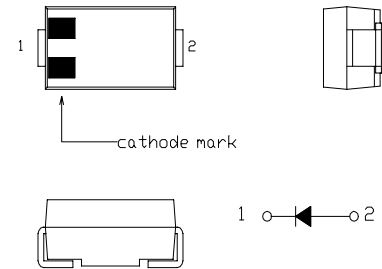


SBD Type : EC21QS09

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

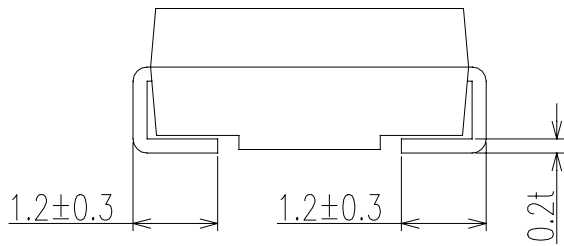
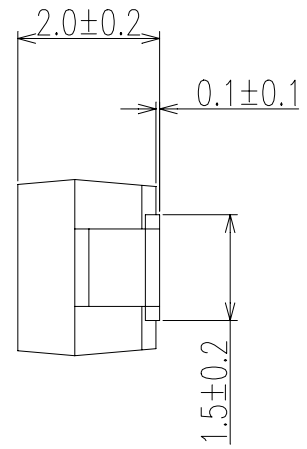
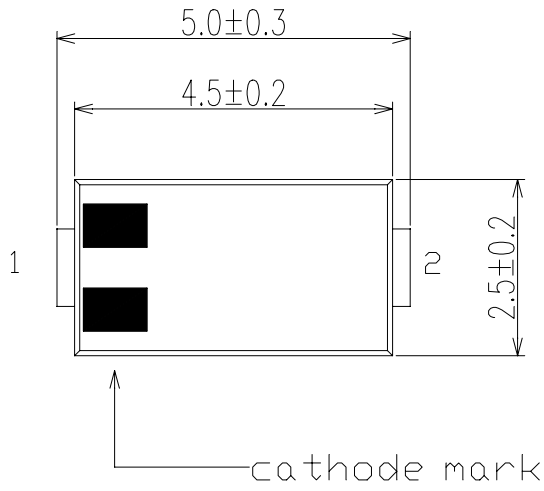
Rating	Symbol	EC21QS09			Unit
Repetitive Peak Reverse Voltage	V_{RRM}	90			V
Average Rectified Output Current	I_o	1.3	$T_a=29\text{ }^\circ\text{C}$ *1	50Hz Half Sine	A
		2.0	$T_l=107\text{ }^\circ\text{C}$	Wave Resistive Load	
RMS Forward Current	$I_{F(RMS)}$	3.14			A
Surge Forward Current	I_{FSM}	50	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

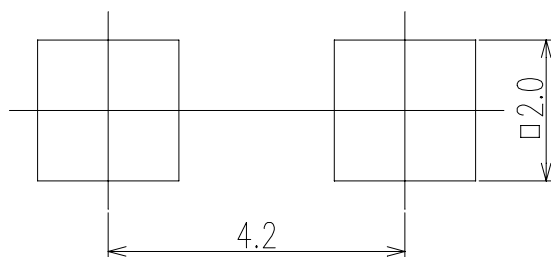
Characteristics		Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current		I_{RM}	$T_j=25\text{ }^\circ\text{C}$, $V_{RM}=V_{RRM}$	-	-	1	mA
Peak Forward Voltage		V_{FM}	$T_j=25\text{ }^\circ\text{C}$, $I_{FM}=2.0\text{A}$	-	-	0.85	V
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	Alumina Substrate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

