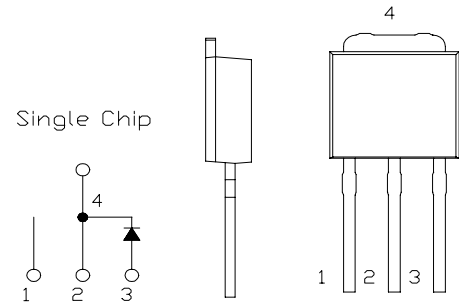


SBD Type : EA20QS09

OUTLINE DRAWING

FEATURES

- * TO-251AA Case
- * Low Forward Voltage drop
- * Low Power Loss
- * High Surge Capability
- * 40 Volts thru 100 Volts Types Available



Maximum Ratings

Approx Net Weight:0.35g

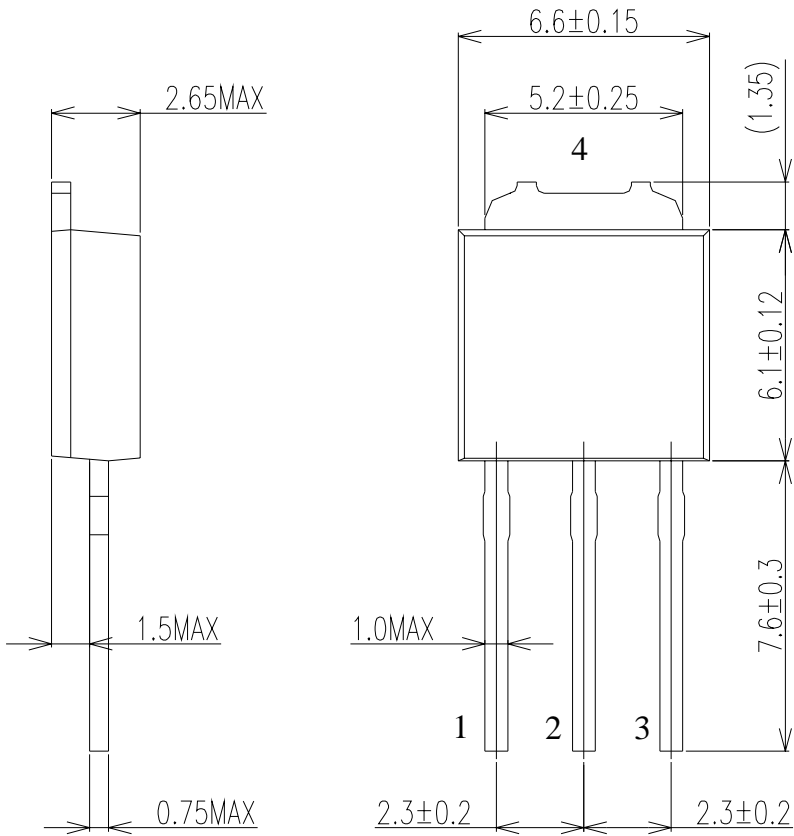
| Rating | | Symbol | EA20QS09 | | | Unit |
|--------------------------------------|---------------------|--------------|---------------|---|------------------------------------|-------------|
| Repetitive Peak Reverse Voltage | | V_{RRM} | 90 | | | V |
| Average Rectified Output Current | P.C.Board mounted * | I_O | 1.7 | $T_a=32^{\circ}C$ | 50Hz Half Sine Wave Resistive Load | A |
| | - | | 1.7 | $T_c=139^{\circ}C$ | | |
| RMS Forward Current | | $I_{F(RMS)}$ | 2.67 | | | A |
| Surge Forward Current | | I_{FSM} | 40 | 50Hz Half Sine Wave, 1cycle, Non-repetitive | | A |
| Operating Junction Temperature Range | | T_{jw} | - 40 to + 150 | | | $^{\circ}C$ |
| Storage Temperature Range | | T_{stg} | - 40 to + 150 | | | $^{\circ}C$ |

