

High Frequency IGBT Modules (NFH-Series)



Features

- Super low turn-off switching losses by combining Carrier Stored Trench Gate Bipolar Transistor (CSTBT™) chip technology with adopted lifetime control
- Optimised for high frequency switching at 50kHz
- Excellent performance also in soft switching applications (resonant mode)
- Low internal inductance package
- Significant improvement of power cycling capability



Line-up NFH-Series

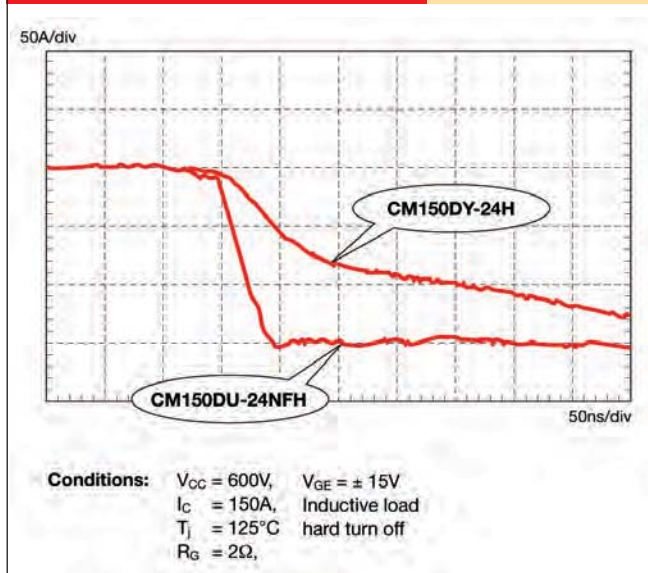
Symbol	Circuit Diagram	V _{CEs} (V)	I _c (A)					
			100	150	200	300	400	600
D		600	CM100DUS-12F	CM150DUS-12F	CM200DU-12NFH	CM300DU-12NFH	CM400DU-12NFH	CM600DU-12NFH
		1200	CM100DU-24NFH	CM150DU-24NFH	CM200DU-24NFH	CM300DU-24NFH	CM400DU-24NFH	CM600DU-24NFH

