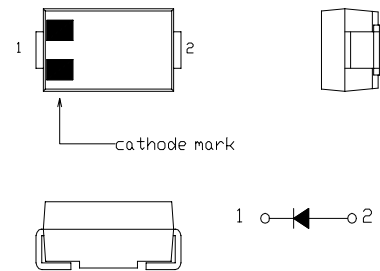


# SBD Type : EC21QS09

## FEATURES

- \* Miniature Size, Surface Mount Device
- \* Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability
- \* 0 Volts through 100Volts Types Available
- \* Packaged in 12mm Tape and Reel
- \* Not Rolling During Assembly

## OUTLINE DRAWING



## Maximum Ratings

Approx Net Weight: 0.06g

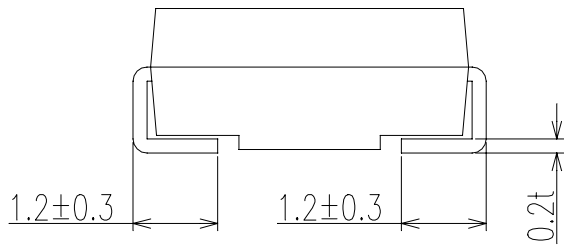
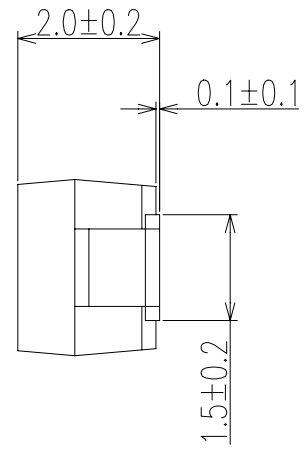
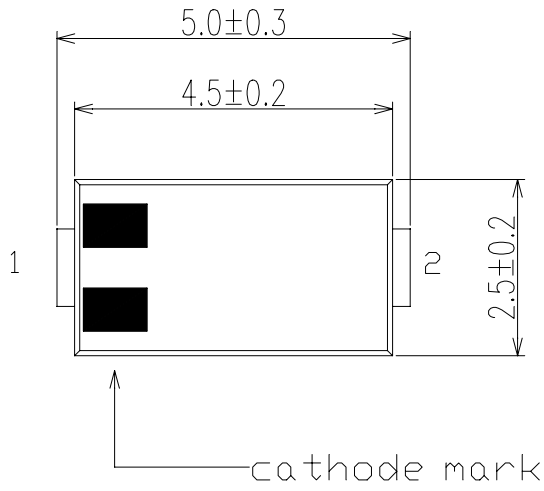
Rating	Symbol	EC21QS09			Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	90			V
Average Rectified Output Current	$I_o$	1.3	$T_a=29\text{ }^\circ\text{C}$ *1	50Hz Half Sine	A
		2.0	$T_l=107\text{ }^\circ\text{C}$	Wave Resistive Load	
RMS Forward Current	$I_{F(RMS)}$	3.14			A
Surge Forward Current	$I_{FSM}$	50	50Hz Half Sine Wave, 1cycle Non-repetitive		A
Operating Junction Temperature Range	$T_{jw}$	-40 to +150			$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-40 to +150			$^\circ\text{C}$

## Electrical • Thermal Characteristics

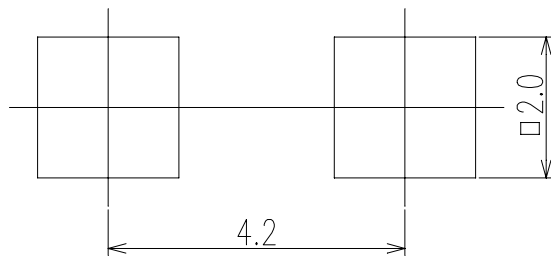
Characteristics		Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current		$I_{RM}$	$T_j=25\text{ }^\circ\text{C}$ , $V_{RM}=V_{RRM}$	-	-	1	mA
Peak Forward Voltage		$V_{FM}$	$T_j=25\text{ }^\circ\text{C}$ , $I_{FM}=2.0\text{A}$	-	-	0.85	V
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	Alumina Substrate Mounted *1	-	-	108	$^\circ\text{C}/\text{W}$
	Junction to Lead	$R_{th(j-l)}$	-	-	-	23	

