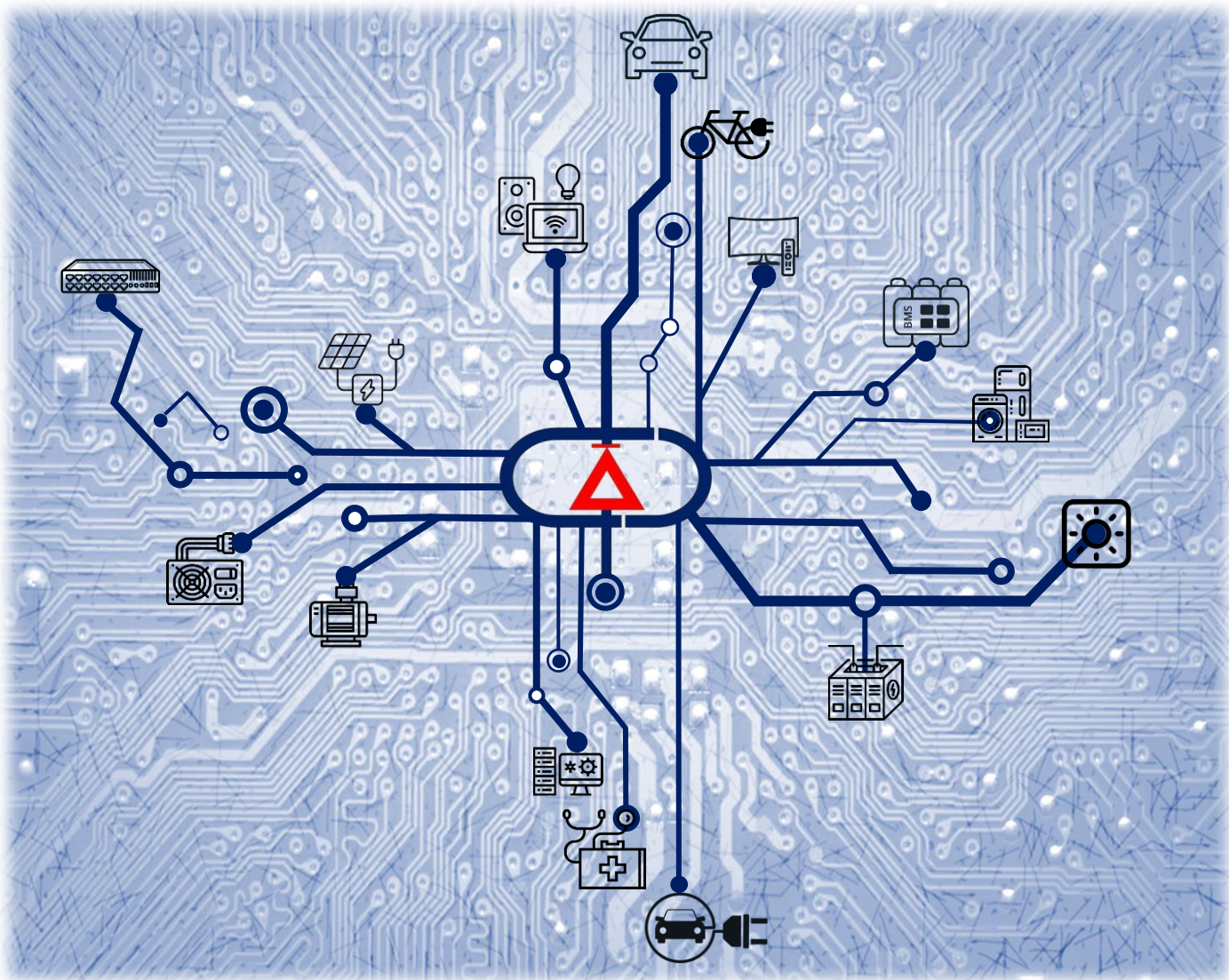


ALPINESEMI™

beyond boundaries...