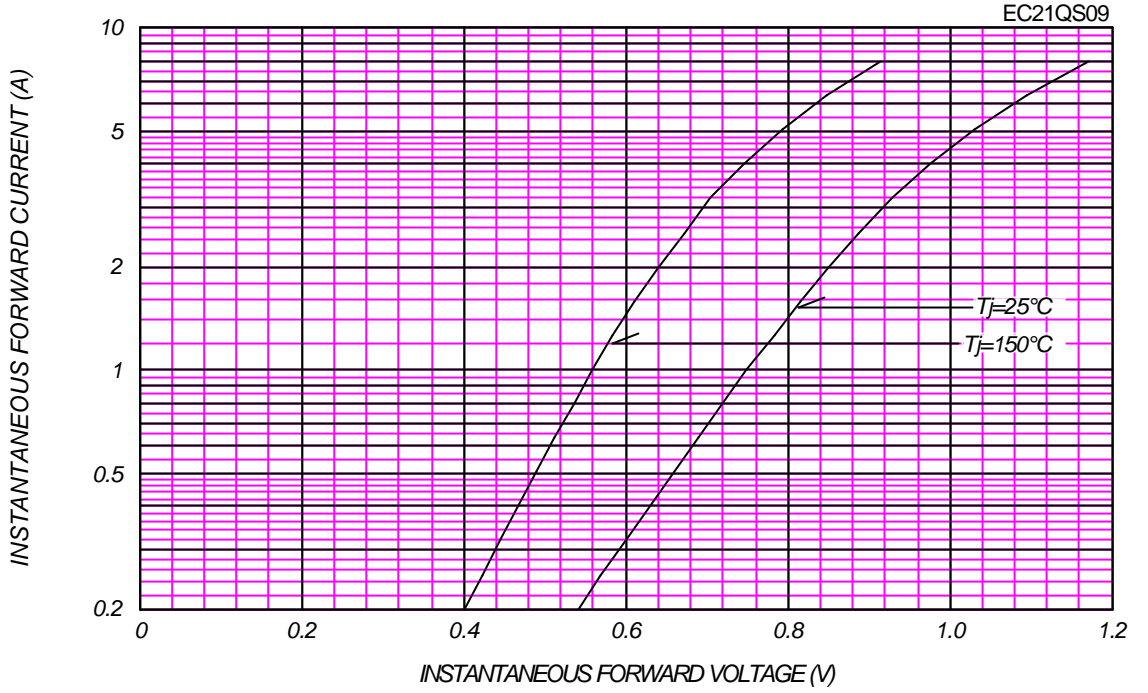
EC21QS_ OUTLINE DRAWING (Dimensions in mm)