Electrical • Thermal Characteristics

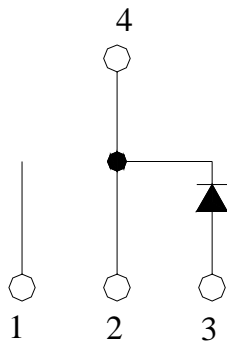
| Characteristics | | Symbol | Conditions | Min | Typ | Max | Unit |
|----------------------|---------------------|---------------|-----------------------------------|-----|-----|------|---------------|
| Peak Reverse Current | | I_{RM} | $T_j=25^{\circ}C, V_{RM}=V_{RRM}$ | - | - | 1.0 | mA |
| Peak Forward Voltage | | V_{FM} | $T_j=25^{\circ}C, I_{FM}= 2 A$ | - | - | 0.85 | V |
| Thermal Resistance | Junction to Ambient | $R_{th(j-a)}$ | P.C.Board mounted * | - | - | 80 | $^{\circ}C/W$ |
| | Junction to Case | $R_{th(j-c)}$ | - | - | - | 7 | $^{\circ}C/W$ |

* Print Land = 20x20 mm

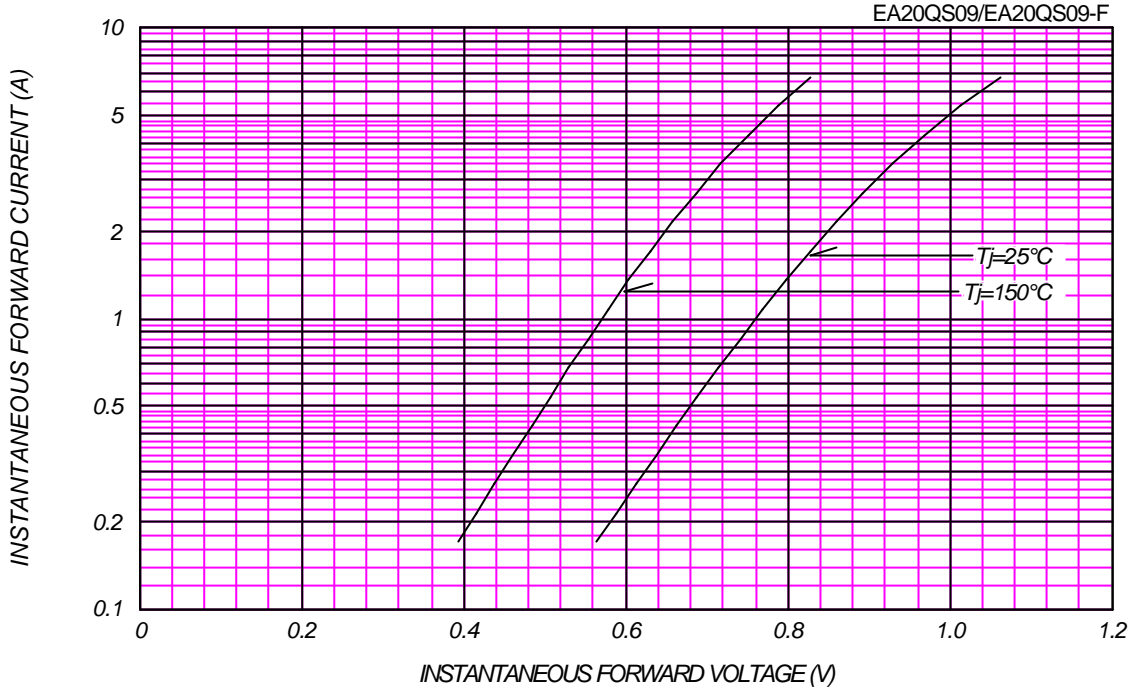
EA20QS09 OUTLINE DRAWING (Dimensions in mm)