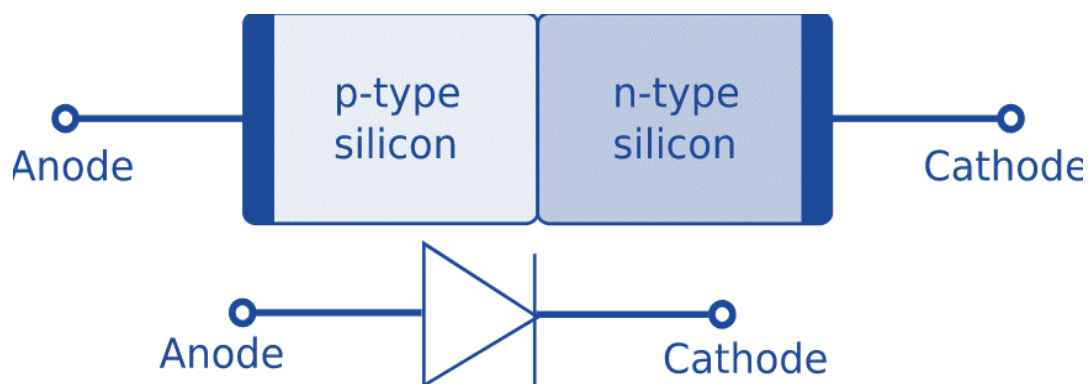


GENERAL DIODES

Short Form Catalogue

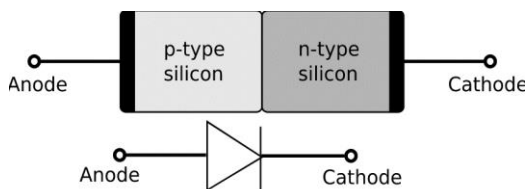
GENERAL DIODES

Short Form Catalogue



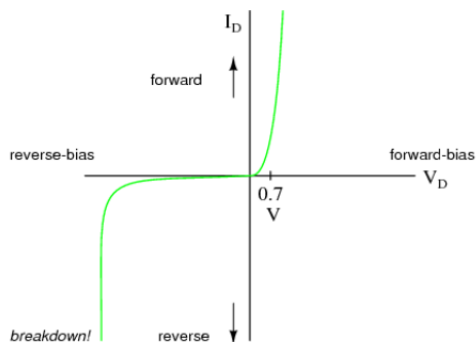
GENERAL DIODE:

PN junctions have a positive or P-region with positive ions and a negative or N-region with negative electrons in these basic semiconductors. When a forward voltage is applied to the PN junction, electrons from the N-region fill "holes" in the P-region, causing the current to flow solely in one direction. The diodes reverse voltage is the potential barrier that prevents current to flow in the opposite direction.



CONSTRUCTION: When the two types of semiconductors, P-type and N-type, are combined, a new device known as a P-N junction diode is generated. The majority carriers in a P-type semiconductor are holes, whereas the minority carriers are electrons. An N-type semiconductor, on the other hand, contains electrons as the majority carrier and holes as the minority carrier.

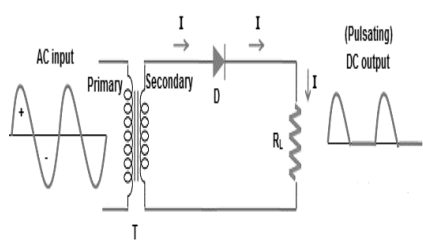
IV-CHARACTERISTICS: While conducting, the voltage drop of the PN junction diode is 0.7V. Current flows from P to N junction that is anode to cathode in forward bias region..



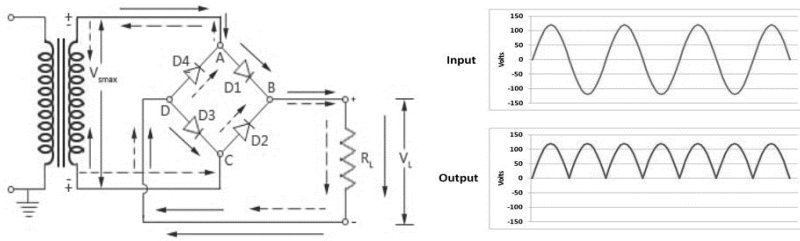
The peak reverse breakdown voltage of a General diode is greater than that of a Schottky diode because a general diode has a bigger depletion region as compared to a Schottky diode during reverse bias condition.

