NextGen Components,Inc.

PART CODE: SMASS1150S1150

SPECIFICATION SHEET

SPECIFICATION SHEET NO.	N1230- SMASS1150S1150
DATE	Dec. 30, 2021
REVISION	A0
DESCRIPITION	SMD Schottky Barrier Rectifier, 2 Pads, SMA series, SS1150 Type Reverse Voltage 150V Max. Forward Current 1.0A Max. Operating Temp. Range -55°C ~+150°C Package in Tape/Reel, 5000pcs/13" Reel RoHS/RoHS III compliant
CUSTOMER	
CUSTOMER PART NUMBER	
CROSS REF. PART NUMBER	
ORIGINAL PART NUMBER	MDD SS1150
PART CODE	SMASS1150S1150

VENDOR APPROVE
Issued/Checked/Approved   
DATE: Dec. 30, 2021

CUSTOMER APPROVE
DATE:

SMD SCHOTTKY BARRIER RECTIFIER SMA SERIES

MAIN FEATURE

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Low power loss and high efficiency
- Built-in strain relief,
- High forward surge current capability
- Metal silicon junction, majority carrier conduction
- High temperature soldering guaranteed: 250℃/ 10 seconds at terminals

APPLICATION

- For surface mounted applications

RFQ

Request For Quotation

PART CODE GUIDE

SMA	SS1150	S	1150
1	2	3	4

1) **SMA**: SMD Schottky Barrier Rectifier, 2 Pads, SMA series,

2) **SS1150:** Type code for original part number SS1150

3) **S**: Package code, Tape/reel, 5000pcs/reel.

4) **1150:** Specification code for. Forward Current 1.0A Max, Reverse Voltage 150V Max.

SMD SCHOTTKY BARRIER RECTIFIER SMA SERIES

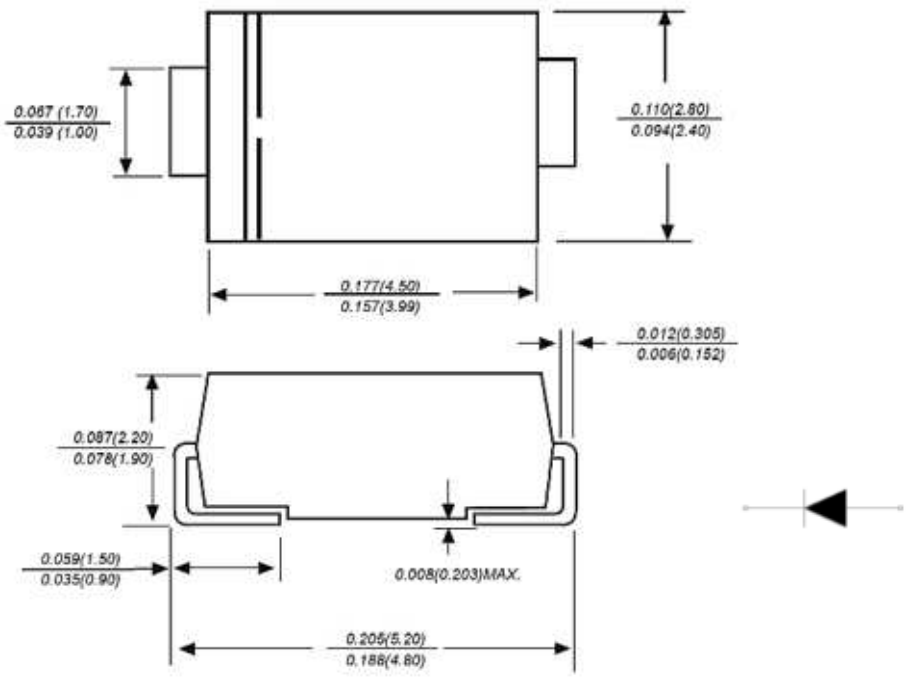
DIMENSION (Unit: Inch/mm)

Image for reference

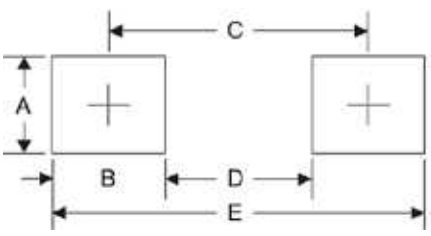


Marking: SS1150

SMA/DO-214AC



Recommend Pad Layout



Symbol	Unit (Inch)	Unit (mm)
A	0.066	1.680
B	0.060	1.520
C	0.154	3.900
D	0.095	2.410
E	0.215	5.450

