

# America Semiconductor



"In America Semi We Trust"

MANUFACTURER OF WORLD CLASS HIGH POWER SEMICONDUCTORS



## America Semiconductor

### Silicon Super Fast Recovery Diode

#### Features

- High Surge Capability
- Types up to 600 V  $V_{RRM}$

### MUR20005CT thru MU20020CTR

$V_{RRM} = 50\text{ V} - 600\text{ V}$

$I_F = 200\text{ A}$

Twin Tower Package



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

| Parameter                                            | Symbol     | Conditions                                       | MUR20005CT (R) | MUR20010CT (R) | MUR20020CT (R) | Unit             |
|------------------------------------------------------|------------|--------------------------------------------------|----------------|----------------|----------------|------------------|
| Repetitive peak reverse voltage                      | $V_{RRM}$  |                                                  | 50             | 100            | 200            | V                |
| RMS reverse voltage                                  | $V_{RMS}$  |                                                  | 35             | 70             | 140            | V                |
| DC blocking voltage                                  | $V_{DC}$   |                                                  | 50             | 100            | 200            | V                |
| Continuous forward current                           | $I_F$      | $T_C \leq 140^\circ\text{C}$                     | 200            | 200            | 200            | A                |
| Surge non-repetitive forward current, Half Sine Wave | $I_{F,SM}$ | $T_C = 25^\circ\text{C}$ , $t_p = 8.3\text{ ms}$ | 800            | 800            | 800            | A                |
| Operating temperature                                | $T_J$      |                                                  | -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     | $^\circ\text{C}$ |

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

| Parameter                     | Symbol   | Conditions                                                                                        | MUR20005CT (R) | MUR20010CT (R) | MUR20020CT (R) | Unit                |
|-------------------------------|----------|---------------------------------------------------------------------------------------------------|----------------|----------------|----------------|---------------------|
| Diode forward voltage         | $V_F$    | $I_F = 100\text{ A}$ , $T_J = 25^\circ\text{C}$                                                   | 1.3            | 1.3            | 1.3            | V                   |
| Reverse current               | $I_R$    | $V_R = 50\text{ V}$ , $T_J = 25^\circ\text{C}$<br>$V_R = 50\text{ V}$ , $T_J = 125^\circ\text{C}$ | 25<br>1        | 25<br>1        | 25<br>1        | $\mu\text{A}$<br>mA |
| Recovery Time                 |          |                                                                                                   |                |                |                |                     |
| Maximum reverse recovery time | $T_{RR}$ | $I_F = 0.5\text{ A}$ , $I_R = 1.0\text{ A}$ ,<br>$I_{RR} = 0.25\text{ A}$                         | 75             | 75             | 75             | nS                  |



