

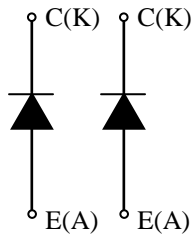
MDM800H45E2

Target Specification

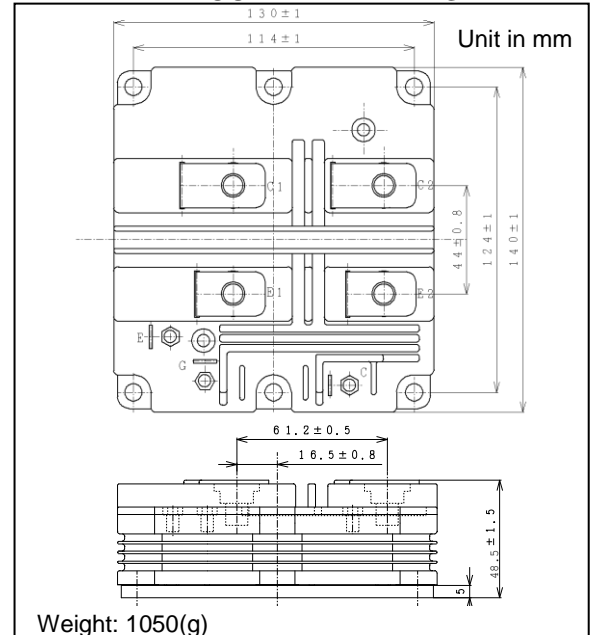
FEATURES

- * Low VF diode module.
- * Low noise recovery: Ultra soft fast recovery diode.
- * High reverse recovery capability: Super HiRC Structure.
- * High reliability, high durability diodes.
- * Isolated heat sink (terminal to base).

CIRCUIT DIAGRAM



OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS (TC=25 °C)

Item	Symbol	Unit	MDM800E45E2
Repetitive Peak Reverse Voltage	V_{RRM}	V	4,500
Forward Current	DC	A	800
	1ms		1,600
Junction Temperature	T_j	°C	-40 ~ +125
Storage Temperature	T_{stg}	°C	-50 ~ +125 (1)
Isolation Test Voltage	Terminals-base	V_{ISO}	V_{RMS}
	Terminal 1-Terminal 2		
Screw Torque	Terminals (M8)	-	10 (2)
	Mounting (M6)	-	6 (3)

Notes: (1) Terminal temperature shall not exceed the specified temperature in any operation.
 (2) Recommended Value 9 ± 1 N·m (3) Recommended Value 5.5 ± 0.5 N·m

ELECTRICAL CHARECTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Repetitive Reverse Current	I_{RRM}	mA	-	0.5	TBD	$V_{AK}=4,500V, T_j=125^\circ C$
Forward Voltage Drop	V_F	V	TBD	3.4	3.9	$I_F=800A, T_j=125^\circ C$
Reverse Recovery Time	t_{rr}	μs	-	0.8	TBD	$V_{CC}=2,600V, I_F=800A, L_s=150nH$
Reverse Recovery Loss	$E_{rr(10\%)}$	J/P	-	2.1	TBD	$T_j=125^\circ C R_g=3.3\Omega$ (4)

Notes:(4) Counter arm; MBN800H45E2 VGE=+/-15V

R_g value is the test condition's value for evaluation of the switching times, not recommended value.
 Please, determine the suitable R_g value after the measurement of switching waveforms (overshoot voltage, etc.) with appliance mounted.

PACKAGE CHARECTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Terminal Resistance	RCE	m Ω	-	0.3	-	per arm
Terminal Stray Inductance	LsCE	nH	-	42	-	per arm
Thermal Impedance	Rth(j-c)	K/W	-	-	0.026	Junction to case (par arm)
Comparative tracking index	CTI		-	600	-	
Contact Thermal Impedance	Rth(c-f)	K/W	-	0.007	-	Case to fin ($\lambda_{grease}=1W/(m \cdot K)$, heat-sink flatness $\leq 50\mu m$)

* Please contact our representatives at order.

* For improvement, specifications are subject to change without notice.

* For actual application, please confirm this spec sheet is the newest revision.

MDM800H45E2

Target Specification

HITACHI POWER SEMICONDUCTORS

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