SMD SCHOTTKY BARRIER RECTIFIER SMA SERIES

MECHANICAL DATA

Case	Terminals	Polarity	Mounting Position	Weight per piece
JEDEC DO-21AC/SMA molded plastic body	Solder plated, Solderable per MIL-STD-750, Method 2026	Color band denotes cathode end mounting	Any	0.0018 Ounce, 0.0510 grams

MAX. RATING & CHARACTERISTICS

Parameter		SYMBOLS	VALUE			UNITS
			Min.	Typical	Max.	
Repetitive peak reverse voltage		V_{RRM}			150	Volts
RMS voltage		V_{RMS}			105	Volts
DC blocking voltage		V_{DC}			150	Volts
Average forward output rectified current at TL(see fig.1)		I_{AV}			1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I_{FSM}		25		A
Instantaneous forward voltage at 1.0A		V_F			0.90	Volts
DC reverse current at rated DC blocking voltage	**TA=25℃**	I_R			0.10	mA
	TA=100℃				2.0	mA
Junction capacitance (Note 2)		C_J		80		pF
Thermal resistance (Note 3)		$R_{\theta JA}$		90		°C/W
Operating junction temperature range		T_J	-55		+150	°C
Storage temperature range		T_{STG}	-55		+150	°C

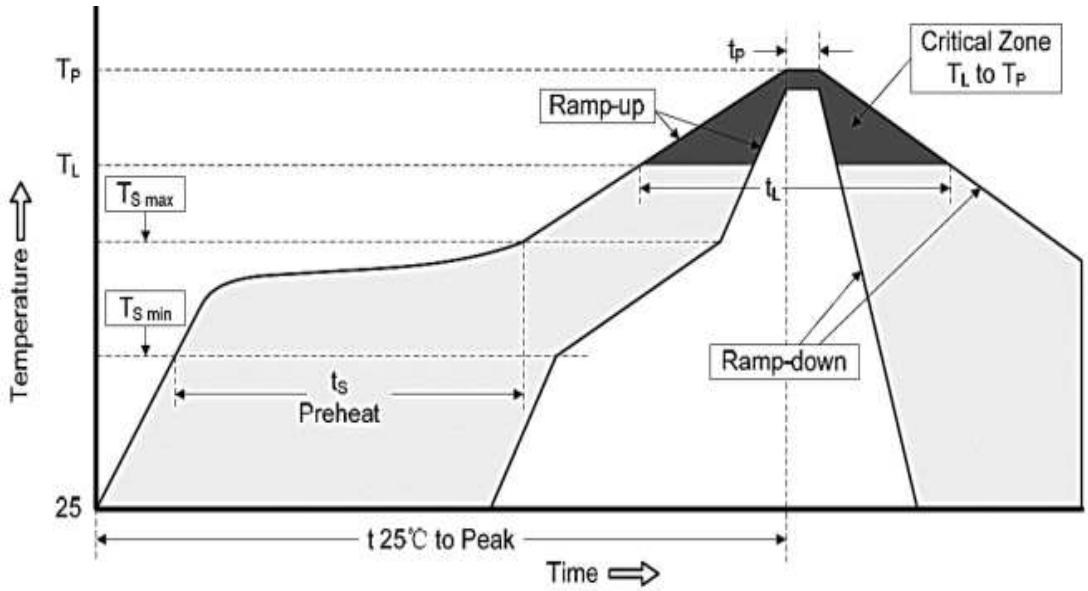
Note

1. 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%.
2. Measured at 1.0MHz and applied reverse voltage of 4.0Voltage
3. P.C.B. mounted with 0.2x0.2”(5.0x5.0mm) copper pad areas.

