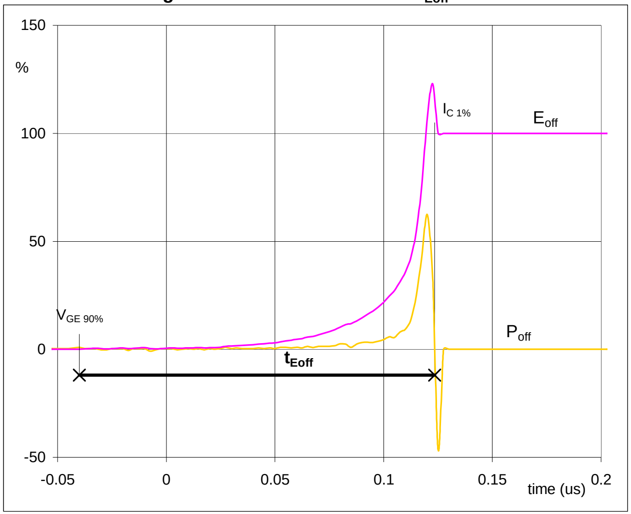
Switching Definitions H-Bridge MOSFET

Figure 5 H-Bridge MOSFET

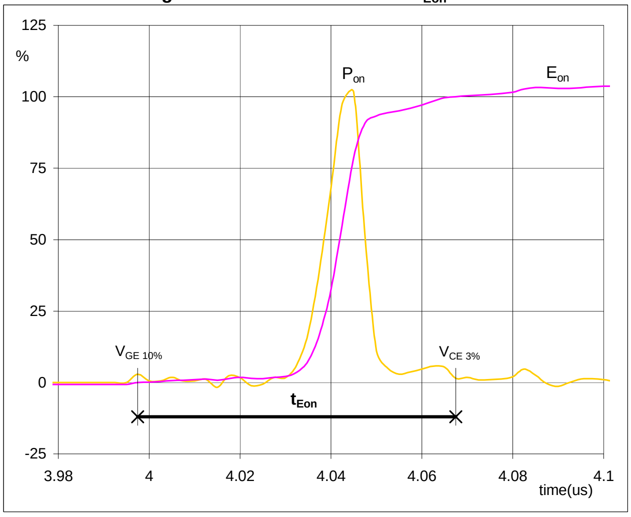
Turn-off Switching Waveforms & definition of t_{Eoff}



P_{off} (100%) =	12.04	kW
E_{off} (100%) =	0.03	mJ
t_{Eoff} =	0.16	μs

Figure 6 H-Bridge MOSFET

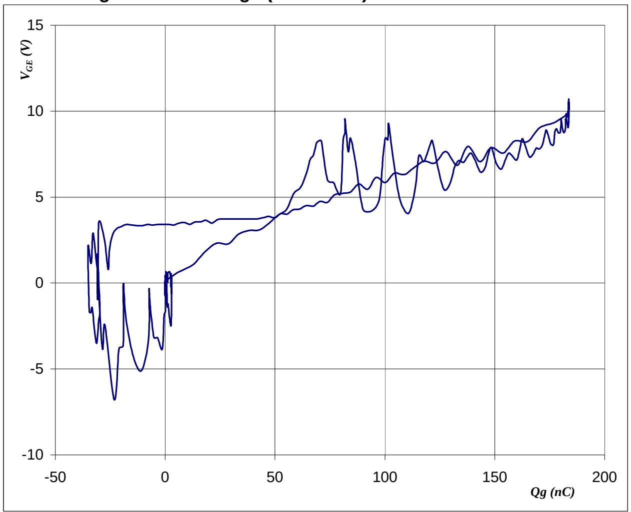
Turn-on Switching Waveforms & definition of t_{Eon}



P_{on} (100%) =	12.04	kW
E_{on} (100%) =	0.14	mJ
t_{Eon} =	0.07	μs

Figure 7 H-Bridge MOSFET

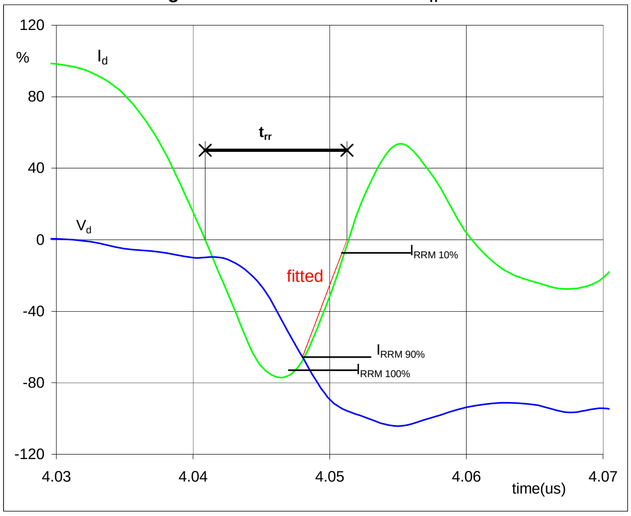
Gate voltage vs Gate charge (measured)



