

**Part Numbering Nomenclature
for IGBT & FRD Module**

Replaces AN5700-2

AN5700-3

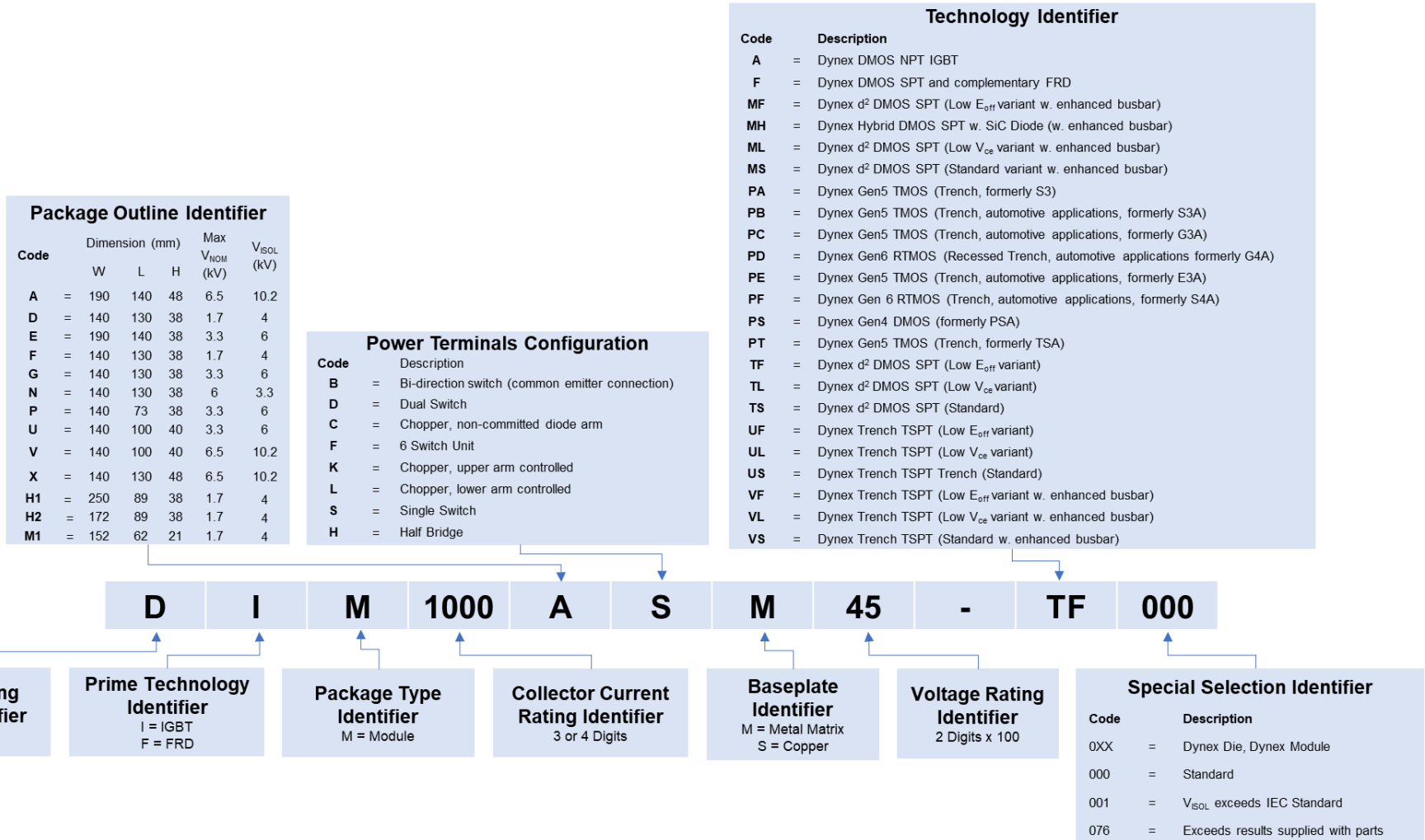
February 2020

(LN39518)

Introduction

Dynex IGBT modules come in a variety of blocking voltages, current capacity, circuit configuration dimensions and isolation voltages; this application note is intended to explain Dynex's module nomenclature regime.