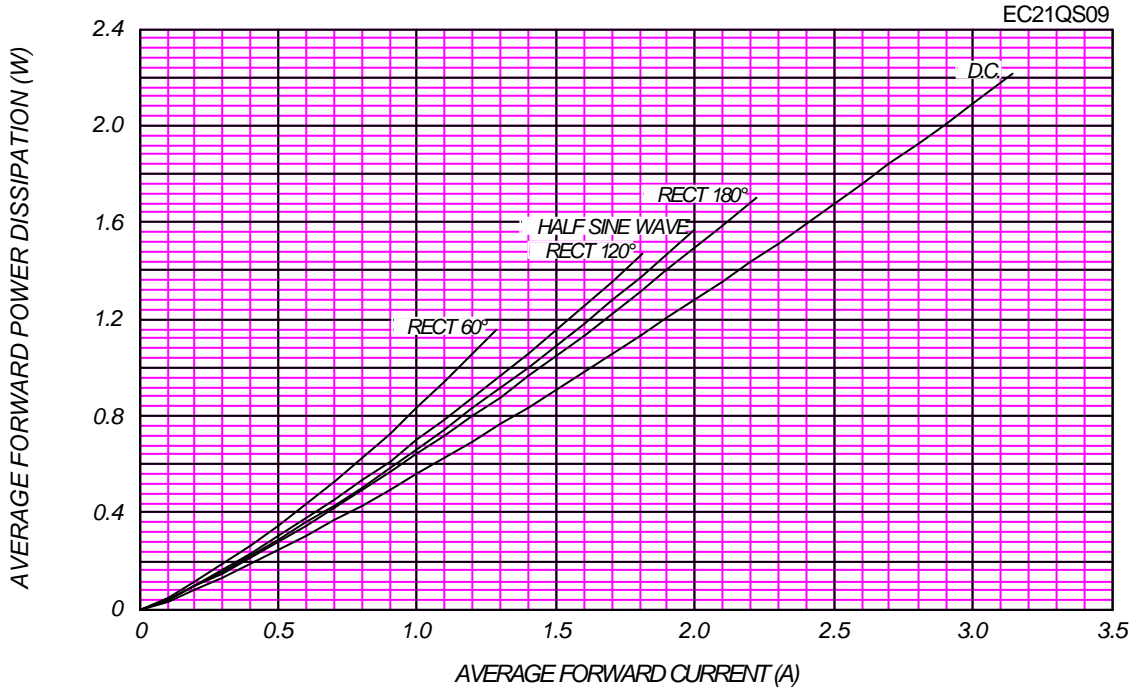
soldering pad



FORWARD CURRENT VS. VOLTAGE



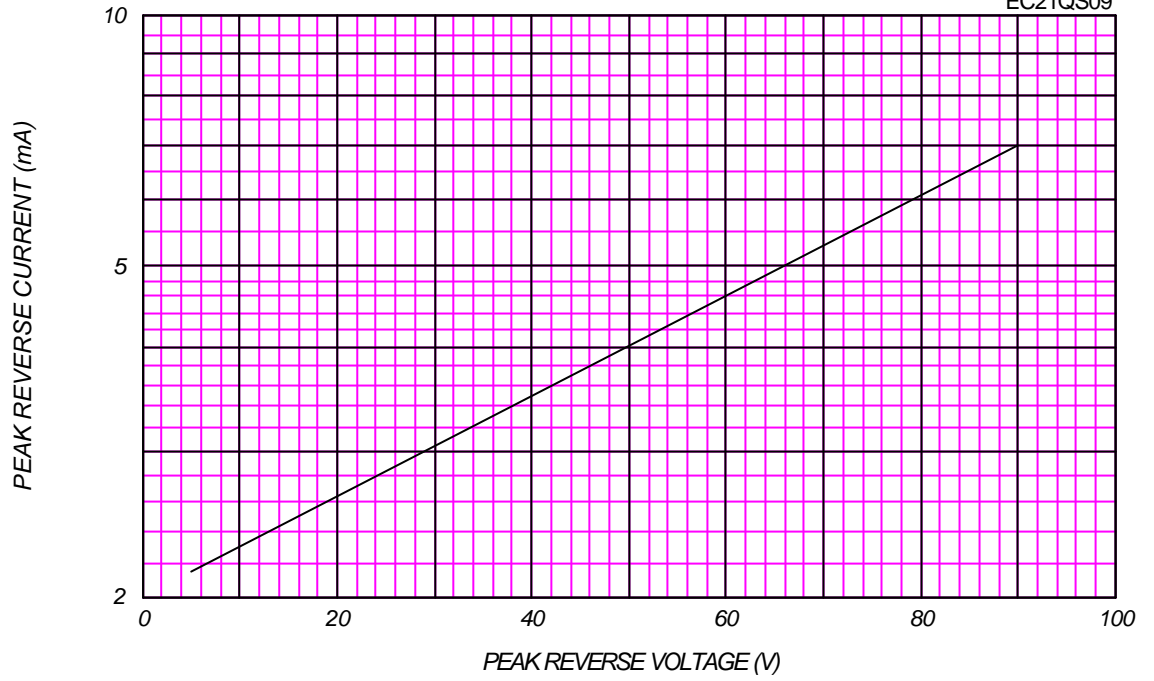
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

