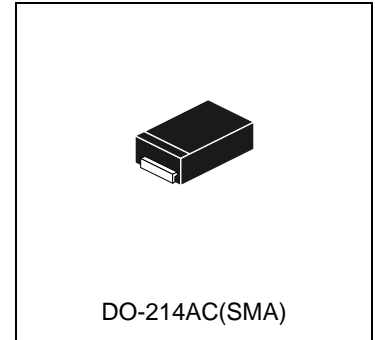




HSMA120 thru HSMA1100

Schottky Barrier Rectifiers
(Reverse Voltage 20 to 100V, Forward Current 1A)



Features

- For surface mounted applications
- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Very low forward voltage drop
- High Current Capability
- Plastic material has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters free wheeling
And polarity orotction applications

Mechanical Data

- Package: JEDEC DO-214AC(SMA) molded plastic
- Polarity: Indicated by cathode band
- Weight: 0.002 ounce, 0.064 gram

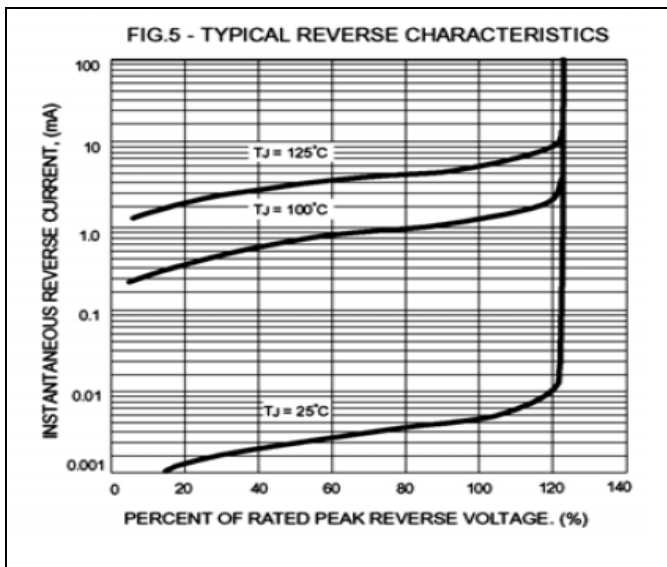
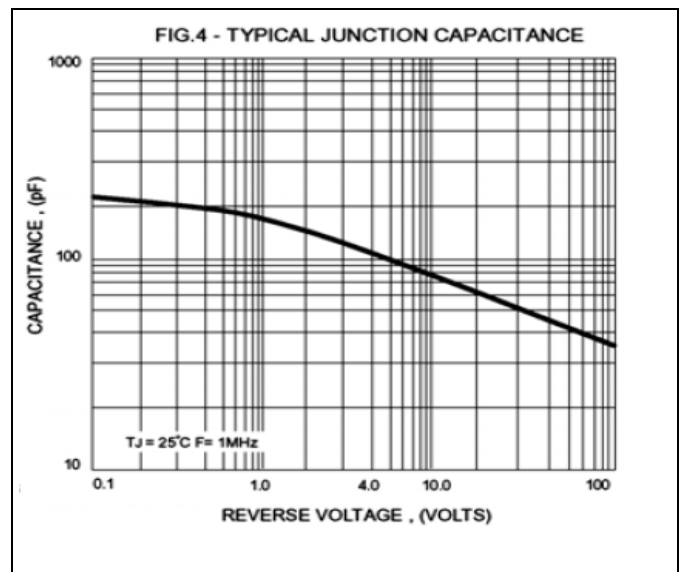
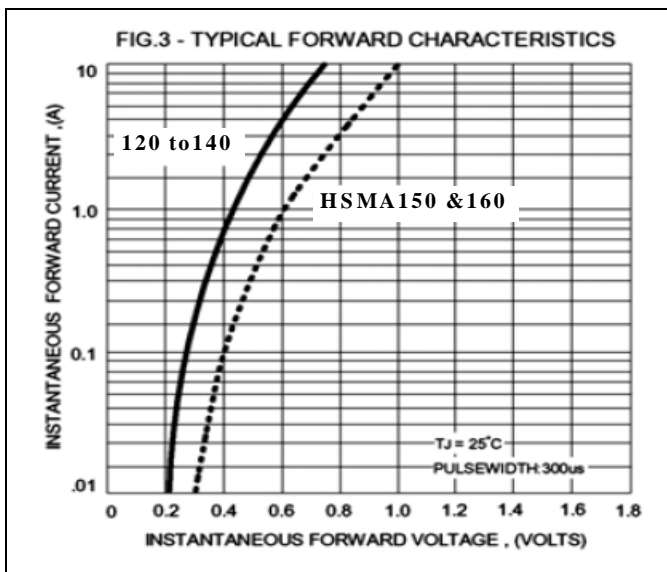
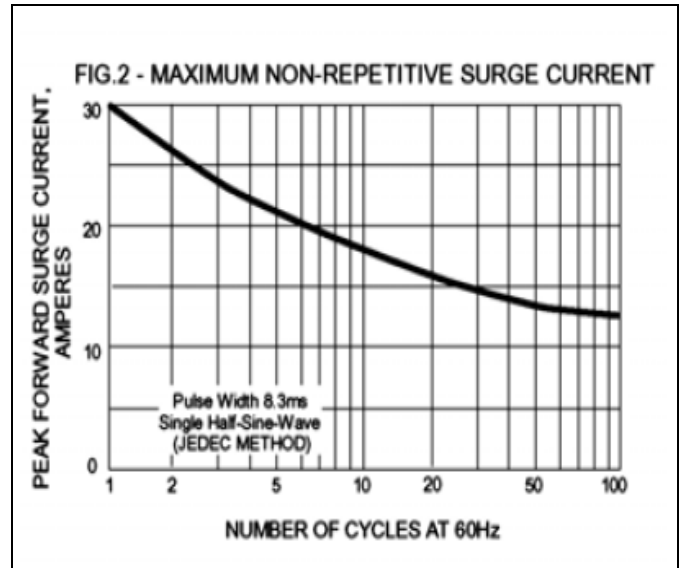
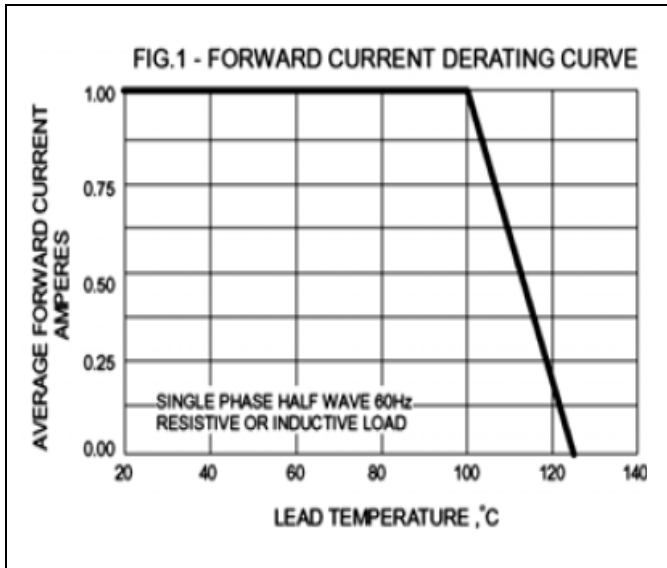
Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load. Derate current by 20%.

