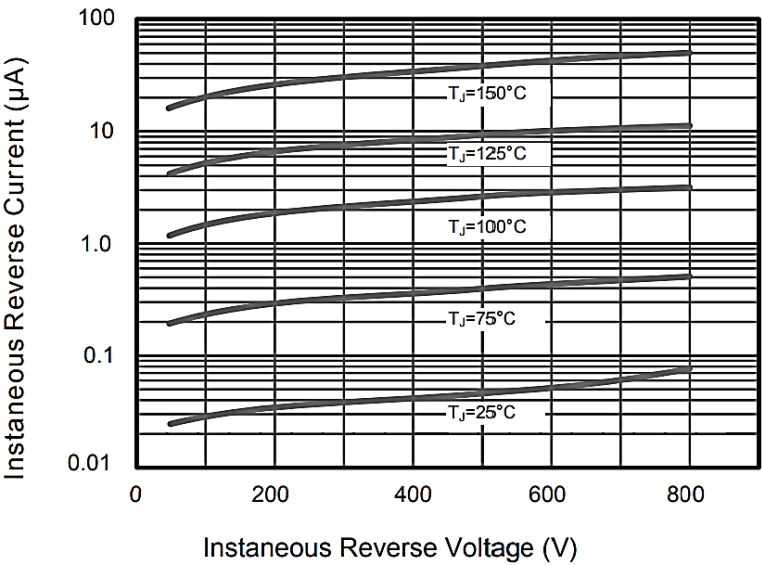
PART CODE	ORINIGAL PART NO.	MAX. REVERSE VOLTAGE VRRM	MAX. RMS VOLTAGE VRMS	MAX. DC BLOCKING VOLTAGE VDC	MARKING
		V	V	V	
M1A0000000S050	M1	50	35	50	M1
M2A0000000S100	M2	100	70	100	M2
M3A0000000S200	M3	200	140	200	M3
M4A0000000S400	M4	400	280	400	M4
M5A0000000S600	M5	600	420	600	M5
M6A0000000S800	M6	800	560	800	M6
M7A000000S1000	M7	1000	700	1000	M7