1.07 High Frequency IGBT Modules (NFH-Series)

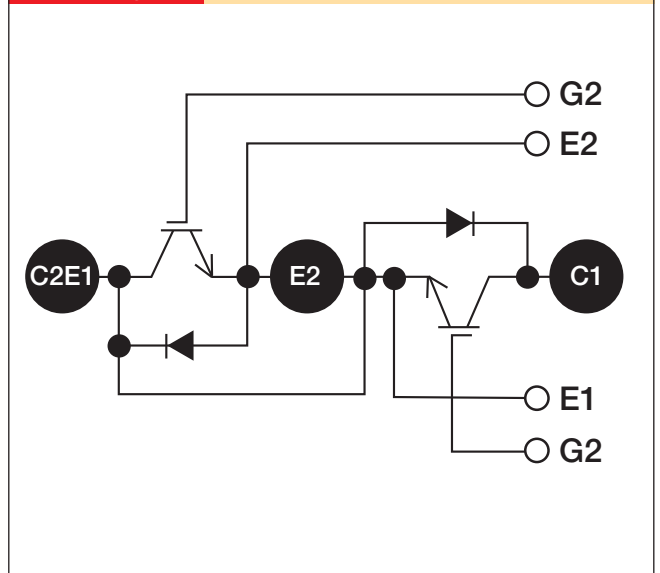
Type Number	Maximum Ratings		Electrical Characteristics (T _j = 25°C)									Free Wheel Diode (T _j = 25°C)			Thermal Characteristics*			Package-No.
	V _{CES} (V)	I _C (A)	V _{CE(sat)} (V)		C _{ies} (nF)	C _{oes} (nF)	C _{res} (nF)	Maximum Switching Times				V _f (V)	Q _{rr} (μC)	t _{rr} (ns)	IGBT R _{th(j-c)} (°C/W)	Diode R _{th(j-c)} (°C/W)	R _{th(c-f)} (°C/W)	
			Typ.	Max.				Max.	Max.	t _{d(on)} (ns)	t _r (ns)							
600 Volt IGBT Modules NFH-Series																		
CM100DUS-12F	600	100	2.0	2.7	27	1.8	1.0	100	80	300	150	2.6	1.9	150	0.35	0.70	0.07	NFH1
CM150DUS-12F	600	150	2.0	2.7	41	2.7	1.5	120	100	350	150	2.6	2.8	150	0.24	0.47	0.07	NFH1
CM200DU-12NFH	600	200	2.0	2.7	55	3.6	2.0	250	150	500	150	2.6	3.5	150	0.21	0.35	0.07	NFH1
CM300DU-12NFH	600	300	2.0	2.7	83	5.4	3.0	350	150	700	150	2.6	5.5	200	0.16	0.24	0.04	NFH2
CM400DU-12NFH	600	400	2.0	2.7	110	7.2	4.0	400	200	700	150	2.6	7.7	200	0.13	0.18	0.04	NFH2
CM600DU-12NFH	600	600	2.0	2.7	166	11	6.0	650	250	800	150	2.6	11	200	0.11	0.12	0.02	NFH3
1200 Volt IGBT Modules NFH-Series																		
CM100DU-24NFH	1200	100	5.0	6.5	16	1.3	0.3	100	50	250	150	3.5	5.0	150	0.22	0.47	0.07	NFH1
CM150DU-24NFH	1200	150	5.0	6.5	24	2.0	0.5	150	80	400	150	3.5	7.5	150	0.19	0.35	0.07	NFH1
CM200DU-24NFH	1200	200	5.0	6.5	32	2.7	0.6	300	80	500	150	3.5	7.5	250	0.15	0.24	0.04	NFH2
CM300DU-24NFH	1200	300	5.0	6.5	47	4.0	0.9	300	80	500	150	3.5	13	250	0.11	0.18	0.04	NFH2
CM400DU-24NFH	1200	400	5.0	6.5	63	5.3	1.2	300	100	500	150	3.5	16	250	0.12	0.23	0.02	NFH3
CM600DU-24NFH	1200	600	5.0	6.5	95	8.0	1.8	400	120	700	150	3.5	28	250	0.083	0.15	0.02	NFH3

* Measurement point of case temperature (T_c) is side of base plate. Please refer to package outline.