APPLICATION: General diode in Rectifying a Voltage . When converting AC to DC, General diodes are used.

HALF WAVE RECTIFIER

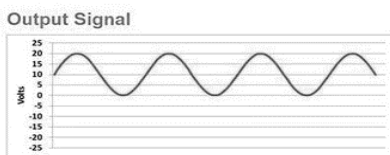
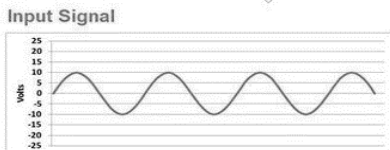
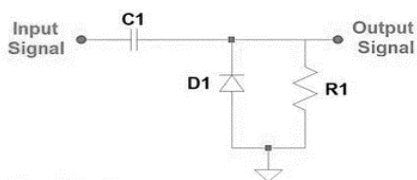


FULL WAVE RECTIFIER



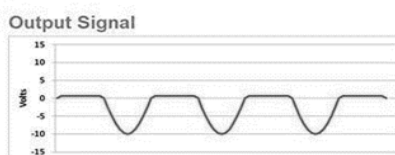
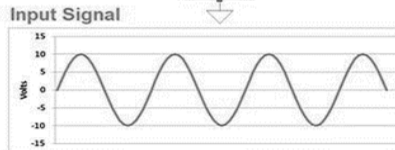
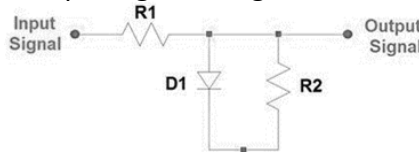
The input signal is converted to all positives

General Diodes in clamping circuits

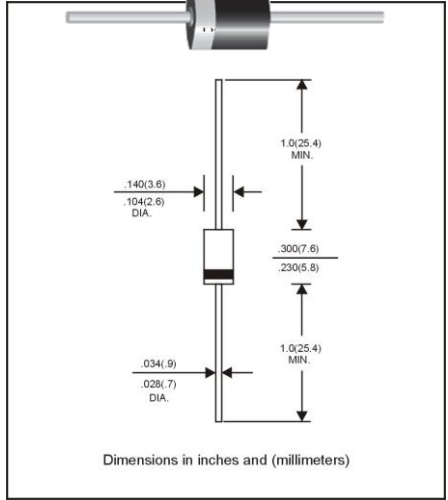


Diodes in the clipping circuit

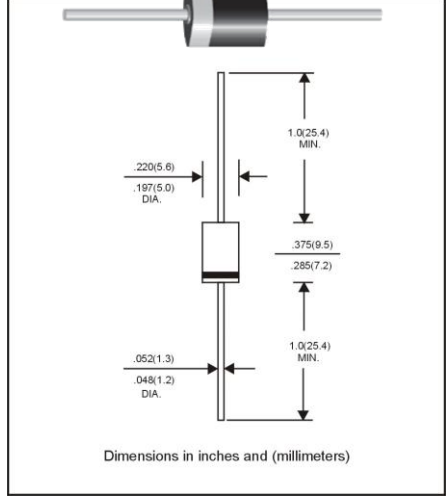
A diode clipper is an electronic circuit that clips or cuts off an input signal using one or more diodes.