\*1 Alumina Substrate Mounted (Soldering Lands=2x2mm, Both Sides)  
( $T_l$ : Lead Temperature)

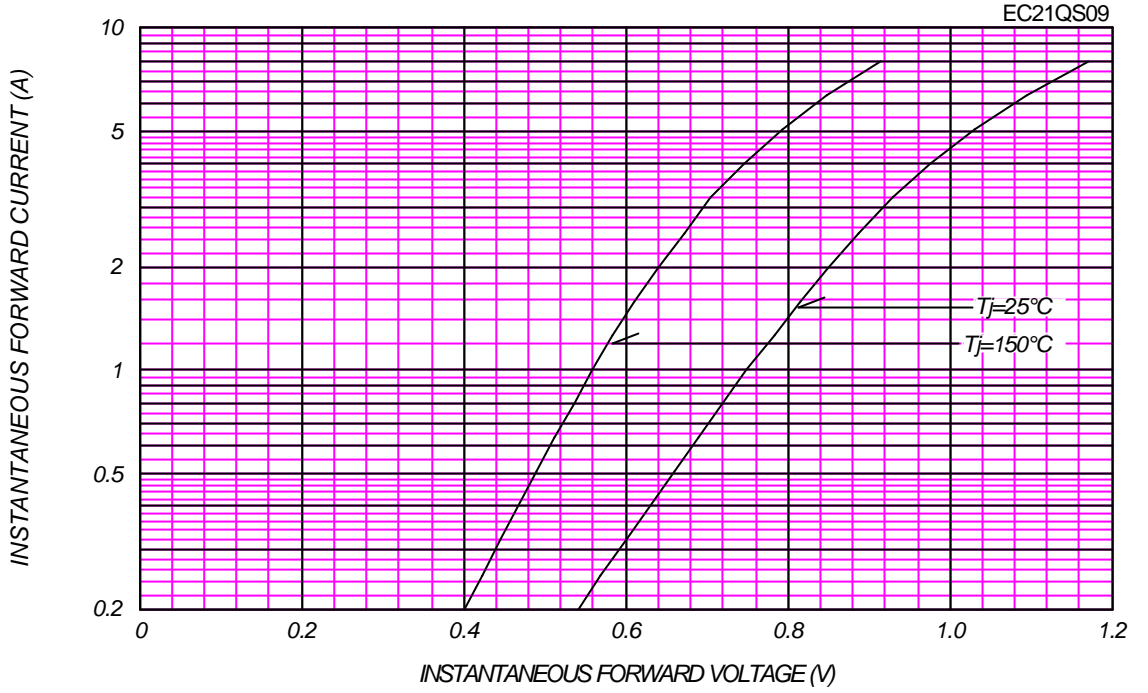
EC21QS\_ OUTLINE DRAWING (Dimensions in mm)



