

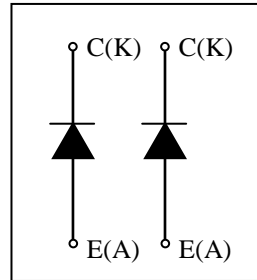
MDM900E45A

PRELIMINARY SPEC.

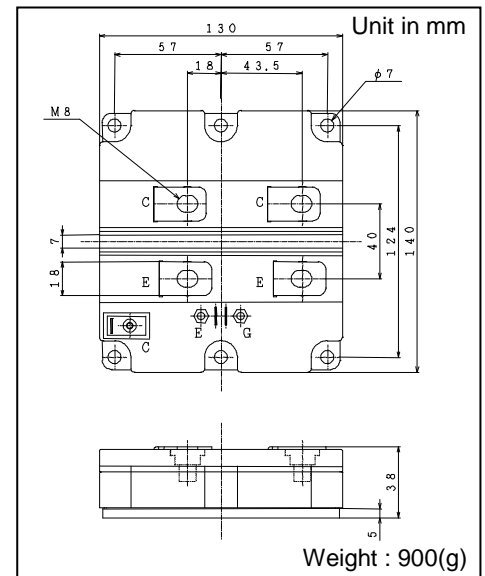
FEATURES

- * Low noise due to soft and fast recovery diodes.
- * High reliability, high durability diodes.
- * Isolated heat sink(terminal to base).

CIRCUIT DIAGRAM



OUTLINE DRAWING



ABSOLUTE MAXIMUM RATINGS (TC=25°C)

Item	Symbol	Unit	MDM900E45A
Repetitive Peak Reverse Voltage	V_{RRM}	V	4,500
Forward Current	DC	A	900
	1ms		1,800
Junction Temperature	T_j	°C	-40 ~ +125
Storage Temperature	T_{stg}	°C	-40 ~ +125 (1)
Isolation Test Voltage	Terminals-base	V_{ISO}	V_{RMS}
	Terminal 1-Terminal 2		
Screw Torque	Terminals (M8)	-	15 (2)
	Mounting (M6)	-	6 (3)

Notes: (1) Terminal temperature shall not exceed the specified temperature in any operation.
 (2) Recommended Value $15^{+0/-3}$ N·m (3) Recommended Value 5.5 ± 0.5 N·m

ELECTRICAL CHARACTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Repetitive Reverse Current	I_{RRM}	mA	-	20	40.0	$V_{AK}=4,500V, T_j=125^\circ C$
Forward Voltage Drop	V_F	V	3.3	4.5	tbd	$I_F=900A, T_j=125^\circ C$
Reverse Recovery Time	t_{rr}	μs	-	0.6	tbd	$V_{CC}=2,600V, I_c=900A, L=130nH$
Reverse Recovery Loss	$E_{rr(10\%)}$	J/P	-	1.1	tbd	$T_j=125^\circ C R_g=2.2 \Omega$ (4)

PACKAGE CHARACTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Terminal Resistance	R_{CE}	m Ω	-	0.3	-	
Terminal Stray Inductance	L_{SCE}	nH	-	35	-	
Thermal Impedance	$R_{th(j-c)}$	°C/W	-	-	0.017	Junction to case
Comparative tracking index	CTI		-	600	-	
Contact Thermal Impedance	$R_{th(c-f)}$	°C/W	-	0.008	-	Case to fin per module
Base Plate material						Al-SiC
Insulation substrate material						AlN

Notes:(4) Counter arm; MBN900D45A 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.

* 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.

MDM900E45A

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