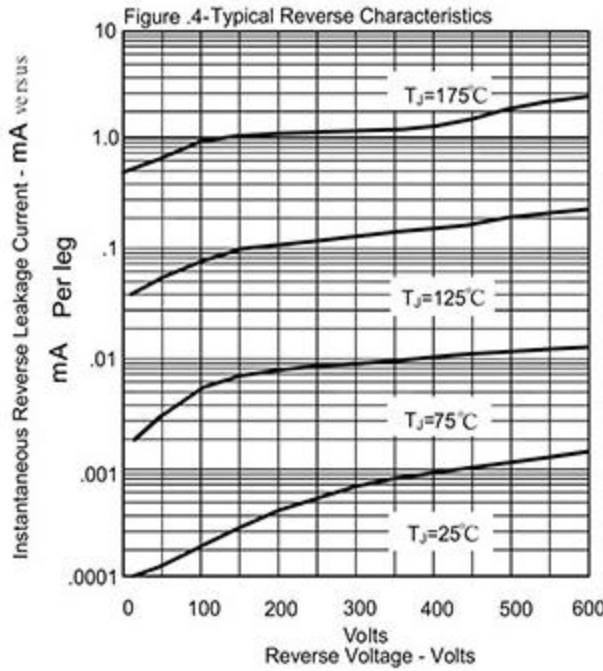
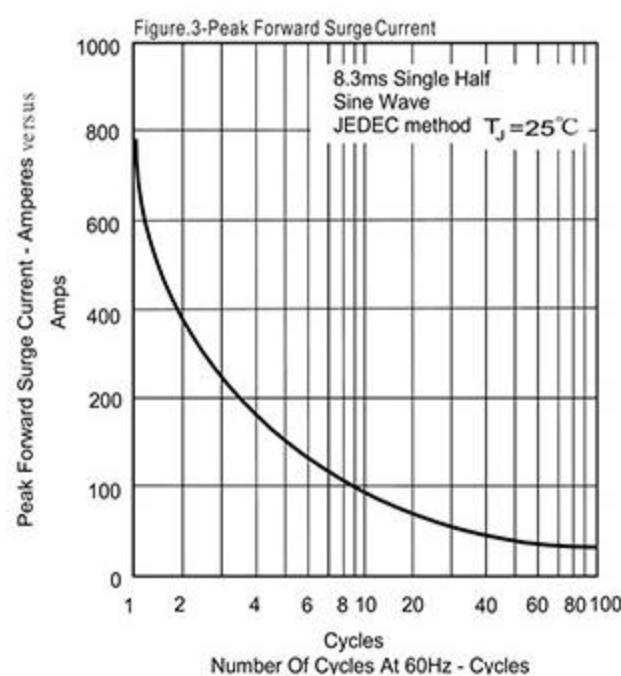
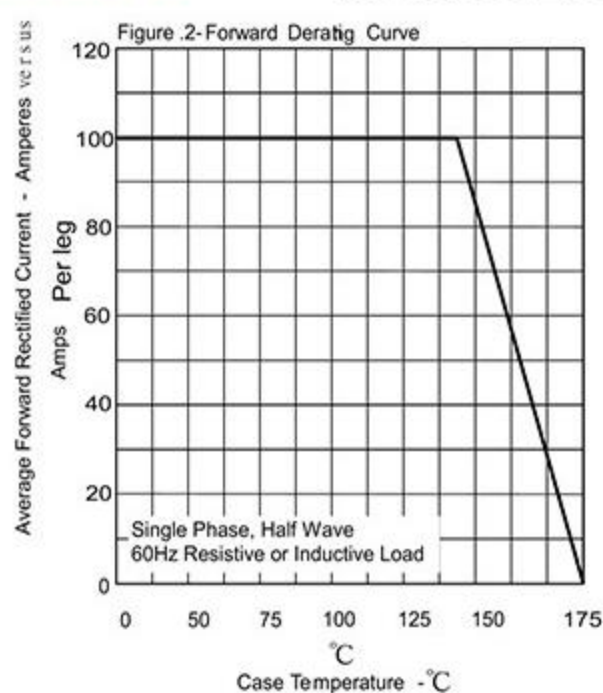
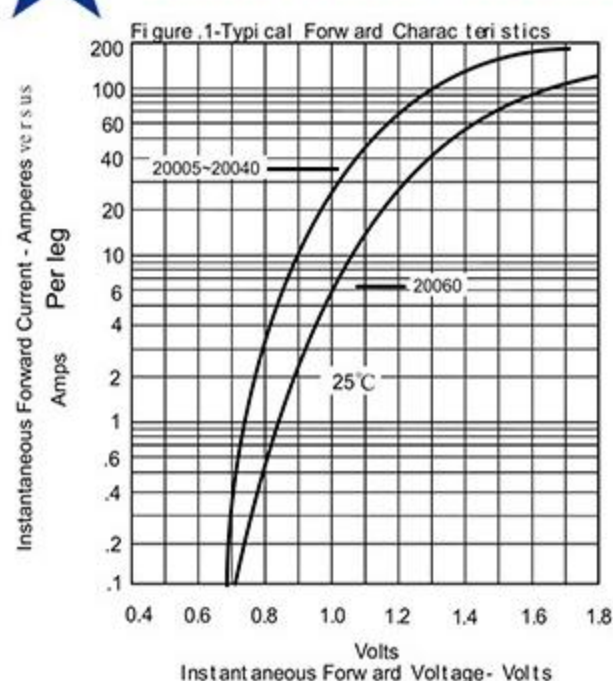
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### MUR20005CT thru MUR20020CTR



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