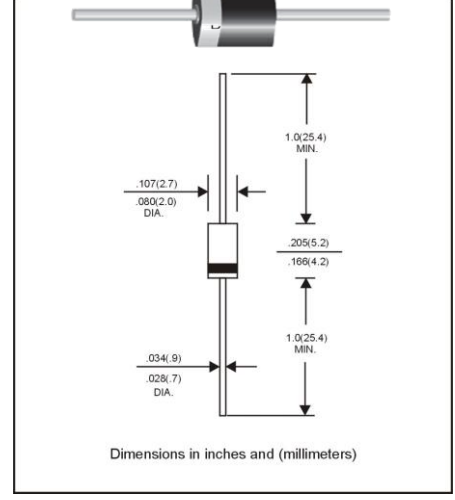
DO-15



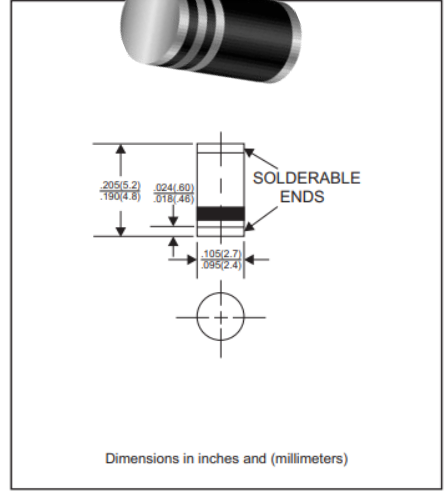
DO-201AD



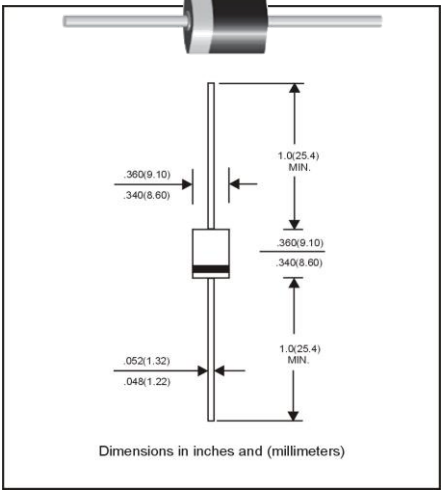
DO-41



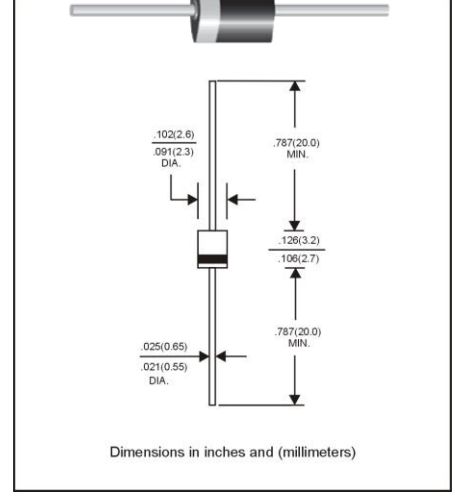
MELF



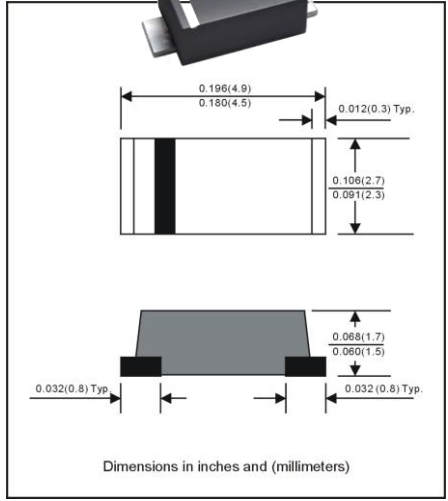
P600



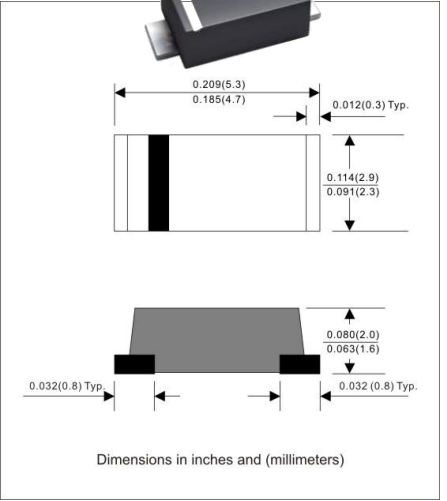
R-1



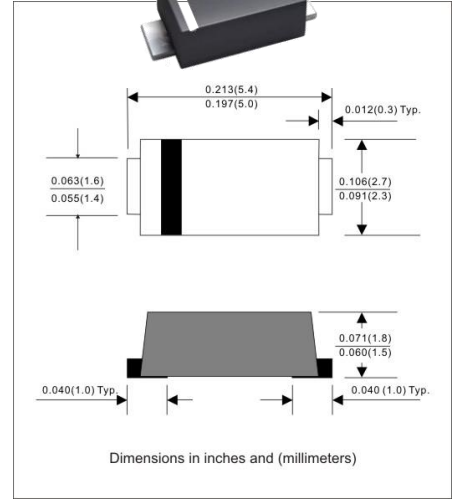
SMA



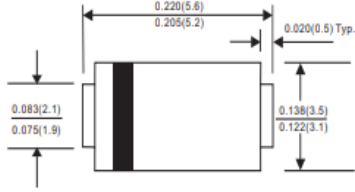
SMA-L



SMA-S

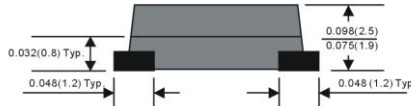
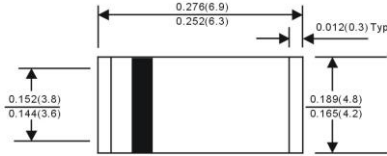


SMB-S



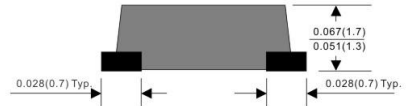
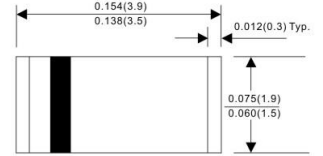
Dimensions in inches and (millimeters)