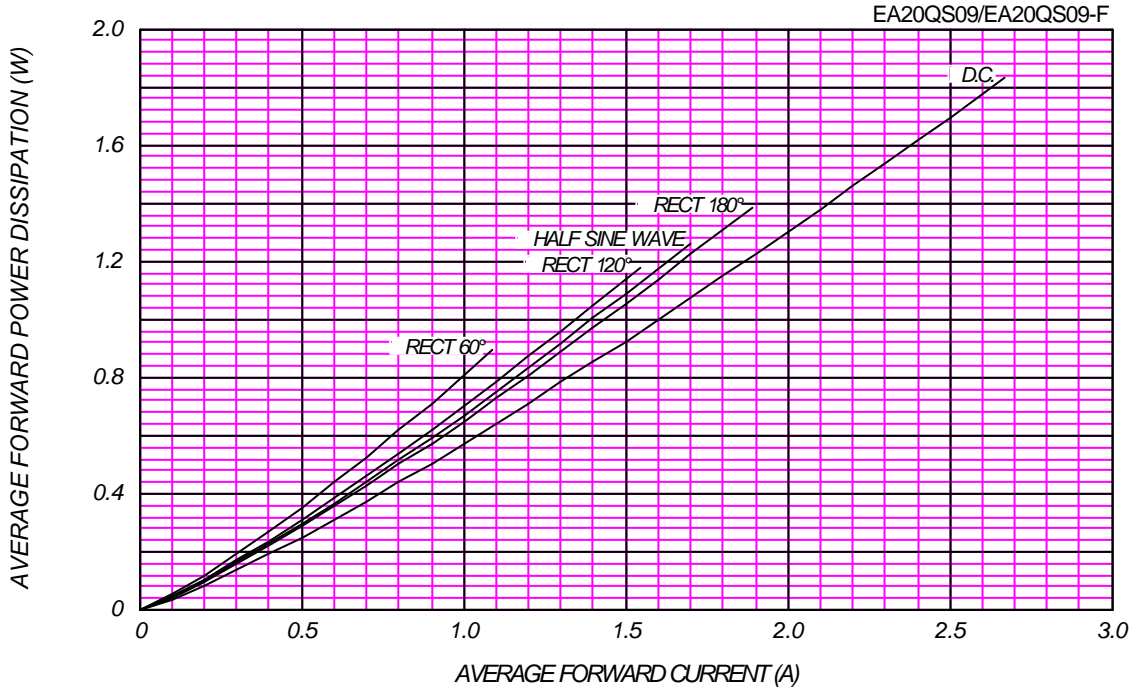
Single



FORWARD CURRENT VS. VOLTAGE



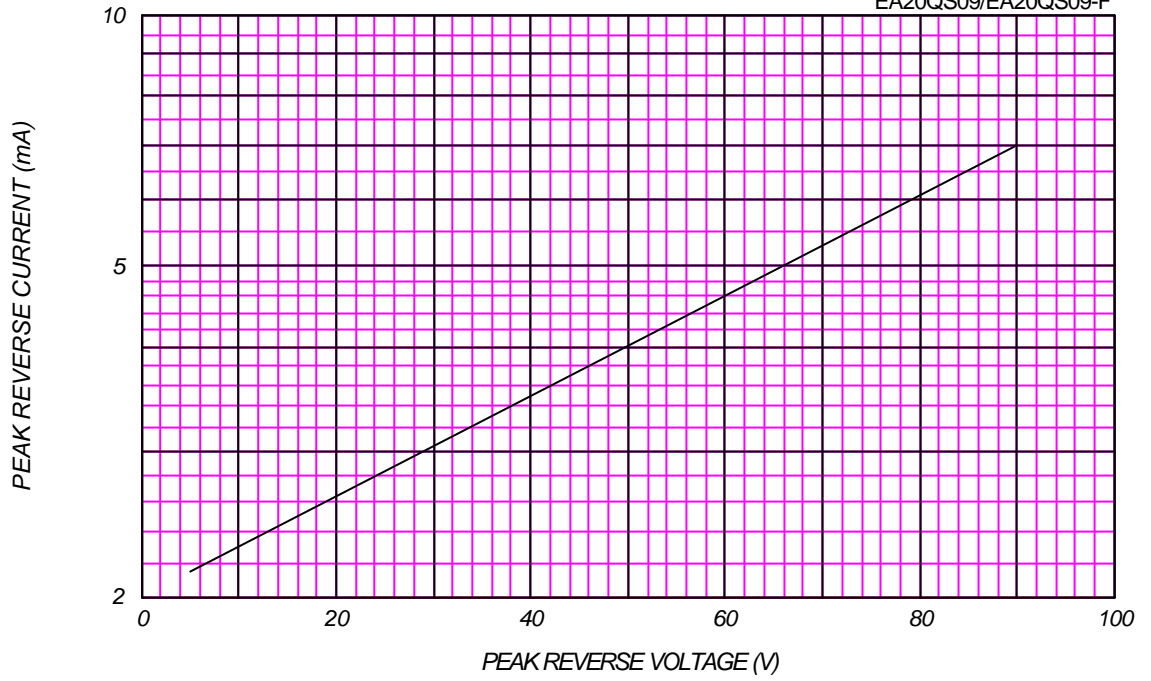
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

