

# ***Power Module Products***

***IGBT/FRD Modules  
MOSFET Modules  
Customized Power Modules***

***Semi-Powerex Corp.***  
Juan Industrial Complex,  
Juyeom-ro 58, Nam-gu, Incheon, Korea  
**[sales@semi-powerex.com](mailto:sales@semi-powerex.com)**  
**+82 (0)10 7762 2437**





**Industry Standard Package**

**IGBT / Fast Recovery Diode Module Line-up**




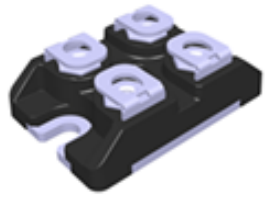
**Ordering Information**

**Package Dimension**

## 1) IGBT Modules

34mm(S1)	62mm(S3)	38mm(S4)	SOT-227(S7)
			
- 600V Class : 75A~200A - 1200V Class : 75A~150A	- 600V Class : 300A~400A - 1200V Class : 100A~400A	- 600V Class : 75A ~ 100A	- 600V Class : 50A~150A - 1200V Class : 75A

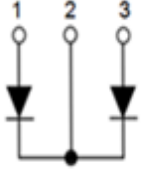
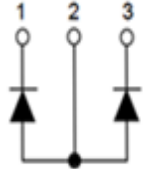
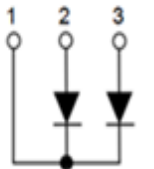
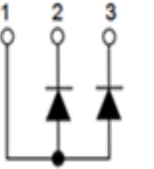

## 2) Fast Recovery Diode Modules

27mm(SH) FRD	34mm(S1) FRD	40mm(ST) FRD	SOT-227(S7)
			
- 400V Class : 100A ~ 200A - 600V Class : 100A ~ 150A - 1200V Class : 100A	- 400V Class : 100A ~ 200A - 600V Class : 150A ~ 200A - 1200V Class : 100A ~ 150A	- 400V Class : 300A - 600V Class : 300A	- 400V Class : 100A - 600V Class : 100A - 1200V Class : 100A

## 1) IGBT Power Modules

$V_{CES}$ (V)	Type	$I_C$ (A) $T_C=80^\circ\text{C}$	$V_{CE(on)}$ (V) at rated $I_C$	PKG				
600	NPT	75	2.1	S1	SPM75GB801S1	SPM75GAL(R)801S1	SPM75GA801S1	SPM100GD601S4
		75	2.1	S7			SPM75GA801S7	
		100	2.1	S1	SPM100GB801S1	SPM100GAL(R)801S1	SPM100GA801S1	
		100	2.1	S4				
		100	2.1	S7				
		150	2.1	S1	SPM150GB801S1	SPM150GAL(R)801S1	SPM150GA801S1	
		150	2.1	S7			SPM150GA801S7	
		200	2.1	S1	SPM200GB801S1	SPM200GAL(R)801S1	SPM200GA801S1	
		300	2.1	S3	SPM300GB801S3	SPM300GAL(R)801S3	SPM300GA801S1	
400	2.1	S3	SPM400GB801S3	SPM400GAL(R)801S3	SPM400GA801S1			
1200	SPT+	50	1.9	S1	SPM50GB1201S1	SPM50GAL(R)1201S1	SPM50GA1201S1	SPM50GD1201S4
		75	1.9	S1	SPM75GB1201S1	SPM75GAL(R)1201S1	SPM75GA1201S1	
		75	1.9	S7			SPM75GA1201S7	
		100	1.9	S1	SPM100GB1201S1	SPM100GAL(R)1201S1	SPM100GA1201S1	
		100	1.9	S3	SPM100GB1201S3	SPM100GAL(R)1201S3		
		150	1.9	S1	SPM150GB1201S1	SPM150GAL(R)1201S1	SPM150GA1201S1	
		150	1.9	S3	SPM150GB1201S3	SPM150GAL(R)1201S3		
		200	1.9	S3	SPM200GB1201S3	SPM200GAL(R)1201S3		
		300	1.9	S3	SPM300GB1201S3	SPM300GAL(R)1201S3		
		400	1.9	S3	SPM400GB1201S3	SPM400GAL(R)1201S3		
1200	NPT	75	2.9	S1	SPM75GB1202S1			
		100	2.9	S1	SPM100GB1202S1			
		150	2.9	S3	SPM150GB1202S3			
		200	2.9	S3	SPM200GB1202S3			
		300	2.9	S3	SPM300GB1202S3			