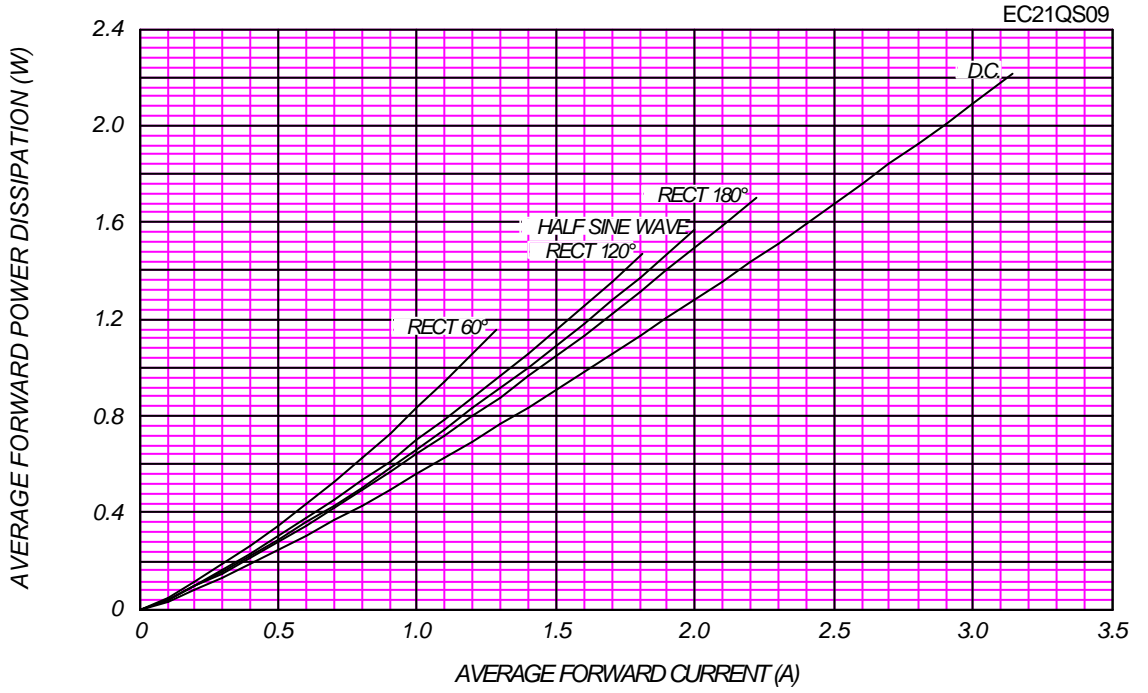
soldering pad



FORWARD CURRENT VS. VOLTAGE



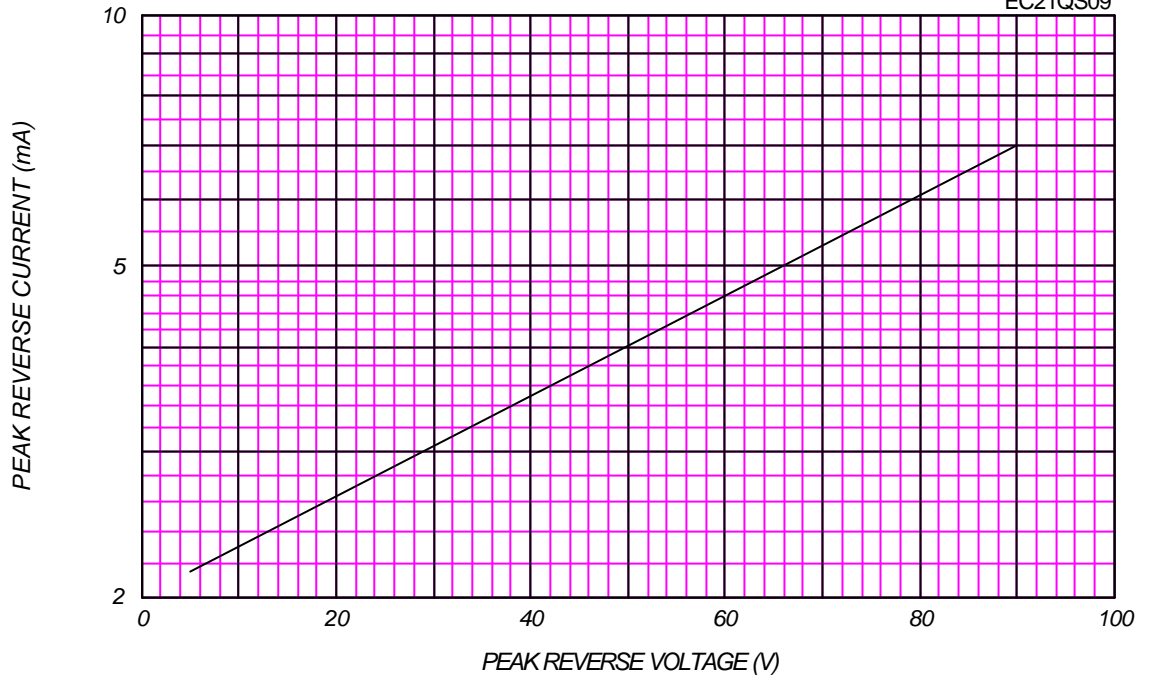
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