Summary Table



Introduction

Dynex IGBT modules come in a variety of blocking voltages, current capacity, circuit configuration dimensions and isolation voltages; this application note is intended to explain Dynex's module nomenclature regime.

Example Model Number

DIM1000ASM65-US000

Manufacturing Centre Identifier

DIM1000ASM65-US000

Code	Description
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D	= Dynex
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Prime Technology Identifier

DIM1000ASM65-US000

Code	Description
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I	= IGBT
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F	= FRD
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Package Identifier

DIMM1000ASM65-US000

Code	Description
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M	= Module
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S	= Substrate
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Collector Current Rating Identifier

DIM1000ASM65-US000

Collector current I_C rating may be three or four characters in length; i.e. a 500A module will read as a DIM500XSM65-TS000.

Package Outline Identifier

DIM1000ASM65-US000

Code	Dimension (mm)			Max V_{NOM} (kV)	V_{ISOL} (kV)
	W	L	H		
A	= 190	140	48	6.5	10.2
D	= 140	130	38	1.7	4
E	= 190	140	38	3.3	6
F	= 140	130	38	1.7	4
G	= 140	130	38	3.3	6
N	= 140	130	38	6	3.3
P	= 140	73	38	3.3	6
U	= 140	100	40	3.3	6
V	= 140	100	40	6.5	10.2
X	= 140	130	48	6.5	10.2
H1	= 250	89	38	1.7	4
H2	= 172	89	38	1.7	4
M1	= 152	62	21	1.7	4

Power Terminals Configuration Identifier

DIM1000ASM65-US000

Modules may be configured in the following options:

Code	Configuration
B	= Bi-direction switch (common emitter connection)
D	= Dual Switch
C	= Chopper, non-committed diode arm
F	= 6 Switch Unit
K	= Chopper, upper arm controlled
L	= Chopper, lower arm controlled
S	= Single Switch
H	= Half Bridge

Baseplate Material Identifier

DIM1000ASM65-US000

Letter	Baseplate Material
M	= Metal Matrix
S	= Copper

Voltage Rating Identifier

DIM1000ASM65-US000

Multiply two-digit voltage rating identifier by 100.

Technology Identifier

DIM1000ASM65-US000




Code	Description
A	= Dynex DMOS NPT IGBT
F	= Dynex DMOS SPT and complementary FRD
MF	= Dynex d ² DMOS SPT (Low Eoff variant w. enhanced busbar)
MH	= Dynex Hybrid d ² DMOS SPT w. SiC Diode (w. enhanced busbar)
ML	= Dynex d ² DMOS SPT (Low Vce variant w. enhanced busbar)
MS	= Dynex d ² DMOS SPT (Standard variant w. enhanced busbar)
PA	= Dynex Gen5 TMOS (Trench, formerly S3)
PB	= Dynex Gen5 TMOS (Trench, automotive applications, formerly S3A)
PC	= Dynex Gen5 TMOS (Trench, automotive applications, formerly G3A)
PD	= Dynex Gen6 RTMOS (Recessed Trench, automotive applications formerly G4A)
PE	= Dynex Gen5 TMOS (Trench, automotive applications, formerly E3A)
PF	= Dynex Gen 6 RTMOS (Trench, automotive applications, formerly S4A)
PS	= Dynex Gen4 DMOS (formerly PSA)
PT	= Dynex Gen5 TMOS (Trench, formerly TSA)
TF	= Dynex d ² DMOS SPT (Low Eoff variant)
TL	= Dynex d ² DMOS SPT (Low Vce variant)
TS	= Dynex d ² DMOS SPT (Standard)
UF	= Dynex Trench TSPT (Low Eoff variant)
UL	= Dynex Trench TSPT (Low Vce variant)
US	= Dynex Trench TSPT Trench (Standard)
VF	= Dynex Trench TSPT (Low Eoff variant w. enhanced busbar)
VL	= Dynex Trench TSPT (Low Vce variant w. enhanced busbar)
VS	= Dynex Trench TSPT (Standard w. enhanced busbar)