SMC



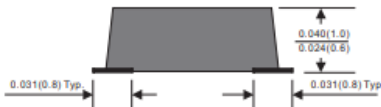
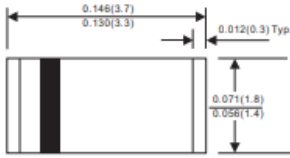
Dimensions in inches and (millimeters)

SOD-123



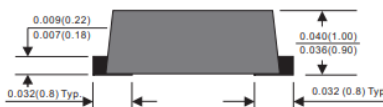
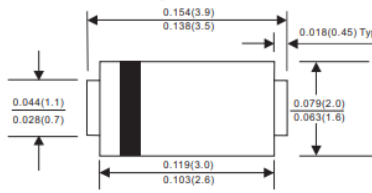
Dimensions in inches and (millimeters)

SOD-123H



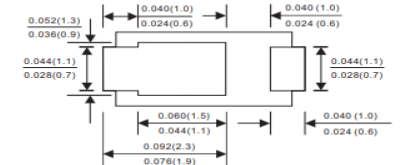
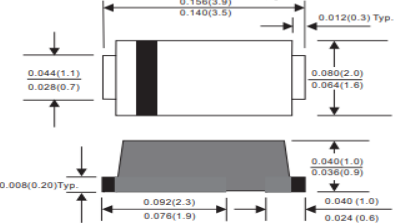
Dimensions in inches and (millimeters)

SOD-123S



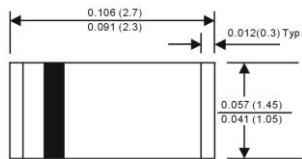
Dimensions in inches and (millimeters)

SOD-123ST



Dimensions in inches and (millimeters)

SOD-323



Dimensions in inches and (millimeters)

