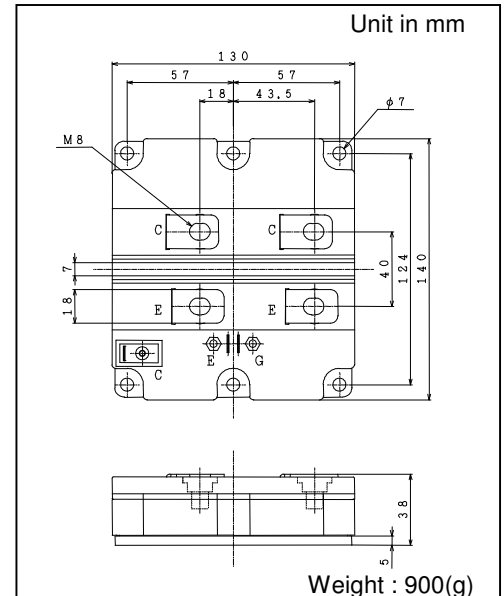


MDM800E33D

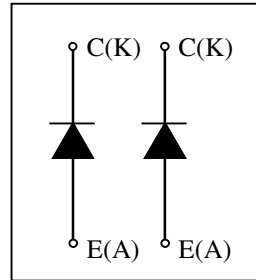
OUTLINE DRAWING



FEATURES

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

CIRCUIT DIAGRAM



ABSOLUTE MAXIMUM RATINGS (TC=25°C)

Item	Symbol	Unit	MDM 800E33D
Repetitive Peak Reverse Voltage	V_{RRM}	V	3,300
Forward Current	DC	A	800
	1ms		1,600
Junction Temperature	T_j	°C	-40 ~ +125
Storage Temperature	T_{stg}	°C	-40 ~ +125
Isolation Test Voltage	V_{ISO}	V_{RMS}	6,000(AC 1 minute)
Screw Torque	Terminals (M8)	-	10 (1)
	Mounting (M6)	-	6 (2)

Notes: (1) Recommended Value $9 \pm 1 \text{ N}\cdot\text{m}$ (2) Recommended Value $5.5 \pm 0.5 \text{ N}\cdot\text{m}$

ELECTRICAL CHARACTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Repetitive Reverse Current	I_{RRM}	mA	-	2.0	20.0	$V_{AK}=3,300\text{V}$, $T_j=125^\circ\text{C}$
Forward Voltage Drop	V_F	V	-	2.5	3.0	$I_F=800\text{A}$, $T_j=125^\circ\text{C}$ at chip level
Reverse Recovery Time	t_{rr}	μs	-	0.6	1.1	$V_{CC}=1,650\text{V}$, $I_c=800\text{A}$, $L=100\text{nH}$
Reverse Recovery Loss	$E_{rr(10\%)}$	J/P	-	0.9	1.3	$T_j=125^\circ\text{C}$

PACKAGE CHARACTERISTICS

Item	Symbol	Unit	Min.	Typ.	Max.	Test Conditions
Terminal Resistance	R_{CE}	$\text{m}\Omega$	-	0.4	-	
Terminal Stray Inductance	L_{sCE}	nH	-	35	-	
Thermal Impedance	$R_{th(j-c)}$	K/W	-	-	0.026	Junction to case
Comparative tracking index	CTI		-	600	-	
Contact Thermal Impedance	$R_{th(c-f)}$	K/W	-	0.008	-	Case to fin per module

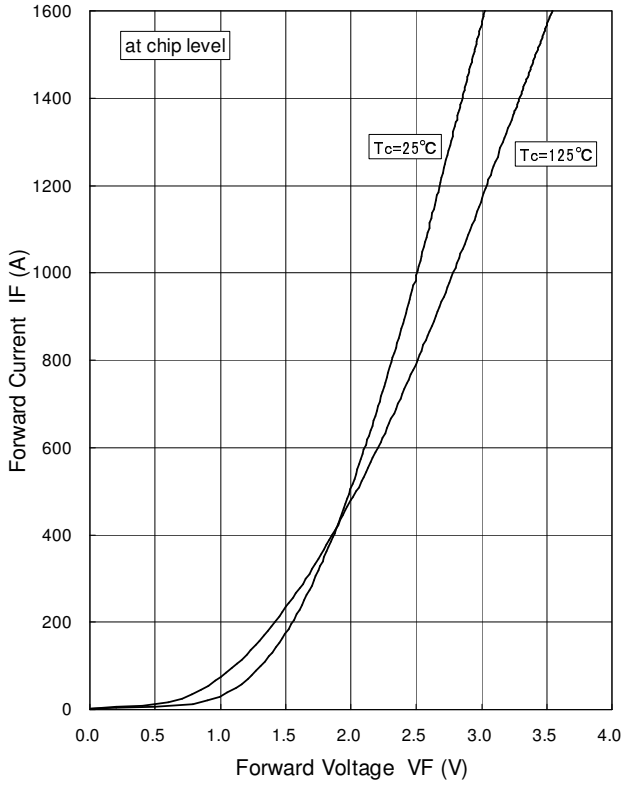
Notes: R_G value is the test condition's value to define the switching characteristics not recommended value.