Special Selection Identifier

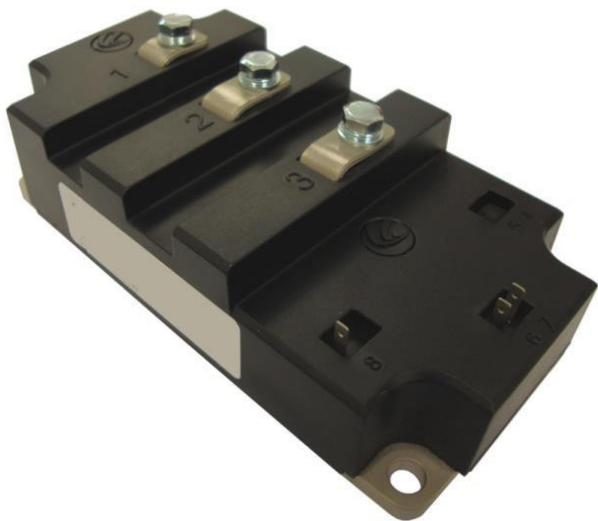
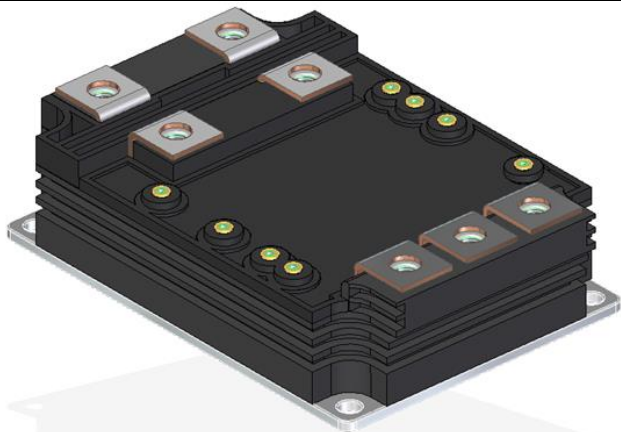
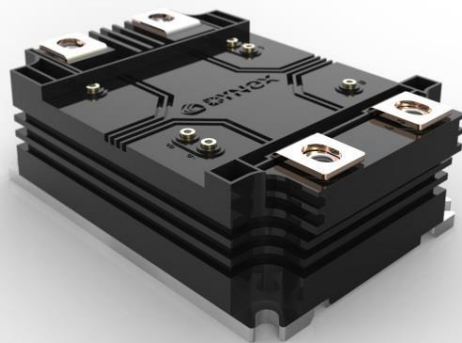
DIM1000ASM65-US000

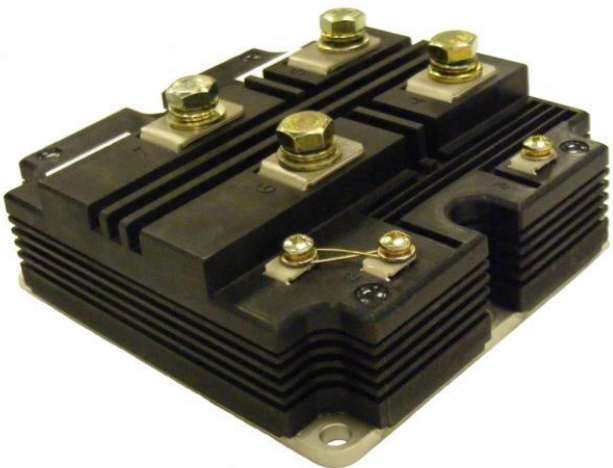


Code	Description
000	= Standard Product
001	= Isolation voltage exceeds IEC standard for blocking voltage
076	= Electrical result supplied with module.
XXX	= Special Selection