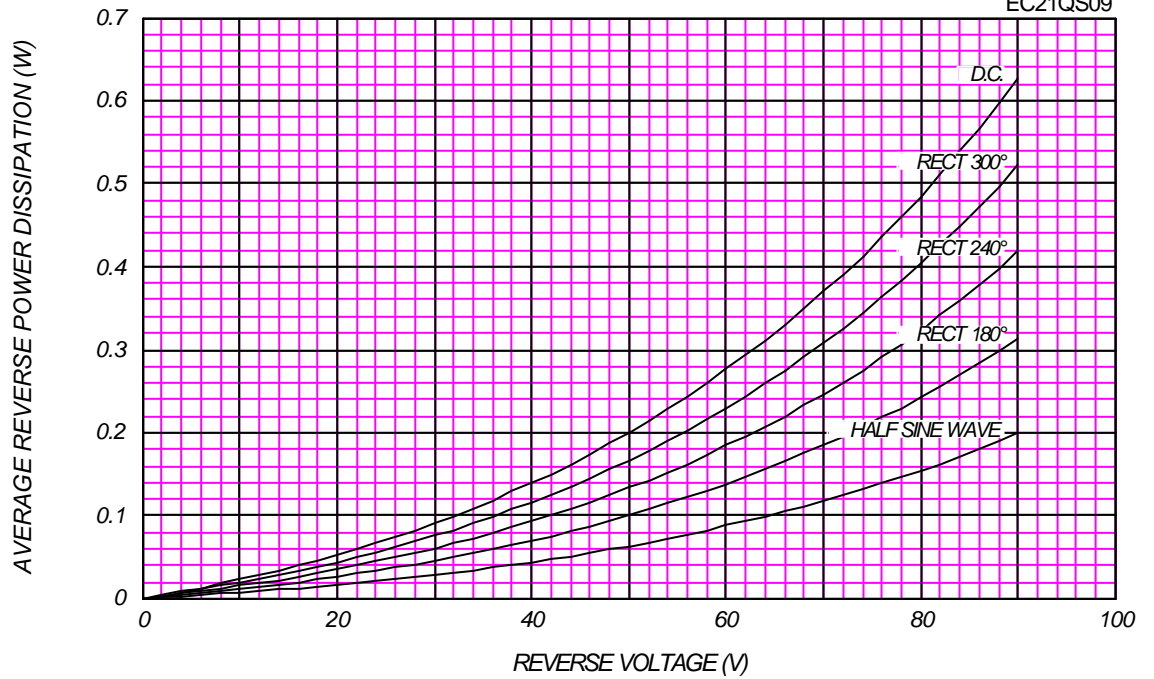
T_j = 150 °C

EC21QS09



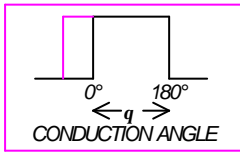
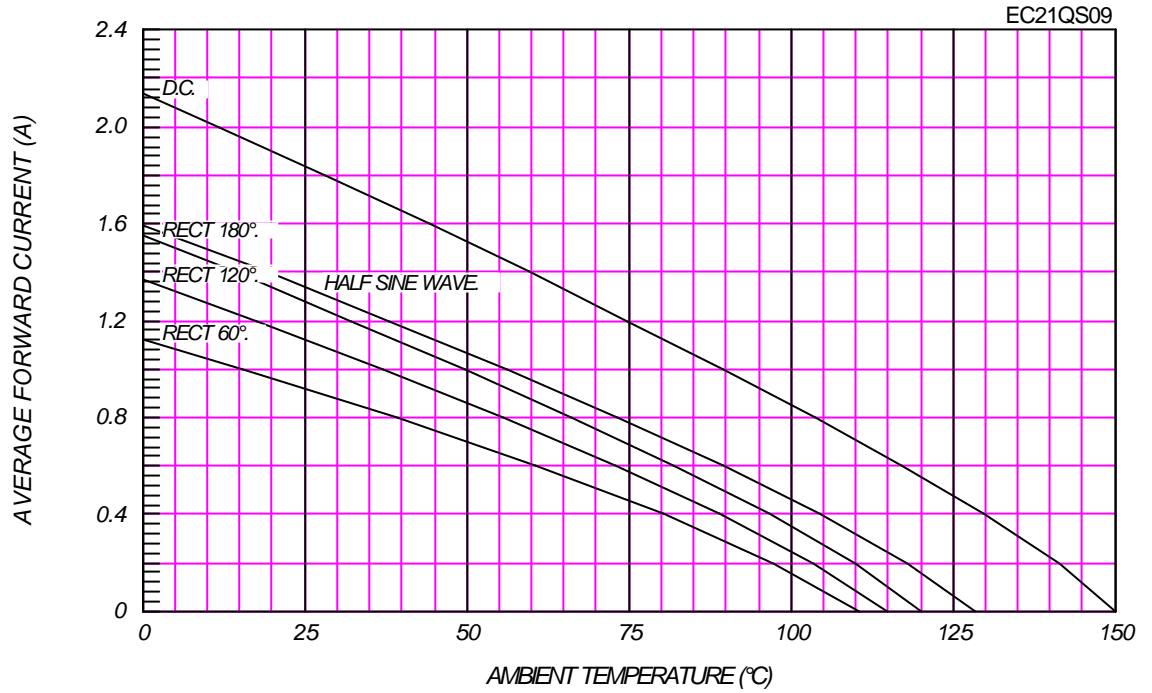
AVERAGE REVERSE POWER DISSIPATION