**RATINGS AND CHARACTERISTIC CURVES - For Reference Only**

**Fig.1 Forward Current Derating Curve**

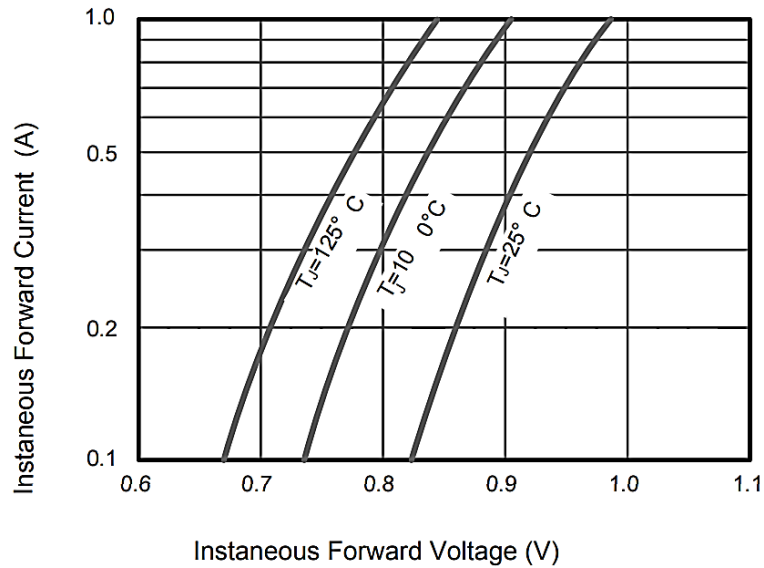


**Fig.2 Typical Instantaneous Reverse Characteristics**

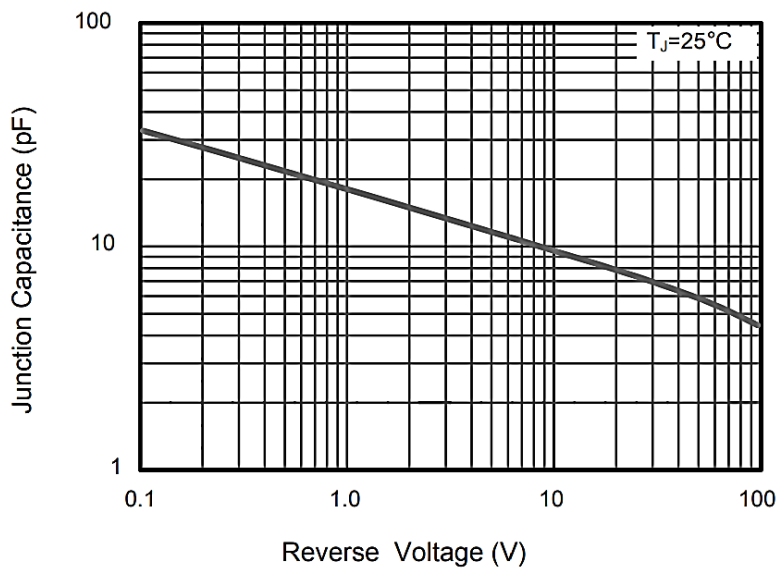


**RATINGS AND CHARACTERISTIC CURVES - For Reference Only**

**Fig.3 Typical Forward Characteristic**



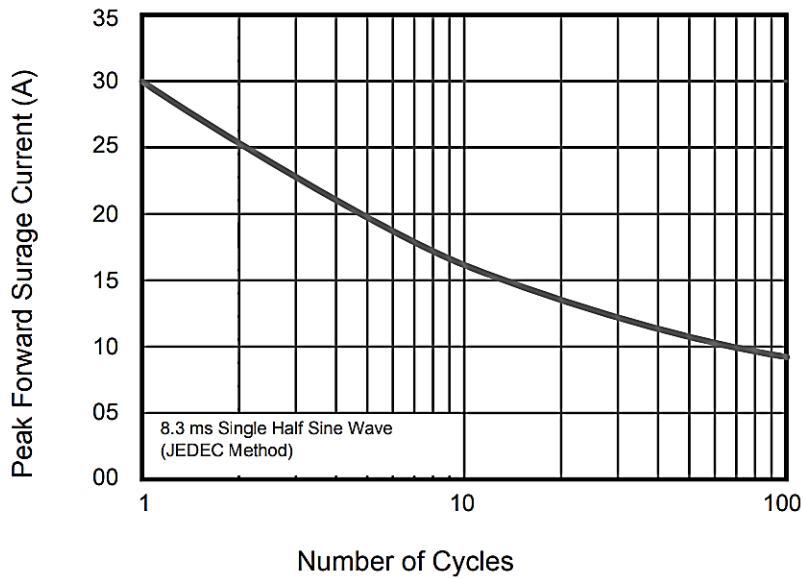
**Fig.4 Typical Junction Capacitance**



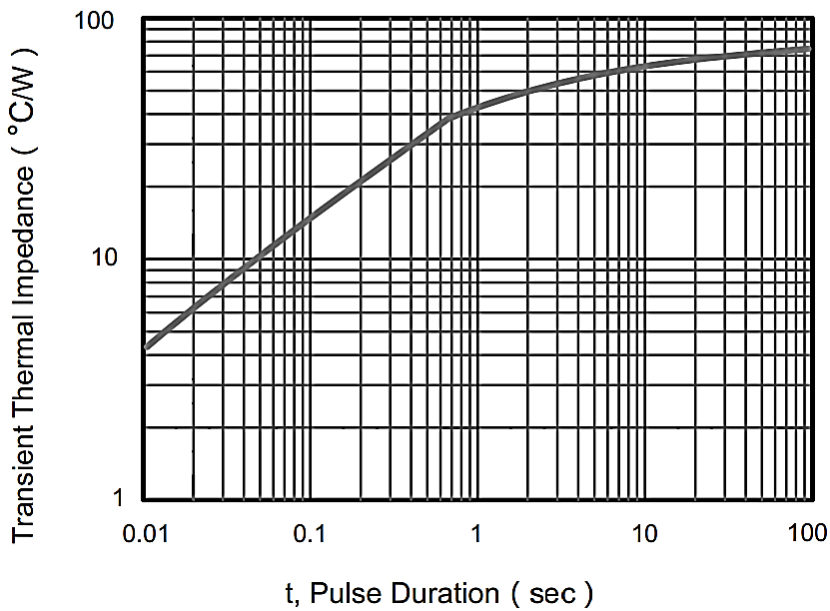


**RATINGS AND CHARACTERISTIC CURVES** - For Reference Only

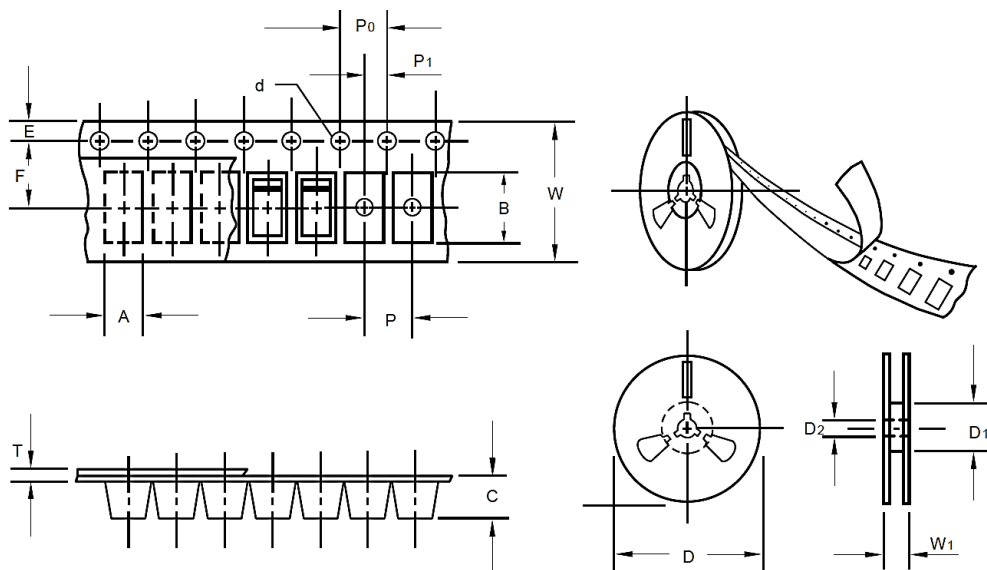
**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



**Fig.6- Typical Transient Thermal Impedance**



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



Item	Symbol	Tolerance	SMA/DO-214AC
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	1.50
13"Reel outside diameter	D	2.0	330.0
13"Reel inner diameter	D1	-	50.0 Min.
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.0
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W1	1.0	18.0
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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