Alpinesemi™ Part Number	V _{RRM} (V)	I _{F(AV)} (mA)	V _{F_MAX} (V)	I _{R_MAX} (μA)	PACKAGE
ALP1A1	50	1	1.1	5	R-1
ALP1N4001	50	1	1	5	DO-41
ALP1N4001G	50	1	1.1	5	DO-41
ALP1N5391	50	1.5	1	5	DO-15
ALP1N5391G	50	1.5	1.1	5	DO-15
ALP1N5400	50	3	1	5	DO-201AD
ALP1N5400G	50	3	1.1	5	DO-201AD
ALPFM201	50	2	1.1	5	SMA
ALPFM201-BS	50	2	1.1	5	SMB-S
ALPFM201-L	50	2	1.1	5	SMA-L
ALPFM201-MS	50	2	1.1	5	SOD-123S
ALPFM201-MST	50	2	1.1	5	SOD-123ST
ALPFM201-S	50	2	1.1	5	SMA-S
ALPFM301	50	3	1.1	5	SMC
ALPFM301-BS	50	3	1.1	5	SMB-S
ALPFM4001	50	1	1.1	5	SMA
ALPFM4001-L	50	1	1.1	5	SMA-L
ALPFM4001-M	50	1	1.1	5	SOD-123
ALPFM4001-MH	50	1	1.1	5	SOD-123H
ALPFM4001-MS	50	1	1.1	5	SOD-123S
ALPFM4001-N	50	1	1.1	5	SOD-323
ALPFM4001-S	50	1	1.1	5	SMA-S
ALPRL201	50	2	1	5	DO-15
ALPRL201G	50	2	1.1	5	DO-15
ALPSM4001	50	1	1.1	5	MELF (DO-213AB)
ALP10A1	100	10	1	10	P600
ALP1A2	100	1	1.1	5	R-1
ALP1N4002	100	1	1	5	DO-41
ALP1N4002G	100	1	1.1	5	DO-41
ALP1N5392	100	1.5	1	5	DO-15
ALP1N5392G	100	1.5	1.1	5	DO-15
ALP1N5401	100	3	1	5	DO-201AD
ALP1N5401G	100	3	1.1	5	DO-201AD
ALP6A1	100	6	1	10	P600
ALPFM202	100	2	1.1	5	SMA
ALPFM202-BS	100	2	1.1	5	SMB-S
ALPFM202-L	100	2	1.1	5	SMA-L
ALPFM202-MS	100	2	1.1	5	SOD-123S
ALPFM202-MST	100	2	1.1	5	SOD-123ST
ALPFM202-S	100	2	1.1	5	SMA-S
ALPFM302	100	3	1.1	5	SMC
ALPFM302-BS	100	3	1.1	5	SMB-S
ALPFM4002	100	1	1.1	5	SMA
ALPFM4002-L	100	1	1.1	5	SMA-L
ALPFM4002-M	100	1	1.1	5	SOD-123
ALPFM4002-MH	100	1	1.1	5	SOD-123H
ALPFM4002-MS	100	1	1.1	5	SOD-123S

Alpinesemi™ Part Number	V _{RRM} (V)	I _{F(AV)} (mA)	V _{F_MAX} (V)	I _{R_MAX} (μA)	PACKAGE
ALPFM4002-N	100	1	1.1	5	SOD-323
ALPFM4002-S	100	1	1.1	5	SMA-S
ALPRL202	100	2	1	5	DO-15
ALPRL202G	100	2	1.1	5	DO-15
ALPSM4002	100	1	1.1	5	MELF (DO-213AB)
ALP10A2	200	10	1	10	P600
ALP1A3	200	1	1.1	5	R-1
ALP1N4003	200	1	1	5	DO-41
ALP1N4003G	200	1	1.1	5	DO-41
ALP1N5393	200	1.5	1	5	DO-15
ALP1N5393G	200	1.5	1.1	5	DO-15
ALP1N5402	200	3	1	5	DO-201AD
ALP1N5402G	200	3	1.1	5	DO-201AD
ALP6A2	200	6	1	10	P600
ALPFM203	200	2	1.1	5	SMA
ALPFM203-BS	200	2	1.1	5	SMB-S
ALPFM203-L	200	2	1.1	5	SMA-L
ALPFM203-MS	200	2	1.1	5	SOD-123S
ALPFM203-MST	200	2	1.1	5	SOD-123ST
ALPFM203-S	200	2	1.1	5	SMA-S
ALPFM303	200	3	1.1	5	SMC
ALPFM303-BS	200	3	1.1	5	SMB-S
ALPFM4003	200	1	1.1	5	SMA
ALPFM4003-L	200	1	1.1	5	SMA-L
ALPFM4003-M	200	1	1.1	5	SOD-123
ALPFM4003-MH	200	1	1.1	5	SOD-123H
ALPFM4003-MS	200	1	1.1	5	SOD-123S
ALPFM4003-N	200	1	1.1	5	SOD-323
ALPFM4003-S	200	1	1.1	5	SMA-S
ALPRL203	200	2	1	5	DO-15
ALPRL203G	200	2	1.1	5	DO-15
ALPSM4003	200	1	1.1	5	MELF (DO-213AB)
ALP10A4	400	10	1	10	P600
ALP1A4	400	1	1.1	5	R-1
ALP1N4004	400	1	1	5	DO-41
ALP1N4004G	400	1	1.1	5	DO-41
ALP1N5395	400	1.5	1	5	DO-15
ALP1N5395G	400	1.5	1.1	5	DO-15
ALP1N5404	400	3	1	5	DO-201AD
ALP1N5404G	400	3	1.1	5	DO-201AD
ALP6A4	400	6	1	10	P600
ALPFM204	400	2	1.1	5	SMA
ALPFM204-BS	400	2	1.1	5	SMB-S
ALPFM204-L	400	2	1.1	5	SMA-L
ALPFM204-MS	400	2	1.1	5	SOD-123S
ALPFM204-MST	400	2	1.1	5	SOD-123ST
ALPFM204-S	400	2	1.1	5	SMA-S