Ratings	Symbol	HSMA 120	HSMA 130	HSMA 140	HSMA 150	HSMA 160	HSMA 170	HSMA 180	HSMA 190	HSMA 1100	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	V
Surge Peak Reverse Voltage	V_{RSM}	14	21	28	35	42	49	56	63	70	V
DC Blocking Voltage	V_{DC}	20	30	40	50	60	70	80	90	100	V
Average Forward Rectified Current ($T_L=100^\circ\text{C}$)	I_{FAV}	1									A
Peak Forward Surge Current, 50Hz Half Sine-wave ($T_A=25^\circ\text{C}$)	I_{FSM}	30									A
Instantaneous Forward Voltage	V_F	0.50			0.70		0.79(0.69@ $T_j=100^\circ\text{C}$)				V
Leakage Current ($T_J=25^\circ\text{C}$, $V_R=V_{RRM}$)	I_R	0.5									mA
Leakage Current ($T_J=100^\circ\text{C}$, $V_R=V_{RRM}$)		10.0			5.0						mA
Typical Junction Capacitance	C_J	110			30						pF
Thermal Resistance Junction to Lead	$R_{\theta JL}$	30			25						30
Operating Junction Temperature Range	T_J	-55 to +125									°C
Storage Temperature Range	T_{STG}	-55 to +150									°C