V_{GEoff} =	0	V
V_{GEon} =	10	V
V_C (100%) =	400	V
I_C (100%) =	30	A
Q_g =	183.73	nC

Figure 8 H-Bridge FWD

Turn-off Switching Waveforms & definition of t_{rr}

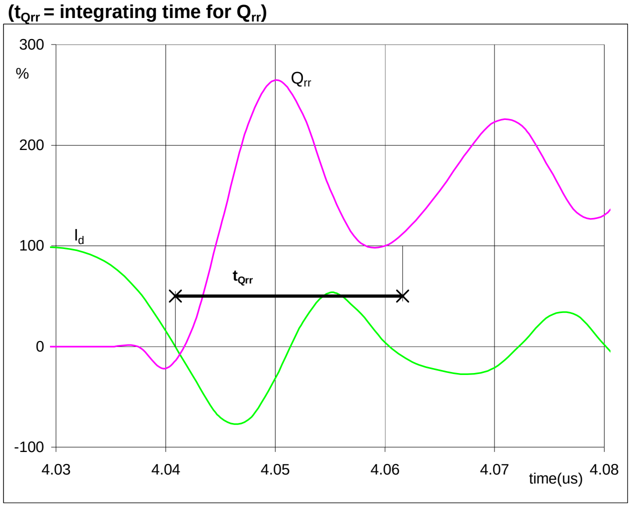


V_d (100%) =	400	V
I_d (100%) =	30	A
I_{RRM} (100%) =	-24	A
t_{rr} =	0.01	μs

Switching Definitions H-Bridge MOSFET

Figure 9 H-Bridge FWD

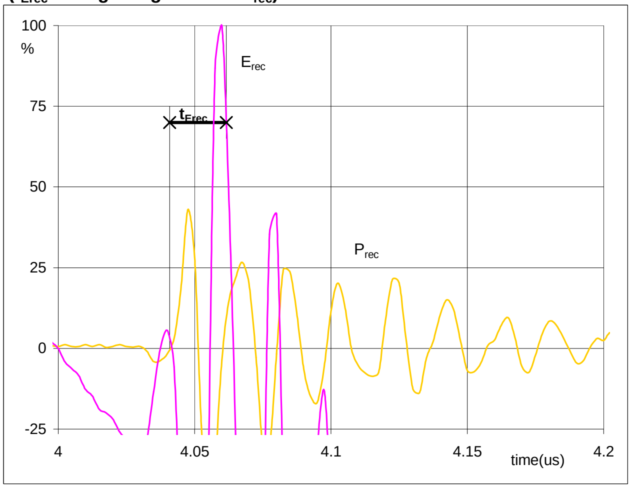
Turn-on Switching Waveforms & definition of t_{Qrr}
(t_{Qrr} = integrating time for Q_{rr})



I_d (100%) =	30	A
Q_{rr} (100%) =	0.12	μC
t_{Qrr} =	0.02	μs

Figure 10 H-Bridge FWD

Turn-on Switching Waveforms & definition of t_{Erec}
(t_{Erec}= integrating time for E_{rec})