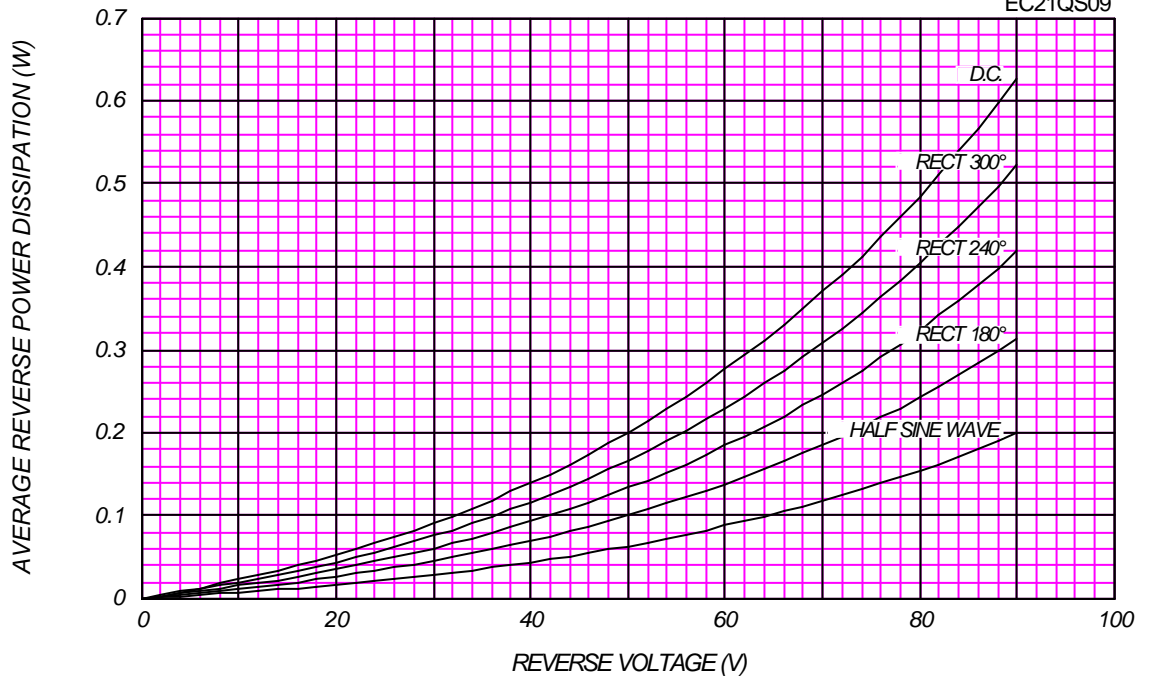
T<sub>j</sub> = 150 °C

EC21QS09