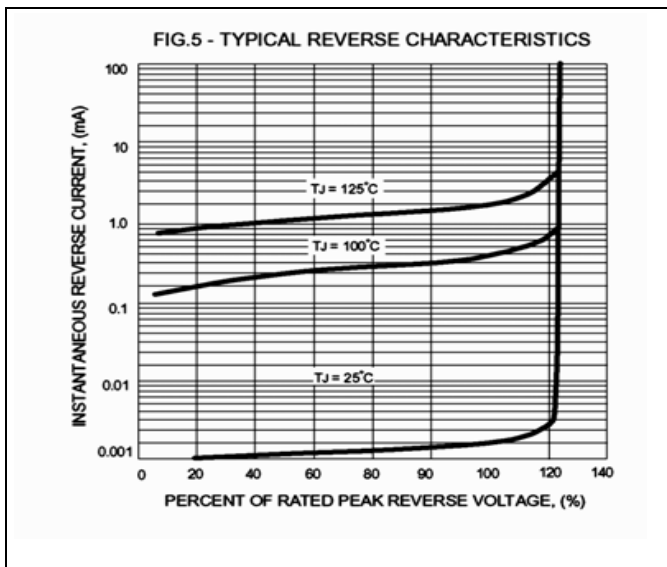
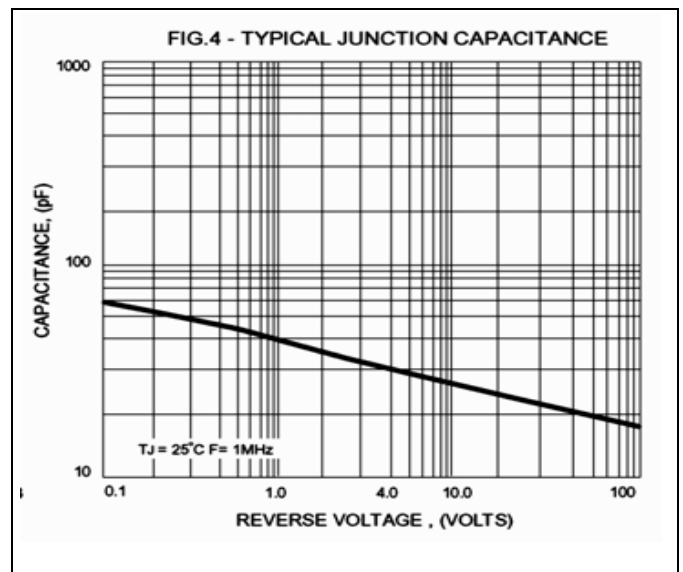
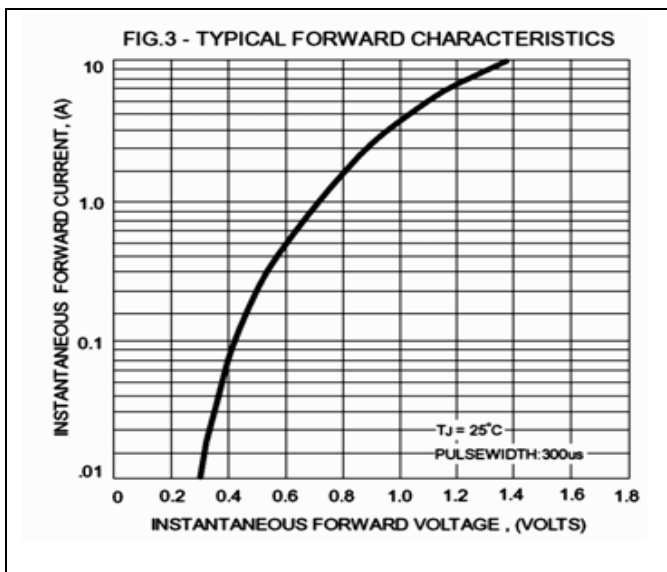
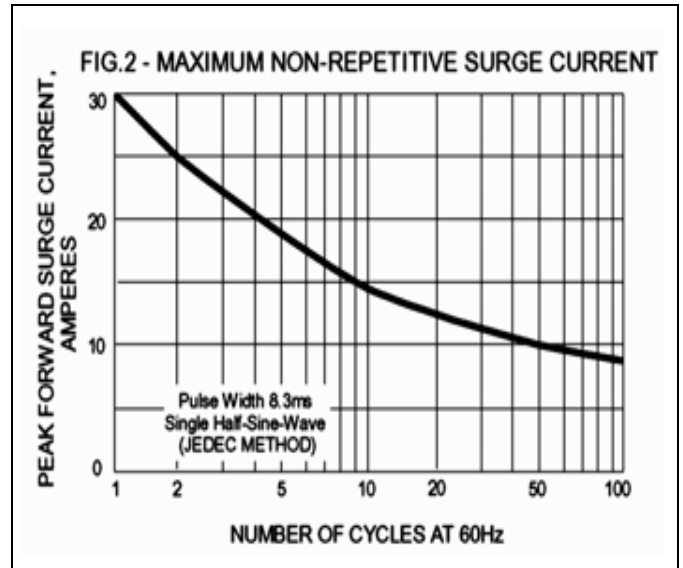
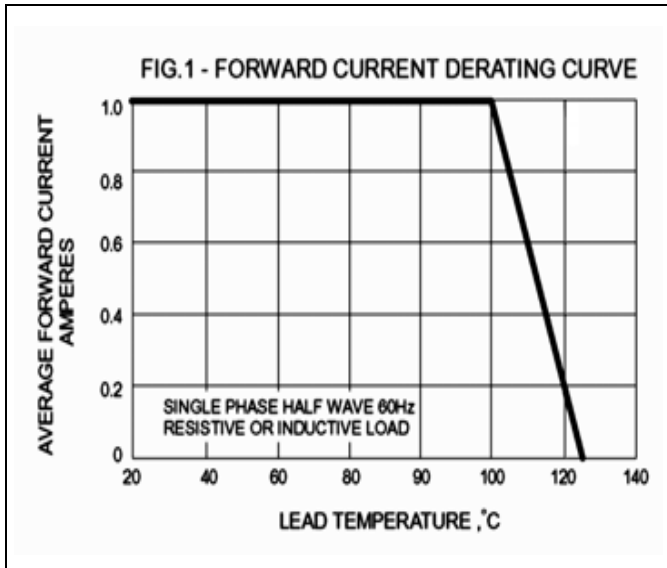