Alpinesemi™ Part Number	V _{RRM} (V)	I _{F(AV)} (mA)	V _{F_MAX} (V)	I _{R_MAX} (μA)	PACKAGE
ALPFM304	400	3	1.1	5	SMC
ALPFM304-BS	400	3	1.1	5	SMB-S
ALPFM4004	400	1	1.1	5	SMA
ALPFM4004-L	400	1	1.1	5	SMA-L
ALPFM4004-M	400	1	1.1	5	SOD-123
ALPFM4004-MH	400	1	1.1	5	SOD-123H
ALPFM4004-MS	400	1	1.1	5	SOD-123S
ALPFM4004-N	400	1	1.1	5	SOD-323
ALPFM4004-S	400	1	1.1	5	SMA-S
ALPRL204	400	2	1	5	DO-15
ALPRL204G	400	2	1.1	5	DO-15
ALPSM4004	400	1	1.1	5	MELF (DO-213AB)
ALP10A6	600	10	1	10	P600
ALP1A5	600	1	1.1	5	R-1
ALP1N4005	600	1	1	5	DO-41
ALP1N4005G	600	1	1.1	5	DO-41
ALP1N5397	600	1.5	1	5	DO-15
ALP1N5397G	600	1.5	1.1	5	DO-15
ALP1N5406	600	3	1	5	DO-201AD
ALP1N5406G	600	3	1.1	5	DO-201AD
ALP6A6	600	6	1	10	P600
ALPFM205	600	2	1.1	5	SMA
ALPFM205-BS	600	2	1.1	5	SMB-S
ALPFM205-L	600	2	1.1	5	SMA-L
ALPFM205-MS	600	2	1.1	5	SOD-123S
ALPFM205-MST	600	2	1.1	5	SOD-123ST
ALPFM205-S	600	2	1.1	5	SMA-S
ALPFM305	600	3	1.1	5	SMC
ALPFM305-BS	600	3	1.1	5	SMB-S
ALPFM4005	600	1	1.1	5	SMA
ALPFM4005-L	600	1	1.1	5	SMA-L
ALPFM4005-M	600	1	1.1	5	SOD-123
ALPFM4005-MH	600	1	1.1	5	SOD-123H
ALPFM4005-MS	600	1	1.1	5	SOD-123S
ALPFM4005-N	600	1	1.1	5	SOD-323
ALPFM4005-S	600	1	1.1	5	SMA-S
ALPRL205	600	2	1	5	DO-15
ALPRL205G	600	2	1.1	5	DO-15
ALPSM4005	600	1	1.1	5	MELF (DO-213AB)
ALP10A8	800	10	1	10	P600
ALP1A6	800	1	1.1	5	R-1
ALP1N4006	800	1	1	5	DO-41
ALP1N4006G	800	1	1.1	5	DO-41
ALP1N5398	800	1.5	1	5	DO-15
ALP1N5398G	800	1.5	1.1	5	DO-15
ALP1N5407	800	3	1	5	DO-201AD
ALP1N5407G	800	3	1.1	5	DO-201AD