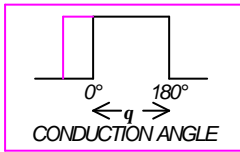
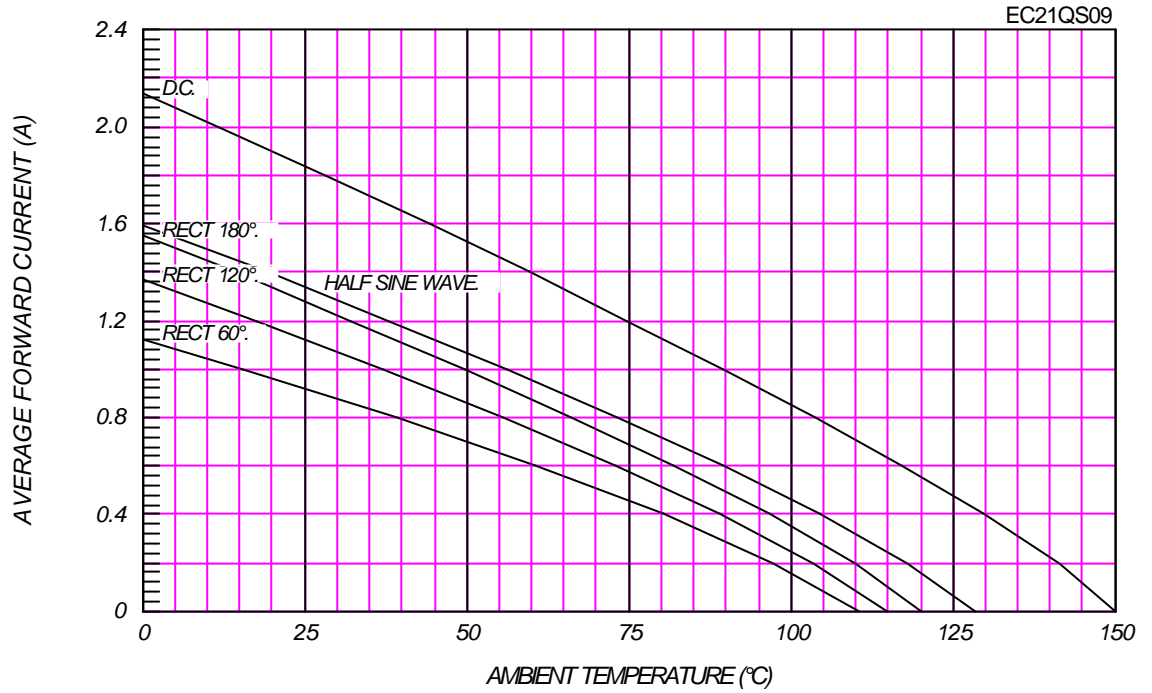
AVERAGE REVERSE POWER DISSIPATION