MDM800E33D

CHARACTERISTICS CURVE

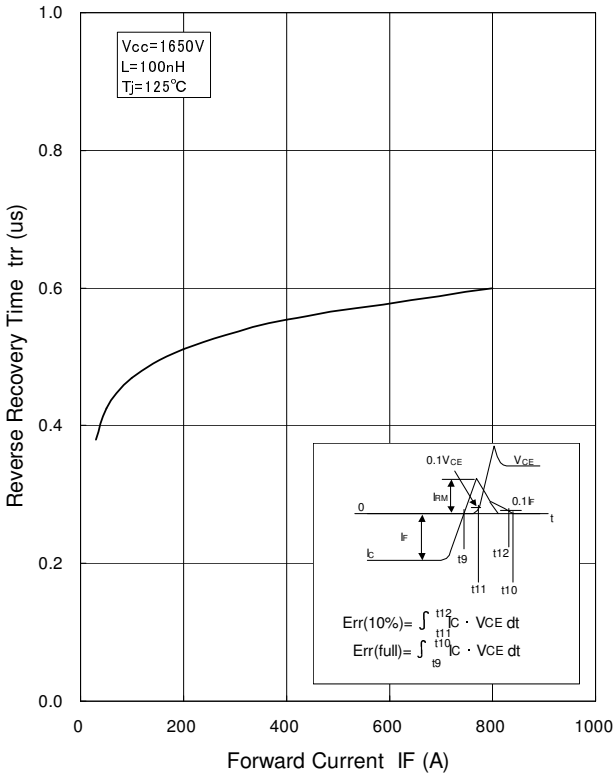
STATIC CHARACTERISTICS

TYPICAL

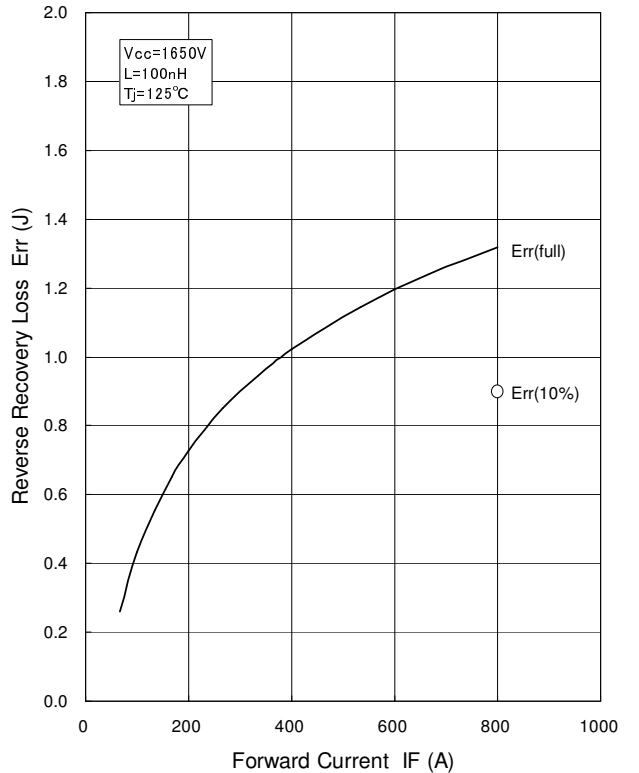


DEPENDENCE OF CURRENT

TYPICAL

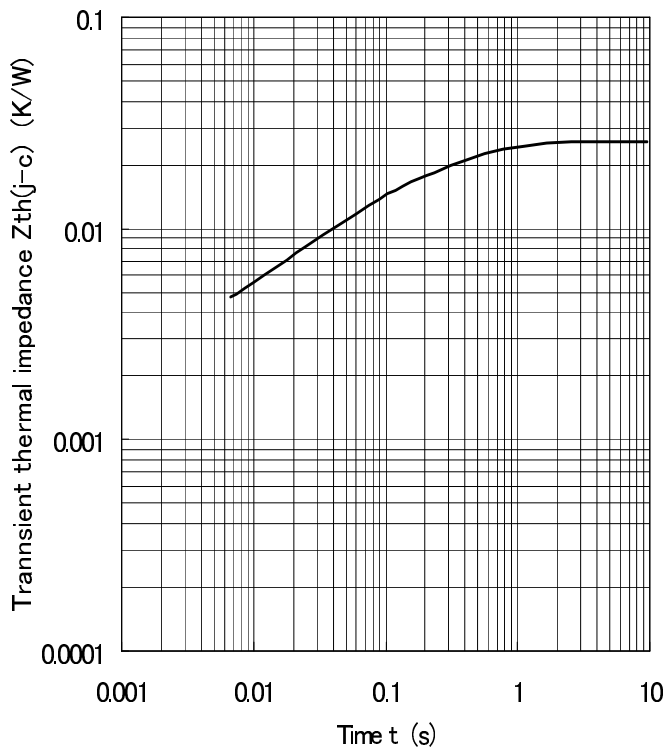


TYPICAL



MDM800E33D

TRANSIENT THERMAL IMPEDANCE



Transient Thermal Impedance Curve (Maximum Value)

HITACHI POWER SEMICONDUCTORS

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