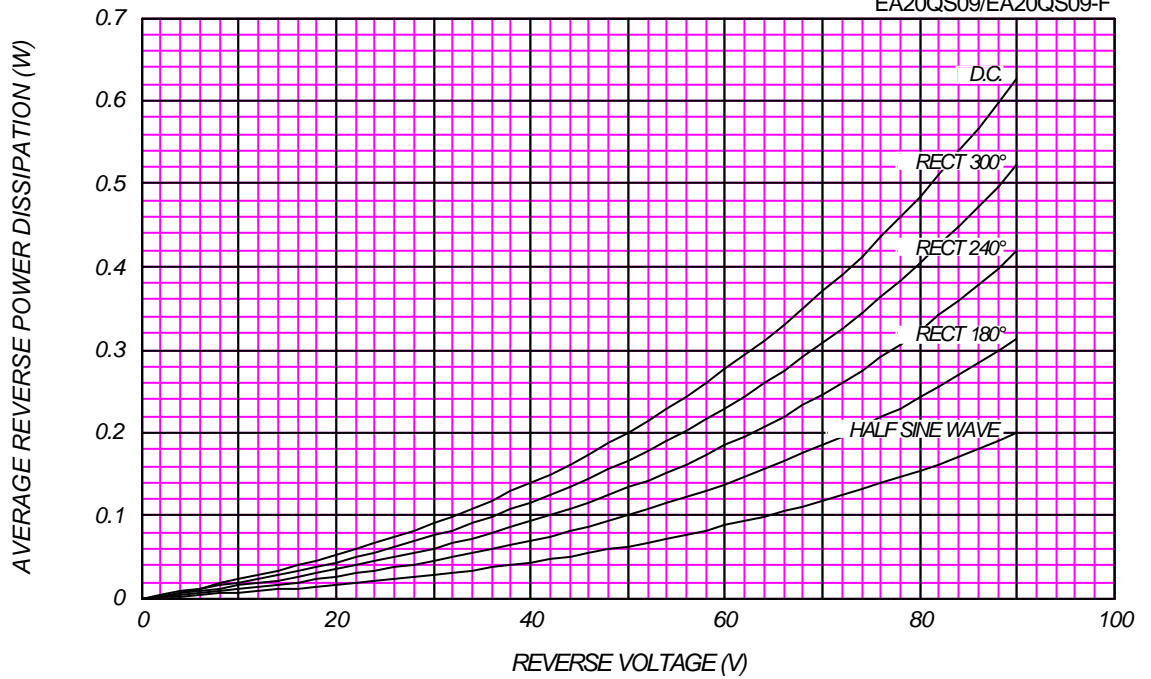
$T_j = 150\text{ }^\circ\text{C}$

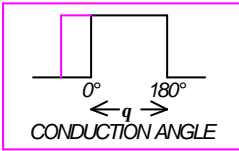
EA20QS09/EA20QS09-F