Alpinesemi™ Part Number	V _{RRM} (V)	I _{F(AV)} (mA)	V _{F_MAX} (V)	I _{R_MAX} (μA)	PACKAGE
ALP6A8	800	6	1	10	P600
ALPFM206	800	2	1.1	5	SMA
ALPFM206-BS	800	2	1.1	5	SMB-S
ALPFM206-L	800	2	1.1	5	SMA-L
ALPFM206-MS	800	2	1.1	5	SOD-123S
ALPFM206-MST	800	2	1.1	5	SOD-123ST
ALPFM206-S	800	2	1.1	5	SMA-S
ALPFM306	800	3	1.1	5	SMC
ALPFM306-BS	800	3	1.1	5	SMB-S
ALPFM4006	800	1	1.1	5	SMA
ALPFM4006-L	800	1	1.1	5	SMA-L
ALPFM4006-M	800	1	1.1	5	SOD-123
ALPFM4006-MH	800	1	1.1	5	SOD-123H
ALPFM4006-MS	800	1	1.1	5	SOD-123S
ALPFM4006-N	800	1	1.1	5	SOD-323
ALPFM4006-S	800	1	1.1	5	SMA-S
ALPRL206	800	2	1	5	DO-15
ALPRL206G	800	2	1.1	5	DO-15
ALPSM4006	800	1	1.1	5	MELF (DO-213AB)
ALP10A10	1000	10	1	10	P600
ALP1A7	1000	1	1.1	5	R-1
ALP1N4007	1000	1	1	5	DO-41
ALP1N4007G	1000	1	1.1	5	DO-41
ALP1N5399	1000	1.5	1	5	DO-15
ALP1N5399G	1000	1.5	1.1	5	DO-15
ALP1N5408	1000	3	1	5	DO-201AD
ALP1N5408G	1000	3	1.1	5	DO-201AD
ALP6A10	1000	6	1	10	P600
ALPFM207	1000	2	1.1	5	SMA
ALPFM207-BS	1000	2	1.1	5	SMB-S
ALPFM207-L	1000	2	1.1	5	SMA-L
ALPFM207-MS	1000	2	1.1	5	SOD-123S
ALPFM207-MST	1000	2	1.1	5	SOD-123ST
ALPFM207-S	1000	2	1.1	5	SMA-S
ALPFM307	1000	3	1.1	5	SMC
ALPFM307-BS	1000	3	1.1	5	SMB-S
ALPFM4007	1000	1	1.1	5	SMA
ALPFM4007-L	1000	1	1.1	5	SMA-L
ALPFM4007-M	1000	1	1.1	5	SOD-123
ALPFM4007-MH	1000	1	1.1	5	SOD-123H
ALPFM4007-MS	1000	1	1.1	5	SOD-123S
ALPFM4007-N	1000	1	1.1	5	SOD-323
ALPFM4007-S	1000	1	1.1	5	SMA-S
ALPRL207	1000	2	1	5	DO-15
ALPRL207G	1000	2	1.1	5	DO-15
ALPSM4007	1000	1	1.1	5	MELF (DO-213AB)

DISCLAIMER

The product information and the selection guide facilitates the selection of the ALPINESEMI™'s Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review the Data sheet(s) so as to confirm that the Device(s) meets functionality parameters for your application. The information furnished on the Data Sheet and the ALPINESEMI™'s Web Site is believed to be accurate and reliable at the time of preparation of this document. ALPINESEMI™ however, does not assume any inaccuracies that may arise when the components are mounted and removed. Furthermore, ALPINESEMI™ does not assume liability whatsoever, arising out of the application or the use of any of ALPINESEMI™'s product(s). Neither, does it convey any license under its patent rights nor the rights of others. These products are not guaranteed for use in life saving/support appliances or systems. ALPINESEMI™'s customers using these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and ALPINESEMI™ will not be responsible in any way(s) for any damage(s) resulting from such use.

Please check the website www.alpinesemi.com for continues updates and revision of datasheets.

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2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).



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