Characteristics Curve(HSMA120 to HSMA160)





Characteristics Curve(HSMA170 to HSMA1100)





DO-214AC(SMA) Dimension

2-Lead DO-214AC(SMA) Plastic Surface Mounted Package
 HSMC Package Code: SMA

Marking:

Product Series
 HSMA120: 12
 HSMA130: 13
 HSMA140: 14
 HSMA150: 15
 HSMA160: 16
 HSMA170: 17
 HSMA180: 18
 HSMA190: 19
 HSMA1100:1A

Cathode band

Note:
 Green label is used for pb-free packing

DIM	Min.	Max.
A	1.27	1.63
B	2.40	2.65
C	4.00	4.60
D	1.90	2.25
E	0.80	1.50
F	0.10	0.20
G	4.80	5.20
H	0.15	0.31

Unit: mm

2-Lead DO-214AC(SMA) Plastic Surface Mounted Package
 HSMC Package Code: SMA

Marking:

Product Series
 HSMA120: 12
 HSMA130: 13
 HSMA140: 14
 HSMA150: 15
 HSMA160: 16
 HSMA180: 18
 HSMA1100: 1A

Green Mark
 Green: " " (Note)
 Normal: None

Cathode band

Note:
 Green label is used for pb-free packing

DIM	Min.	Max.
A	1.27	1.63
B	2.40	2.65
C	4.00	4.60
D	1.90	2.25
E	0.80	1.50
F	0.10	0.20
G	4.80	5.20
H	0.15	0.31

Unit: mm

Important Notice:

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of HSMC.
- HSMC reserves the right to make changes to its products without notice.
- **HSMC semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- HSMC assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

Head Office And Factory:

• **Head Office** (Hi-Sincerity Microelectronics Corp.): 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.
 Tel: 886-2-25212056 Fax: 886-2-25632712