EC21QS09



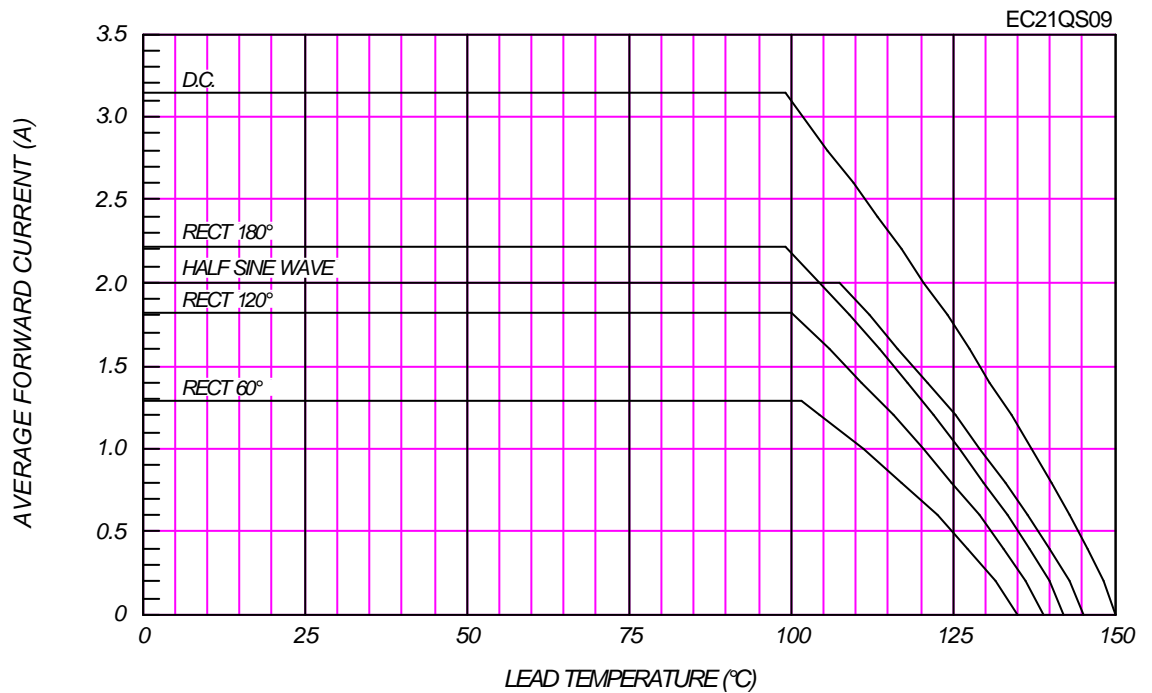


**AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE**  
 Alumina Substrate Mounted (Soldering Land = 2x2 mm),  $V_{RM} = 90V$



**AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE**

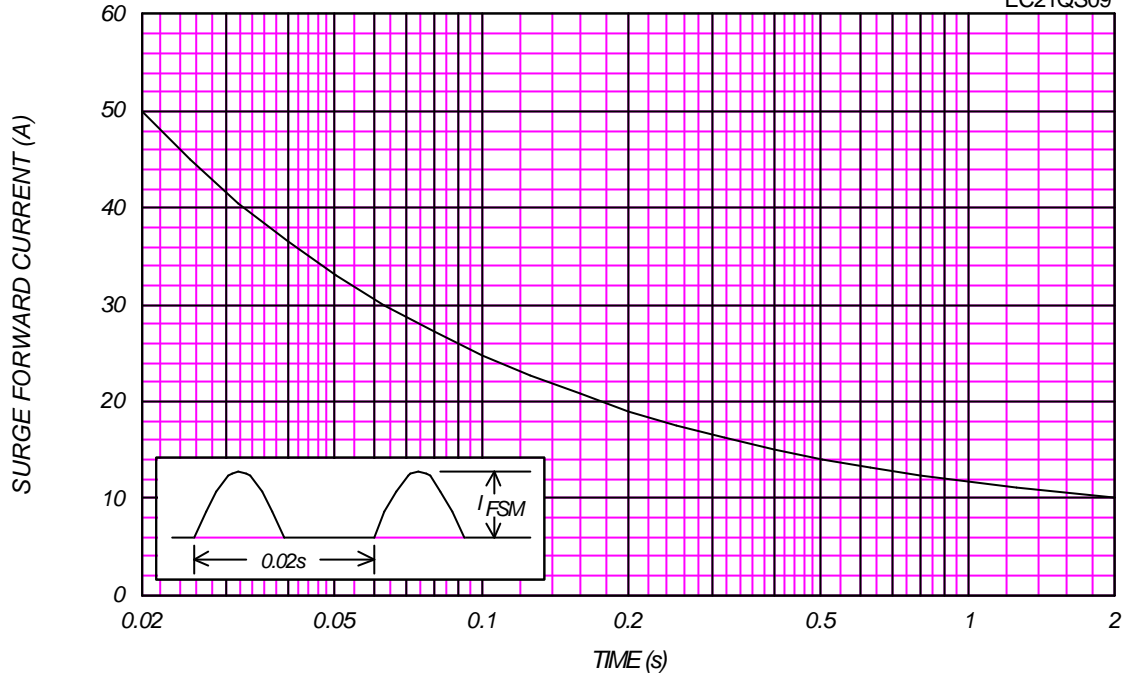
$V_{RM} = 90V$



### SURGE CURRENT RATINGS

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

EC21QS09



### JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

EC21QS09