P_{rec} (100%) =	12.04	kW
E_{rec} (100%) =	0.02	mJ
t_{Erec} =	0.02	μs

Ordering Code and Marking - Outline - Pinout

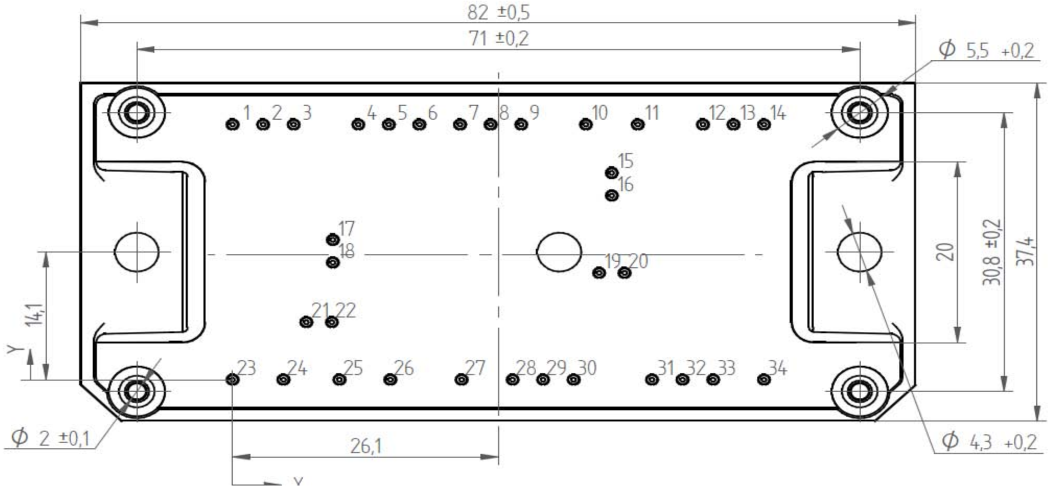
Ordering Code & Marking

Version	Ordering Code	in DataMatrix as	in packaging barcode as
without thermal paste 12mm housing	10-FY07BIA041MC-M528E58	M528E58	M528E58

Outline

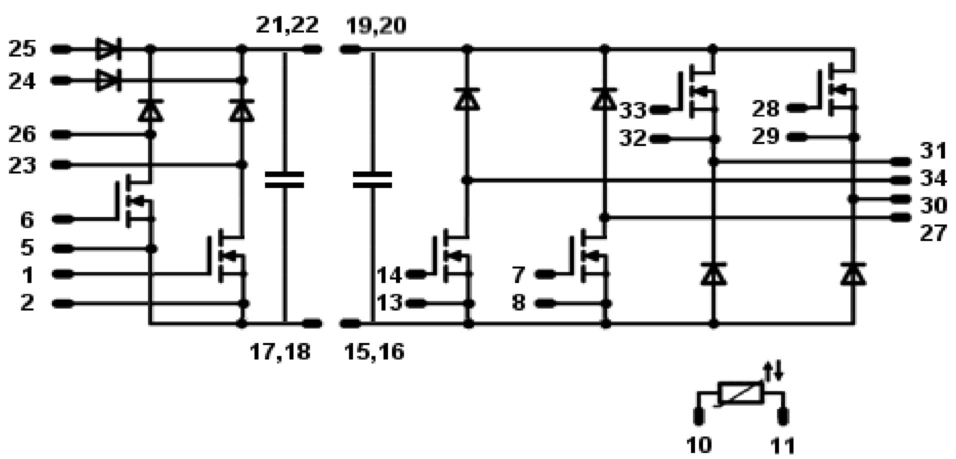
Pin table

Pin	X	Y
1	0	28,2
2	3	28,2
3	6	28,2
4	12,35	28,2
5	15,35	28,2
6	18,35	28,2
7	22,35	28,2
8	25,35	28,2
9	28,35	28,2
10	34,7	28,2
11	39,8	28,2
12	46,2	28,2
13	49,2	28,2
14	52,2	28,2
15	37,25	22,85
16	37,25	20,35
17	9,85	15,45
18	9,85	12,95
19	36	11,8
20	38,5	11,8
21	7,25	6,35
22	9,75	6,35
23	0	0
24	5	0
25	10,5	0
26	15,5	0
27	22,5	0
28	27,5	0
29	30,5	0
30	33,5	0
31	41,2	0
32	44,2	0
33	47,2	0
34	52,2	0



Tolerance of pinpositions: ±0,5mm at the end of pins
Dimension of coordinate axis is only offset without tolerance
PCB cutouts and holes see in handling instructions document

Pinout



Pins 3,4,9,12 are not connected.

PRODUCT STATUS DEFINITIONS

Datasheet Status	Product Status	Definition
Target	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. The data contained is exclusively intended for technically trained staff.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data may be published at a later date. Vincotech reserves the right to make changes at any time without notice in order to improve design. The data contained is exclusively intended for technically trained staff.
Final	Full Production	This datasheet contains final specifications. Vincotech reserves the right to make changes at any time without notice in order to improve design. The data contained is exclusively intended for technically trained staff.

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.