RELIABILITY

Number	Experiment Items	Experiment Method And Conditions	Reference Documents
1	Solder Resistance Test	Test 260°C± 5°C for 10 ± 2 sec. Immerse body into solder 1/16" ± 1/32"	MIL-STD-750D METHOD-2031.2
2	Solderability Test	230°C ±5°C for 5 sec.	MIL-STD-750D METHOD-2026.1 0
3	Pull Test	1 kg in axial lead direction for 10 sec.	MIL-STD-750D METHOD-2036.4
4	Bend Test	0.5Kg Weight Applied To Each Lead, Bending Arcs 90 °C ± 5 °C For 3 Times	MIL-STD-750D METHOD-2036.4
5	High Temperature Reverse Bias Test	T_A=100°C for 1000 Hours at V_R=80% Rated V_R	MIL-STD-750D METHOD-1038.4
6	Forward Operation Life Test	TA=25°C Rated Average Rectified Current	MIL-STD-750D METHOD-1027.3
7	Intermittent Operation Life Test	On state: 5 min with rated IRMS Power Off state: 5 min with Cool Forced Air. On and off for 1000 cycles.	MIL-STD-750D METHOD-1036.3
8	Pressure Cooker Test	15 PSIG, T_A=121°C, 4 hours	MIL-S-19500 APPENOIXC
9	Temperature Cycling Test	-55°C~+125°C; 30 Minutes For Dwelled Time 5 minutes for transferred time. Total: 10 cycles.	MIL-STD-750D METHOD-1051.7
10	Thermal Shock Test	0°C for 5 minutes., 100°C for 5minutes, Total: 10 cycles	MIL-STD-750D METHOD-1056.7
11	Forward Surge Test	8.3ms Single Sale Sine-wave One Surge.	MIL-STD-750D METHOD-4066.4
12	Humidity Test	T_A=65°C, RH=98% for 1000 hours.	MIL-STD-750D METHOD-1021.3
13	High Temperature Storage life Test	150°C for 1000 Hours	MIL-STD-750D METHOD-1031.5

SUGGESTED REFLOW PROFILE (For Reference Only)



Profile Feature		Pb-Free Assembly
Average Ramp-up Rate (Ts Max to Tp)		3℃/second Max
Preheat	**Temperature Min (Ts Min.)**	150℃
	Temperature Max (Ts Max.)	200℃
	Time (ts Min. to ts Max.)	60 ~ 180 seconds
Time maintained above	**Temperature (TL)**	217℃
	Time (tL)	60 ~ 150 seconds
Peak/Classification Temperature (Tp)		250 ℃
Time within 5℃ of actual Peak Temperature (tp)		10 seconds
Ramp-down rate		6 ℃ /Second Max.
Time 25 ℃ to Peak Temperature		6 minutes Max.
Suggest reflow times		3 Times Max.

RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

Fig.1 Forward Current Derating Curve

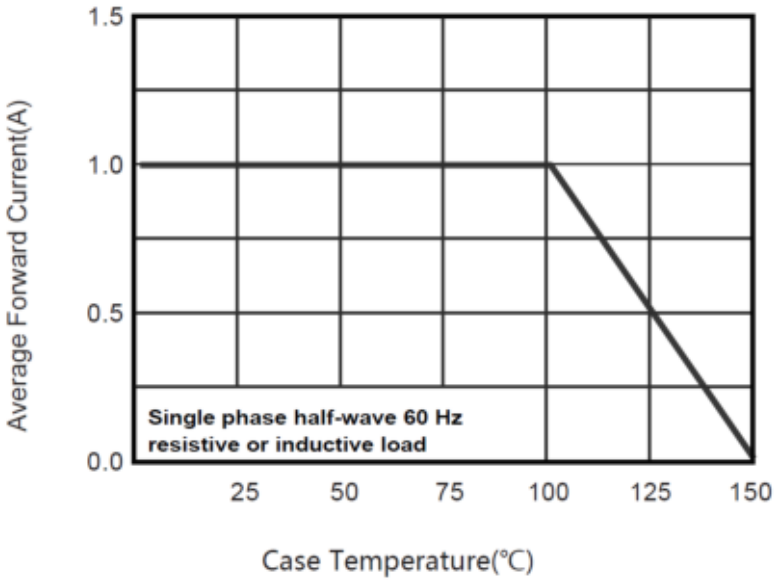
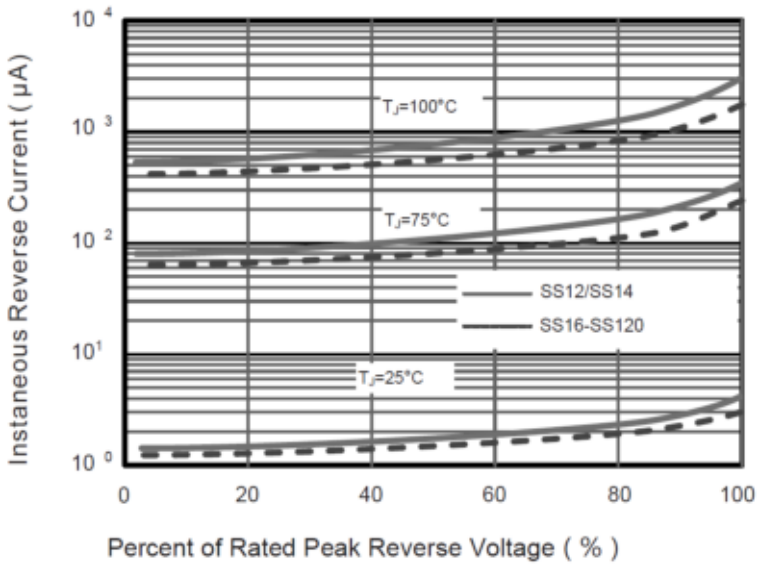