## 2) Fast Recovery Diode Modules

$V_{RRM}$ (V)	Type	IF (A) per Diode $T_c=80^\circ\text{C}$	VF (V) $T_J=25^\circ\text{C}$	PKG					
					Common Cathode	Common Anode	Side Cathode	Side Anode	Cathode Anode
400	FRED	100	1.14	SOT-227					SPD100KA40S7
	FRED	100	1.14	SH	SPD100CC40SH	SPD100CA40SH			
	FRED	160	1.14	SH	SPD160CC40SH	SPD160CA40SH			
600	FRED	100	1.35	SH	SPD100CC60SH	SPD100CA60SH			SPD100KA60S7
	FRED	100	1.34	SOT-227					
	FRED	120	1.35	SH	SPD120CC60SH	SPD120CA60SH			
	FRED	150	1.35	SH	SPD150CC60SH	SPD150CA60SH			
	FRED	150	1.35	S1	SPD150CC60S1	SPD150CA60S1	SPD150SC60S1	SPD150SA60S1	
	FRED	200	1.35	S1	SPD200CC60S1	SPD200CA60S1	SPD200SC60S1	SPD200SA60S1	
	FRED	300	1.2	ST					
1200	FRED	60	2.14	SOT-227					SPD60KA120S7
	RECTIFIER	60	1.01	SOT-227					SPR60KA120S7
	FRED	100	2.14	SOT-227					SPD100KA120S7
	FRED	100	2.14	SH	SPD100CC120SH	SPD100CA120SH	SPD100SC120SH	SPD100SA120SH	
	FRED	150	2.14	S1	SPD150CC120S1	SPD150CA120S1	SPD150SC120S1	SPD150SA120S1	
	FRED	200	2.14	S1	SPD200CC120S1	SPD200CA120S1	SPD200SC120S1	SPD200SA120S1	

## IGBT Modules

**SPM**   **100**   **GB**   **601**   **S1**  
I            II            III            IV            V

I   **Trade Mark for IGBT Modules**

II   **Current :**  
 **$I_c @ T_c=80^\circ\text{C}$**

III   **Topology :**  
**GA = Single**  
**GAL(R)= Chopper**  
**GB = Half Bridge(2-Pack)**  
**GD = Full Bridge(4-Pack)**

IV   **Blocking Voltage + IGBT type**  
**601 = 600 V NPT**  
**1201 = 1200 V SPT\***  
**1202 = 1200 V NPT**

V   **Package :**  
**S1 = 34mm**  
**S3 = 62mm**  
**S4 = 38mm**  
**S7 = SOT-227**

## Diode Modules

**SPD**   **100**   **CC**   **60**   **S1**  
I            II            III            IV            V

I   **Trade Mark for Diode Modules**

II   **Current :**  
 **$I_c @ T_c=80^\circ\text{C}$**

III   **Topology :**  
**CC = Common Cathode**  
**CA = Common Anode**  
**SC = Side Common Cathode**  
**SA = Side Common Anode**  
**KA = Cathode Anode**