AVERAGE REVERSE POWER DISSIPATION

EA20QS09/EA20QS09-F

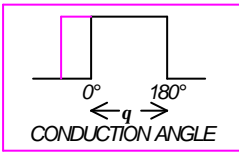
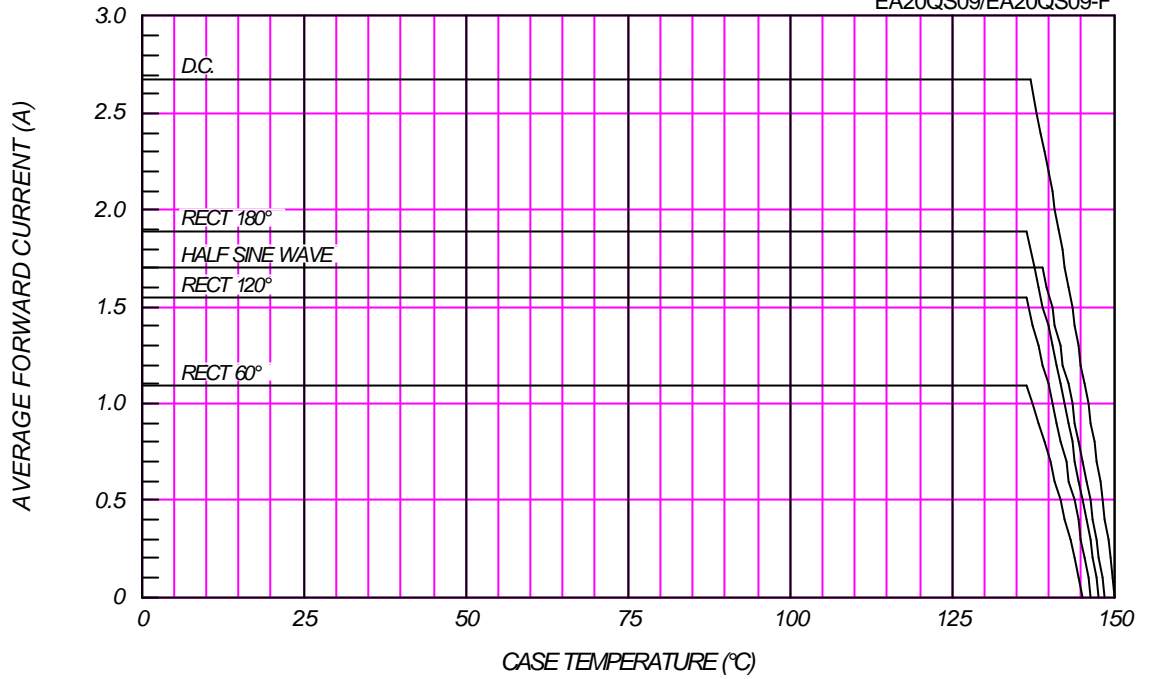




AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=90V$

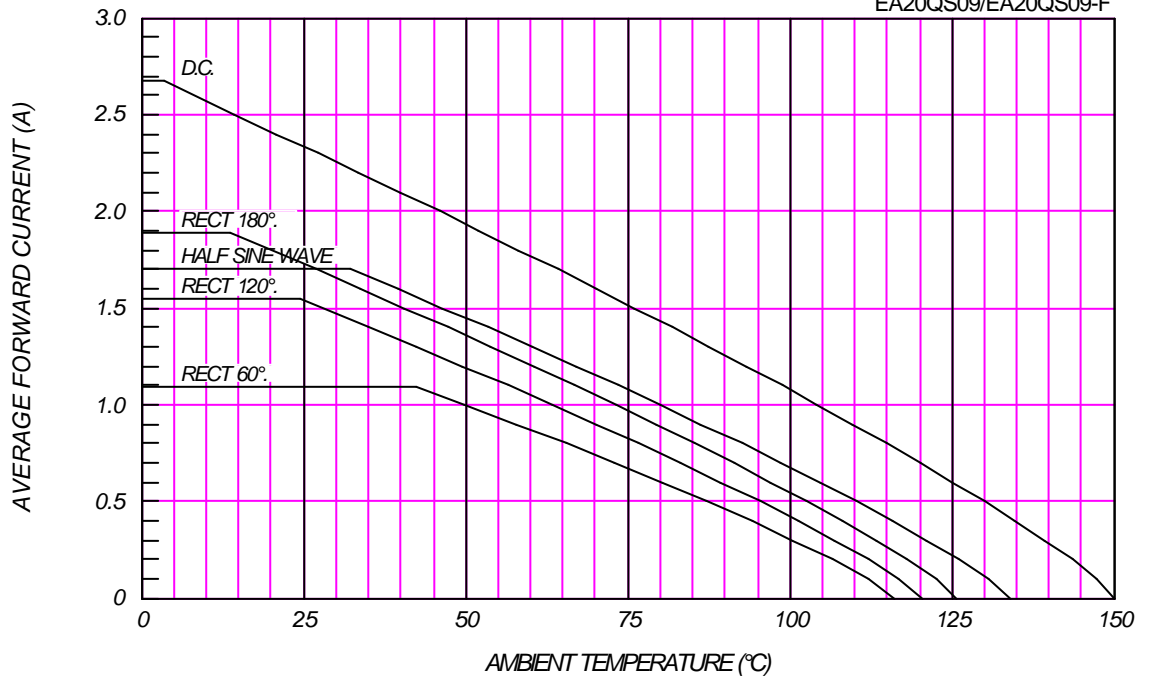
EA20QS09/EA20QS09-F



AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

P.C. Board mounted (Print land=20x20mm)

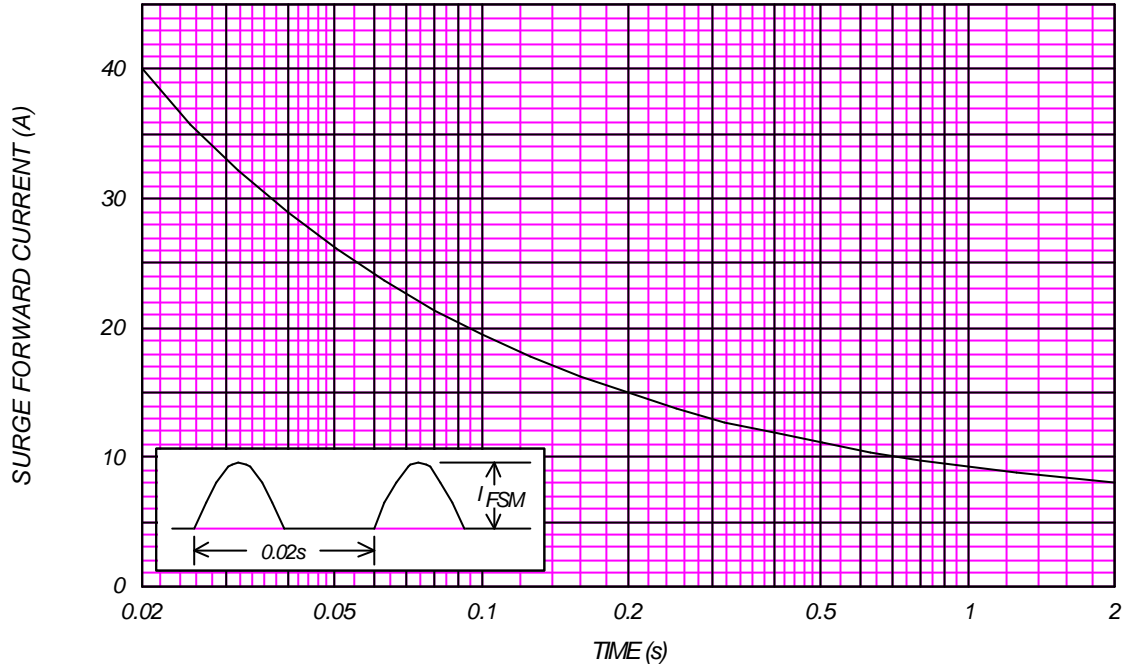
EA20QS09/EA20QS09-F



SURGE CURRENT RATINGS

f=50Hz,Sine Wave,Non-Repetitive,No Load

EA20QS09/EA20QS09-F



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

$T_j=25^\circ\text{C}, V_m=20\text{mV}_{RMS}, f=100\text{kHz}$, Typical Value

EA20QS09/EA20QS09-F