Annex 1: Package Outline Detailed Description

Code	Dimension		Module Appearance
A =	Max V_{NOM}		
	Max V_{ISOL}		
	W (mm)	140	
	L (mm)	190	
	H (mm)	48	
D =	Max V_{NOM} (kV)	6.5	
	Max V_{ISOL} (kV)	10.2	
	W (mm)	140	
	L (mm)	130	
	H (mm)	38	
E =	Max V_{NOM} (kV)	1.7	
	Max V_{ISOL} (kV)	4	
	W (mm)	140	
	L (mm)	190	
	H (mm)	38	
E =	Max V_{NOM} (kV)	3.3	
	Max V_{ISOL} (kV)	6	

Code	Dimension	Module Appearance	
F =	Max V_{NOM}		
	Max V_{ISOL}		
	W (mm)		140
	L (mm)		130
	H (mm)		38
	Max V_{NOM} (kV)		1.7
Max V_{ISOL} (kV)	4		
G =	Max V_{NOM}		
	Max V_{ISOL}		
	W (mm)		140
	L (mm)		130
	H (mm)		38
	Max V_{NOM} (kV)		3.3
Max V_{ISOL} (kV)	6		
N =	Max V_{NOM}		
	Max V_{ISOL}		
	W (mm)		140
	L (mm)		130
	H (mm)		38
	Max V_{NOM} (kV)		3.3
Max V_{ISOL} (kV)	6		

Code	Dimension	Module Appearance	
P =	Max V_{NOM}		
	Max V_{ISOL}		
	W (mm)		140
	L (mm)		73
	H (mm)		38
	Max V_{NOM} (kV)		3.3
U	Max V_{ISOL} (kV)		
	W (mm)		140
	L (mm)		100
	H (mm)		40
	Max V_{NOM} (kV)		3.3
	Max V_{ISOL} (kV)		6
V =	Max V_{ISOL} (kV)		
	W (mm)		140
	L (mm)		100
	H (mm)		40
	Max V_{NOM} (kV)		6.5
	Max V_{ISOL} (kV)		10.2

Code	Dimension	Max V_{NOM}	Max V_{ISOL}	Module Appearance
X =	W (mm)	140		
	L (mm)	130		
	H (mm)	48		
	Max V_{NOM} (kV)	6.5		
	Max V_{ISOL} (kV)	10.2		
H1 =	W (mm)	250		
	L (mm)	89		
	H (mm)	38		
	Max V_{NOM} (kV)	1.7		
	Max V_{ISOL} (kV)	4		
H2 =	W (mm)	172		
	L (mm)	89		
	H (mm)	38		
	Max V_{NOM} (kV)	1.7		
	Max V_{ISOL} (kV)	4		

Code	Dimension		Module Appearance
	Max V_{NOM}	Max V_{ISOL}	
M1 =	W (mm)	156	
	L (mm)	62	
	H (mm)	21	
	Max V_{NOM} (kV)	1.7	
	Max V_{ISOL} (kV)	4	

Annex 2: Circuit Configuration

Note: Terminal identifiers may change dependent on selected package, refer to individual datasheet for correct terminal alias.

Code	Configuration	Circuit
B	= Bi-directional switch	
D	= Dual Switch	
C	= Chopper non-committed diode arm	<p>Available in Packages Outlines: D, G, N & X</p>
F	= 6 Switch Unit	<p>Available in Package Outlines: A & E</p>
		Pending

Code	Configuration	Circuit
K	= Chopper, upper arm controlled	
L	= Chopper, lower arm controlled	
S	= Single Switch	<p data-bbox="799 1133 1262 1167">Available in Package Outlines: A, E</p> <p data-bbox="783 1585 1278 1619">Available in Package Outlines: F, N, X</p>
H	= Half Bridge	

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