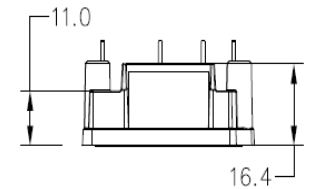
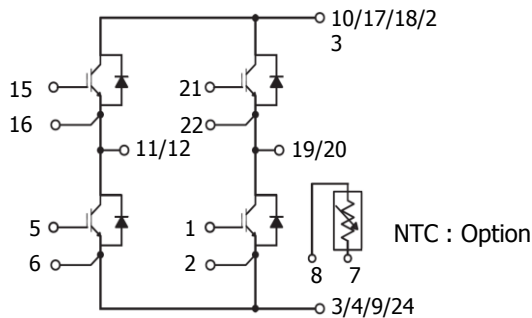
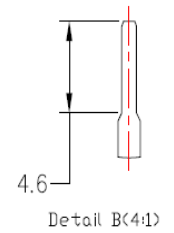
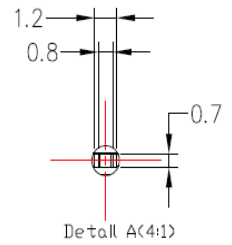
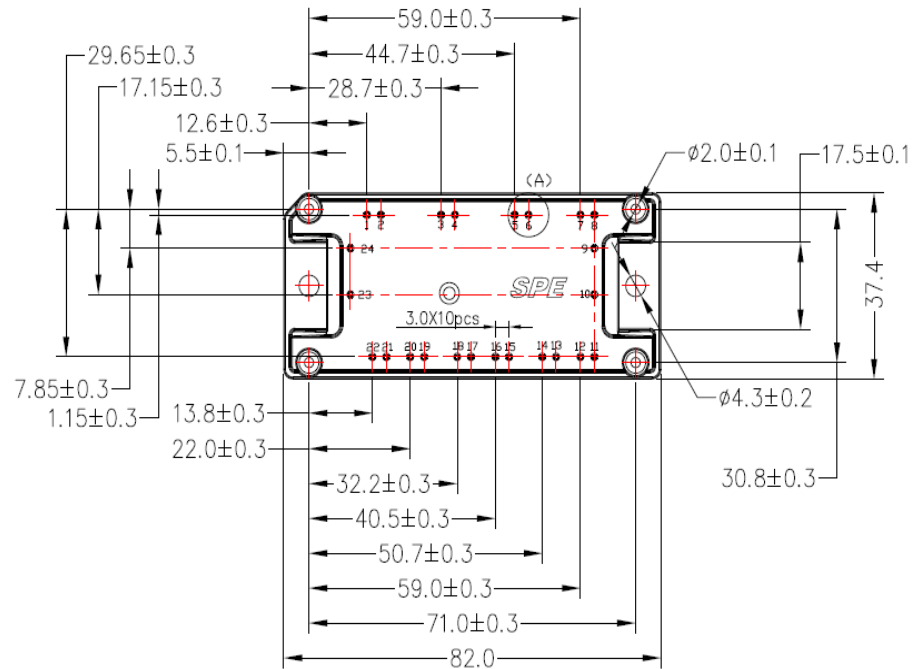
IV   **Blocking Voltage**  
**40 = 400 V**  
**60 = 600 V**  
**120 = 1200 V**

V   **Package :**  
**SH = 27mm**  
**S1 = 34mm**  
**ST = 40mm**  
**S7 = SOT-227**



# Package Dimension 2/4

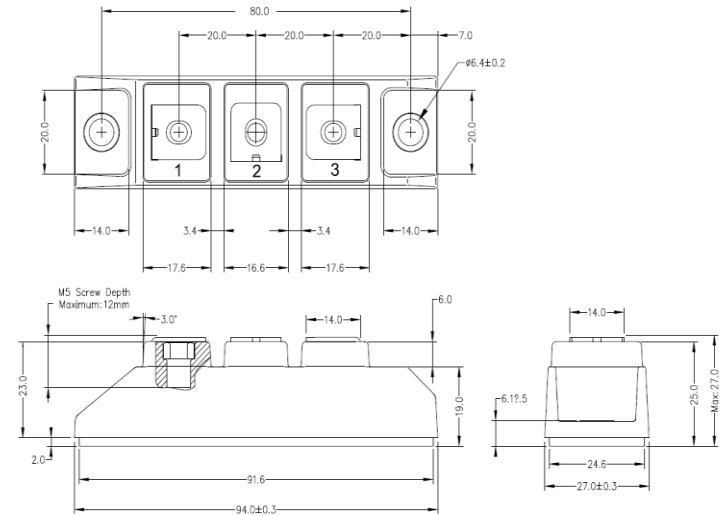
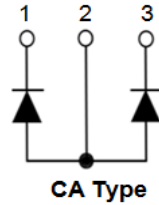
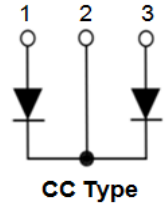
=> 38mm(S4)-IGBT