EC21QS09



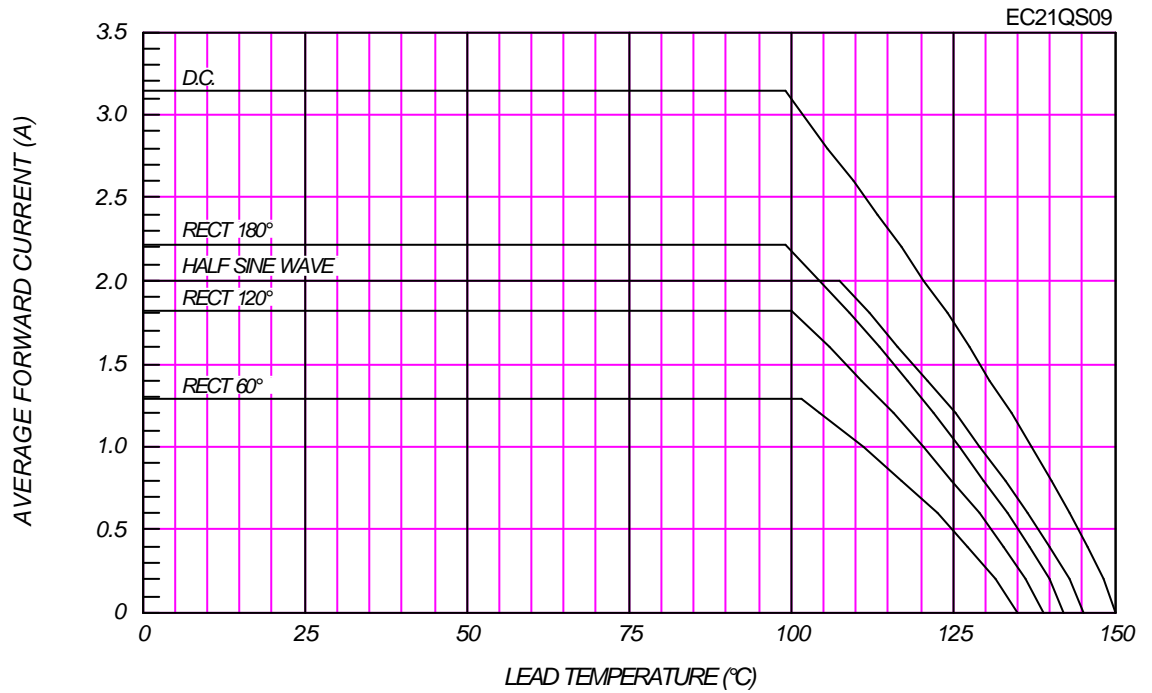


AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE
 Alumina Substrate Mounted (Soldering Land = 2×2 mm), $V_{RM} = 90$ V



AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

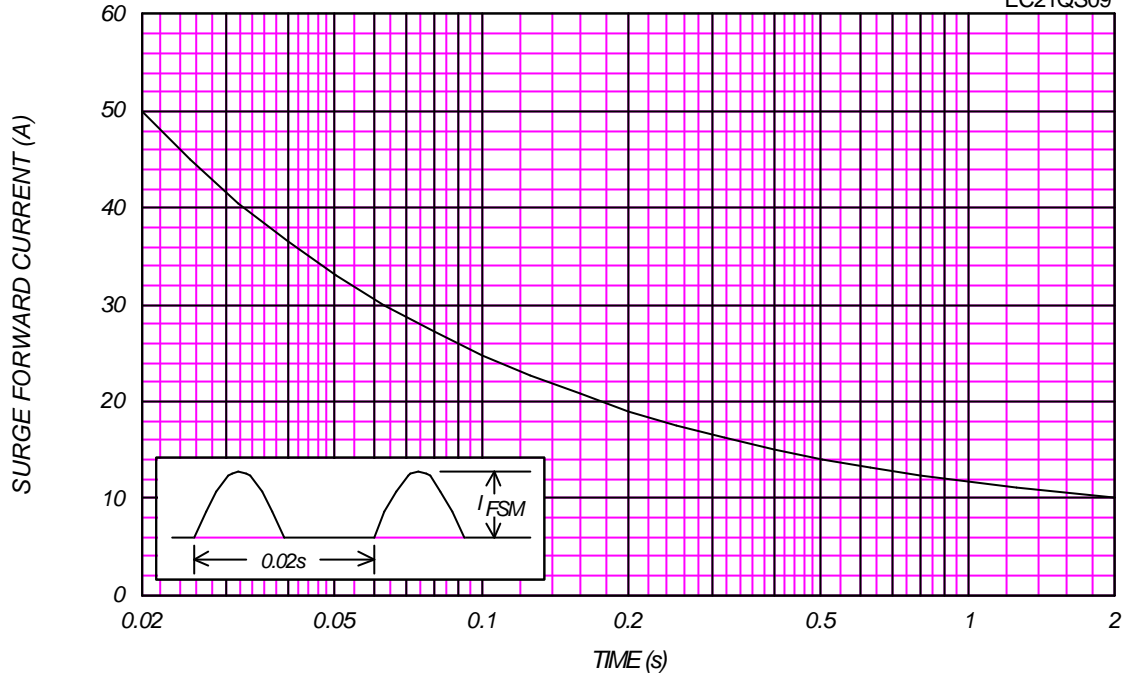
$V_{RM} = 90$ V



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

