DACOSEIICOONOCTORCO. ITD.

MBRTT40020(A)(D)(R)
THRU
MBRTT40045(A)(D)(R)

## SCHOTTKY DIODE MODULE TYPES

400A / 20-45V

Features<br>High Surge Capability<br>Types up to $45 \mathrm{~V}_{\text {RRM }}$<br>Isolation Type Package<br>Electrically Isolation base plate

## Maximum Ratings

Operating Temperature : $-55^{\circ} \mathrm{C}$ to $+150^{\circ} \mathrm{C}$
Storage Temperature : $-55^{\circ} \mathrm{C}$ to $+150^{\circ} \mathrm{C}$

| Part Number | Maximum <br> Recurrent <br> Peak Reverse <br> Voltage | Maximum <br> RMS Voltage | Maximum DC <br> Blocking <br> Voltage |
| :---: | :---: | :---: | :---: |
| MBRTT40020(A)(D)(R) | 20 V | 14 V | 20 V |
| MBRTT40030(A)(D)(R) | 30 V | 21 V | 30 V |
| MBRTT40035(A)(D)(R) | 35 V | 25 V | 35 V |
| MBRTT40040(A)(D)(R) | 40 V | 28 V | 40 V |
| MBRTT40045(A)(D)(R) | 45 V | 32 V | 45 V |

Electrical Characteristics @ $25{ }^{\circ} \mathrm{C}$ Unless Otherwise Specified

| Average Forward Current (Per pkg) | If (AV) | 400A | $\mathrm{Tc}=125^{\circ} \mathrm{C}$ |
| :---: | :---: | :---: | :---: |
| Peak Forward Surge Current <br> (Per leg) | IFSM | 3000A | 8.3ms, half sine |
| $\begin{aligned} & \text { Maximum (Per leg) } \\ & \text { Instantaneous } \\ & \text { Forward Voltage * } \end{aligned}$ | VF | $\begin{aligned} & 0.64 \mathrm{~V} \\ & 0.70 \mathrm{~V} \end{aligned}$ | $\begin{aligned} & \text { IFM }=200 \mathrm{~A} ; \mathrm{T}_{J}=125^{\circ} \mathrm{C} \\ & \mathrm{IFM}_{2}=200 \mathrm{~A} ; \mathrm{T}_{J}=25^{\circ} \mathrm{C} \end{aligned}$ |
| Maximum Instantaneous Reverse Current At Rated DC Blockig Voltage* (Per leg) | IR | $\begin{array}{r} 1 \mathrm{~mA} \\ 10 \mathrm{~mA} \\ 50 \mathrm{~mA} \end{array}$ | $\begin{aligned} & \mathrm{T}_{J}=25^{\circ} \mathrm{C} \\ & \mathrm{~T}_{J}=100^{\circ} \mathrm{C} \\ & \mathrm{~T}_{J}=150^{\circ} \mathrm{C} \end{aligned}$ |
| Isolation Voltage | Viso | 2500V | A.C. 1 minute |
| Maximum Thermal Resistance Junction To Case (Per leg) | R $\mathrm{\theta}^{\text {j }}$ c | $0.35{ }^{\circ} \mathrm{C} / \mathrm{W}$ |  |
| Mounting torque |  | $\begin{aligned} & 4 \pm 0.5 \mathrm{Nm} \\ & 3 \pm 0.5 \mathrm{Nm} \end{aligned}$ | to heatsink to terminals |



Dimensions in mm ( $1 \mathrm{~mm}=0.0394^{\prime \prime}$ )


MBRTT400xxR


MBRTT400xxADR

[^0]Figure .1- Typical Forward Characteristics


Instantaneous Forward Voltage -Volts

Figure .3-Peak Forward Surge Current


Number Of Cycles At 60Hz - Cycles

Figure .2-Forward Derating Curve


Case Temperature - ${ }^{\circ} \mathrm{C}$

Figure . 4 -Typical Reverse Characteristics


Reverse Voltage - Volts (\%)

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[^0]:    *Pulse Test: Pulse Width $300 \mu \mathrm{sec}$, Duty Cycle 2\%

