



**America Semiconductor**

**Silicon Power  
Schottky Diode**

**MBR12045CT thru  
MBR120100CTR**

**$V_{RRM} = 20\text{ V} - 100\text{ V}$**

**$I_F = 120\text{ A}$**

**Features**

- High Surge Capability
- Types up to 100 V  $V_{RRM}$

**Twin Tower Package**



**Maximum ratings, at  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified ("R" devices have leads reversed)**

| Parameter  | Symbol     | Conditions   | MBR12045CT (R) | MBR12060CT (R) | MBR12080CT (R) | MBR120100CT (R) | Unit             |
|--|------------|--|----------------|----------------|----------------|-----------------|------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |  | 45             | 60             | 80             | 100             | V                |
| RMS reverse voltage                                  | $V_{RMS}$  |  | 32             | 42             | 56             | 70              | V                |
| DC blocking voltage                                  | $V_{DC}$   |  | 45             | 60             | 80             | 100             | V                |
| Continuous forward current                           | $I_F$      | $T_C \leq 140\text{ }^\circ\text{C}$                     | 120            | 120            | 120            | 120             | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$ | 800            | 800            | 800            | 800             | A                |
| Operating temperature                                | $T_j$      |  | -40 to 175     | -40 to 175     | -40 to 175     | -40 to 175      | $^\circ\text{C}$ |
| Storage temperature                                  | $T_{stg}$  |  | -40 to 175     | -40 to 175     | -40 to 175     | -40 to 175      | $^\circ\text{C}$ |

**Electrical characteristics, at  $T_j = 25\text{ }^\circ\text{C}$ , unless otherwise specified**

| Parameter             | Symbol | Conditions  | MBR12045CT (R) | MBR12060CT (R) | MBR12080CT (R) | MBR120100CT (R) | Unit |
|-----------------------|--------|---|----------------|----------------|----------------|-----------------|------|
| Diode forward voltage | $V_F$  | $I_F = 60\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$  | 0.65           | 0.75           | 0.84           | 0.84            | V    |
| Reverse current       | $I_R$  | $V_R = 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$  | 3              | 3              | 3              | 3               | mA   |
|                       |        | $V_R = 20\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$ | 200            | 200            | 200            | 200             |      |

**Thermal characteristics**

|                                     |            |  |     |     |     |     |                    |
|-------------------------------------|------------|--|-----|-----|-----|-----|--------------------|
| Thermal resistance, junction - case | $R_{thJC}$ |  | 0.8 | 0.8 | 0.8 | 0.8 | $^\circ\text{C/W}$ |
|-------------------------------------|------------|--|-----|-----|-----|-----|--------------------|