Fig.2 Typical Reverse Characteristics



RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

Fig.3 Typical Forward Characteristic

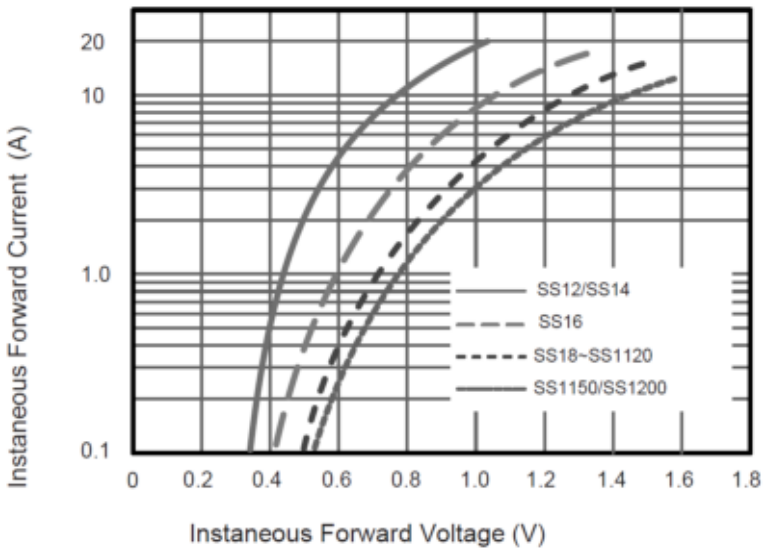
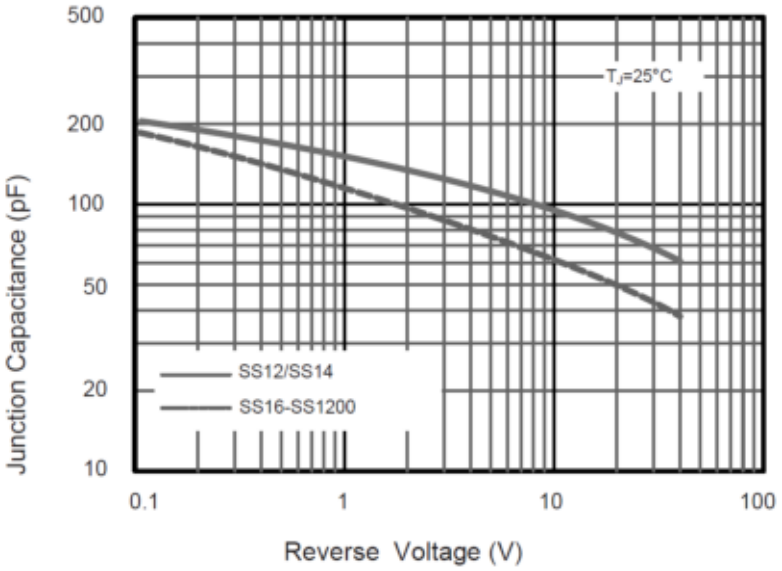


Fig.4 Typical Junction Capacitance



RATINGS AND CHARACTERISTIC CURVES (For Reference Only)

Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

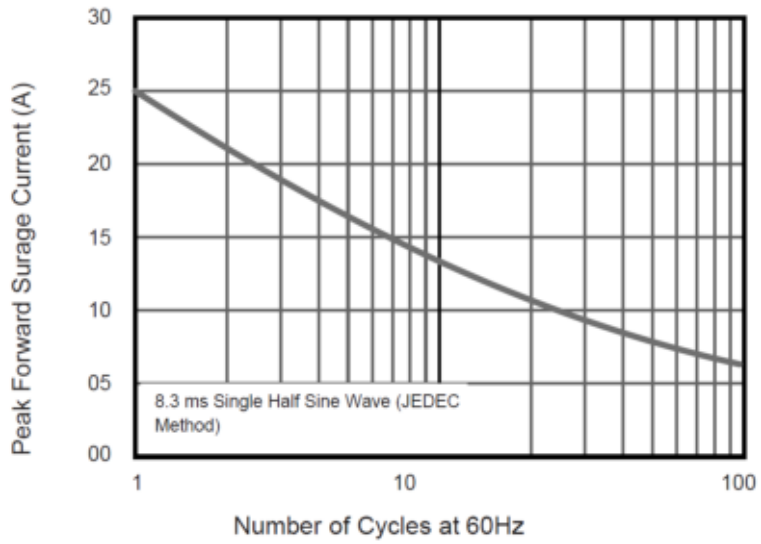
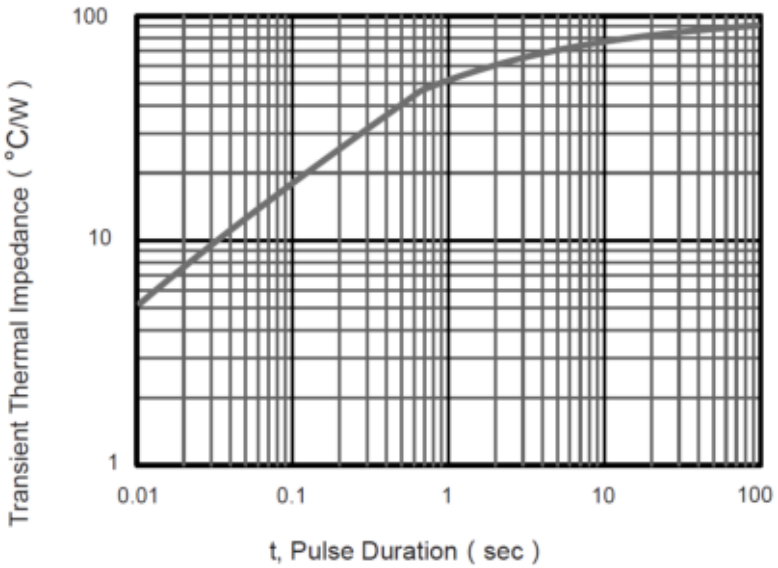
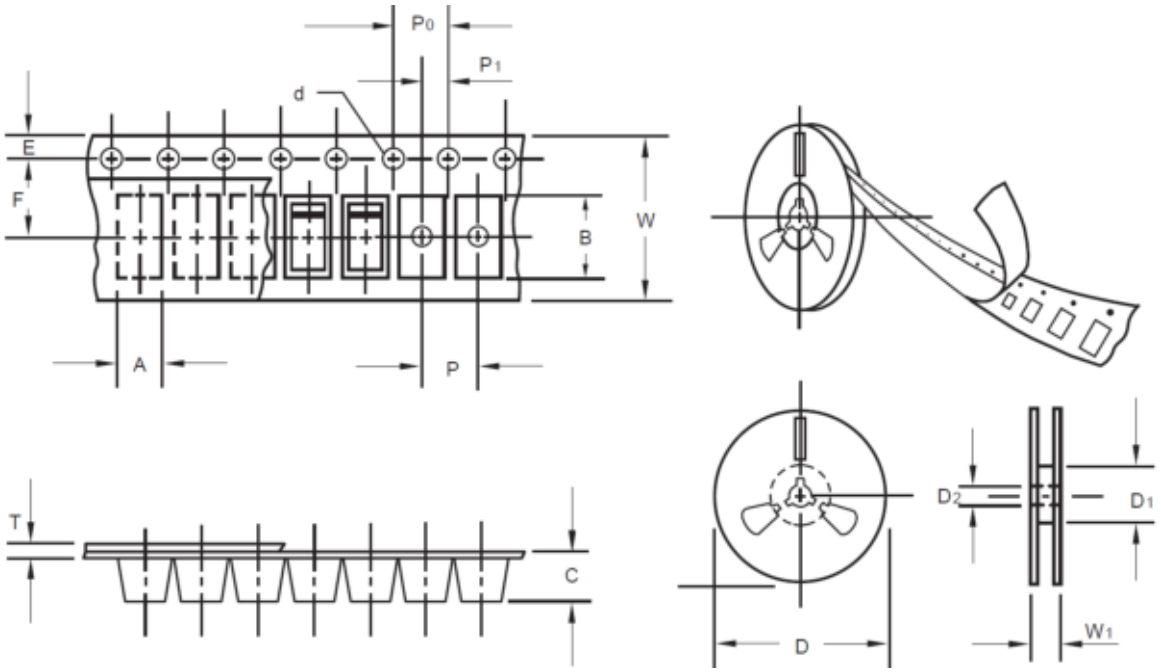


Fig.6- Typical Transient Thermal Impedance



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	-	330.00
13”Reel inner diameter	D1	-	50.00
7”Reel outside diameter	D	-	-
7”Reel inner diameter	D1	-	-
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

PACKAGE For Reference

Case Code	SMA
Reel Size	13”
Reel Size	330 mm
MPQ/Reel	5000 pcs
Qty. /Box	10000 pcs
G.W/Box	6 lbs

DISCLAIMER

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