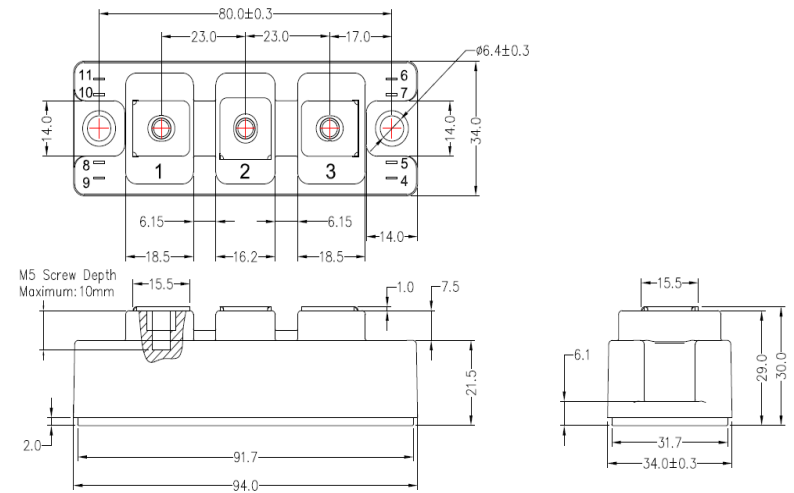
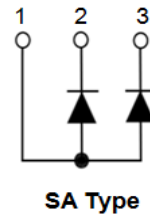
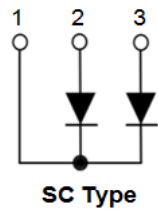


# Package Dimension 3/4

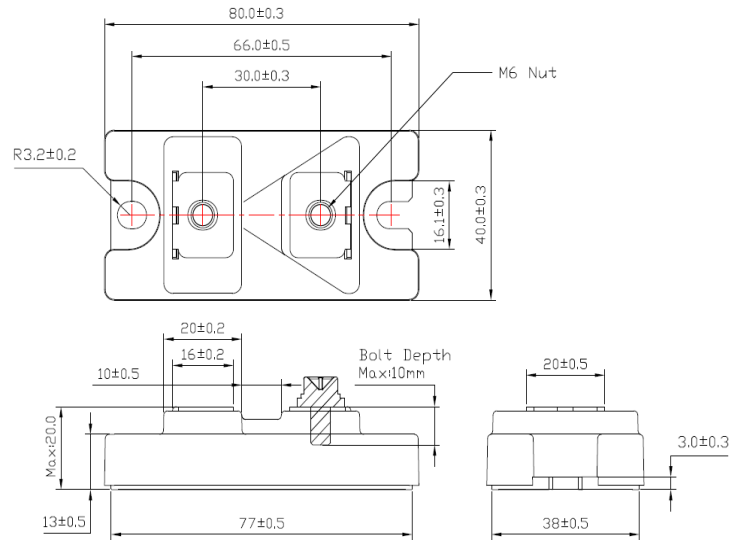
=> 27mm(SH)-FRD



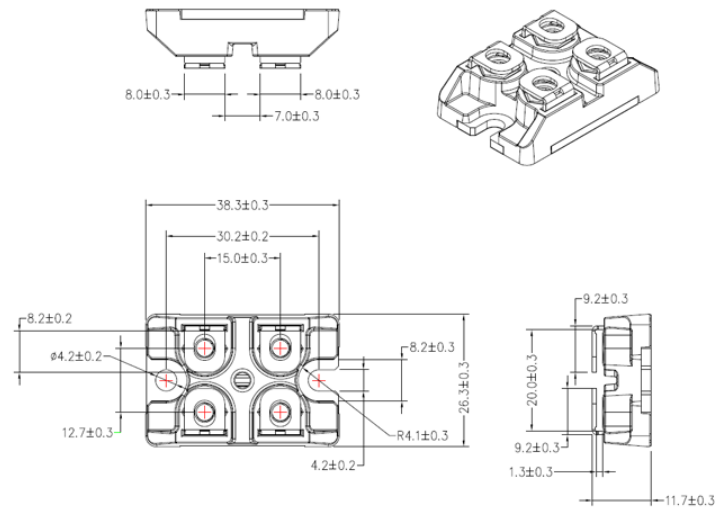
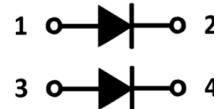
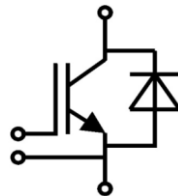
=> 34mm(S1)-FRD



=> 40mm(ST)-FRD



=> SOT-227 : FRD/IGBT/MOSFET



*Thank you for your attention...*

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