Comparison of Turn-off Waveform

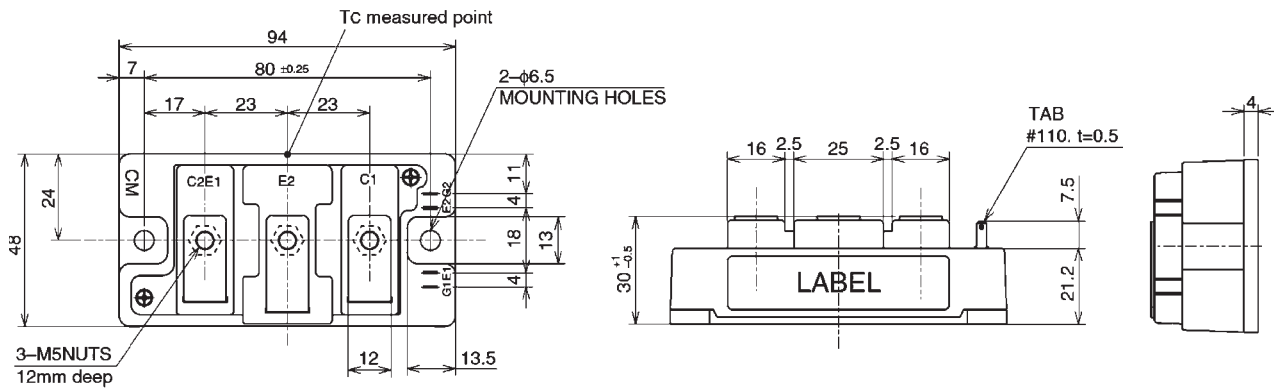


Circuit Diagram

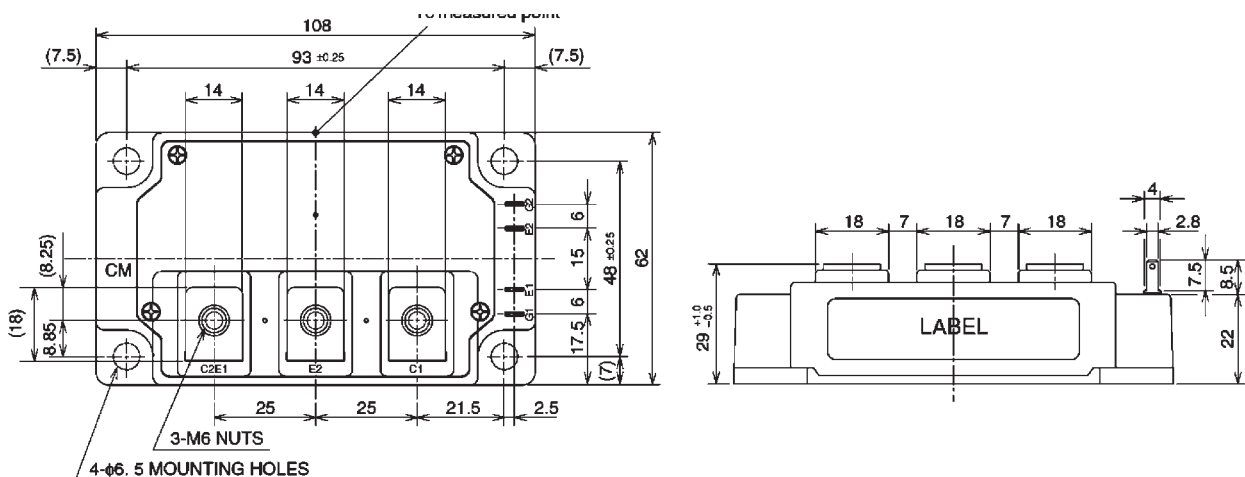


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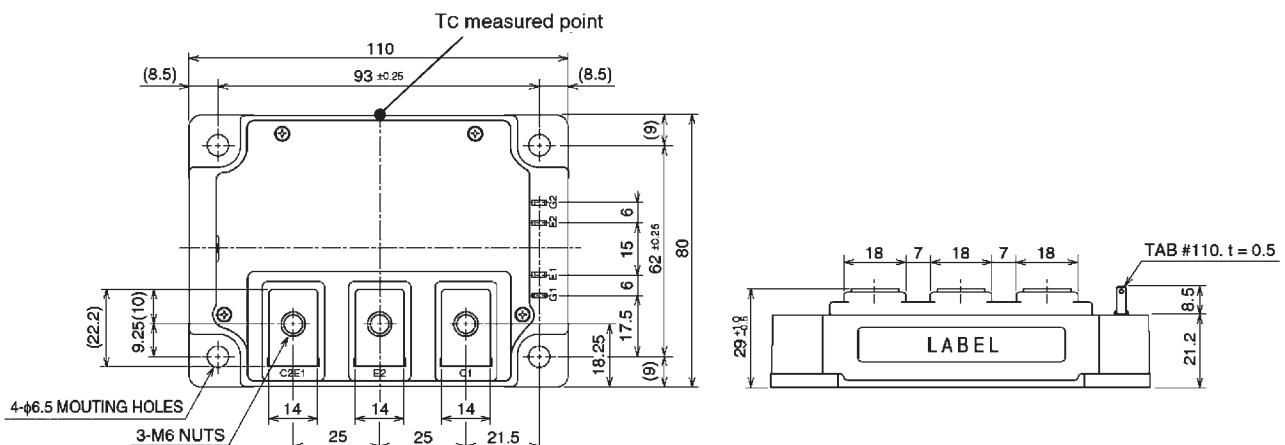
Package NFH1



Package NFH2



Package NFH3



Dimensions in mm

Ihr Vertriebspartner:
HY-LINE[®]
POWER COMPONENTS

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