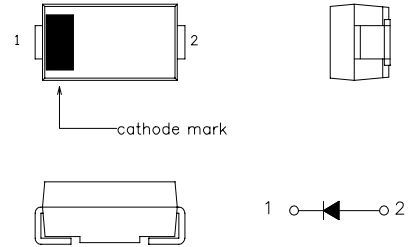


# SBD Type : EC10QS10

## FEATURES

- \* Miniature Size, Surface Mount Device
- \* Low Forward Voltage Drop
- \* Low Power Loss, High Efficiency
- \* High Surge Capability
- \* 30 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	EC10QS10		Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100		V
Average Rectified Output Current	$I_O$	0.89	Ta=25 °C *1	50Hz Half Sine Wave Resistive Load
		1.0	Ta=52 °C *2	
RMS Forward Current	$I_{F(RMS)}$	1.57		A
Surge Forward Current	$I_{FSM}$	20	50Hz Half Sine Wave, 1cycle Non-repetitive	A
Operating Junction Temperature Range	$T_{jw}$	-40 to +150		°C
Storage Temperature Range	$T_{stg}$	-40 to +150		°C

## Electrical • Thermal Characteristics

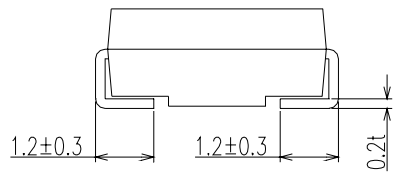
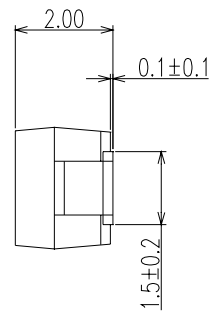
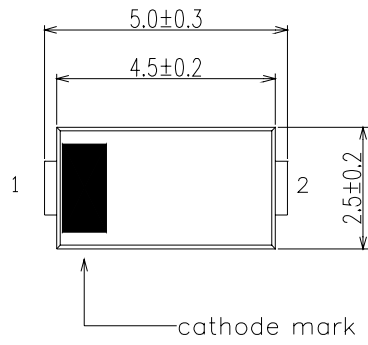
Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Peak Reverse Current	$I_{RM}$	$T_j = 25^\circ\text{C}, V_{RM} = V_{RRM}$	-	-	0.5	mA	
Peak Forward Voltage	$V_{FM}$	$T_j = 25^\circ\text{C}, I_{FM} = 1.0\text{A}$	-	-	0.85	V	
Thermal Resistance	$R_{th(j-a)}$	Junction to Ambient	*1	-	-	157	°C /W
			*2	-	-	108	

\*1 Glass Epoxy Substrate Mounted

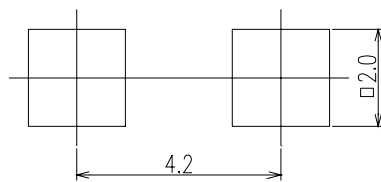
\*2 Alumina Substrate Mounted

Soldering Lands=2x2mm, Both Sides

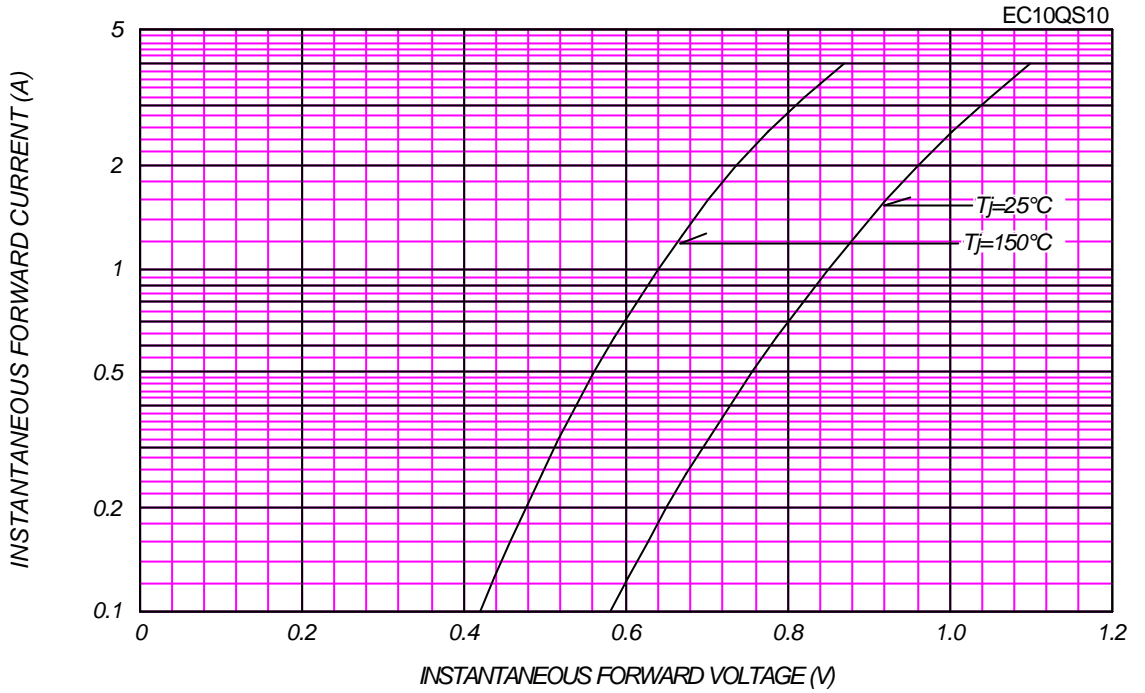
EC10QS10 OUTLINE DRAWING (Dimensions in mm)



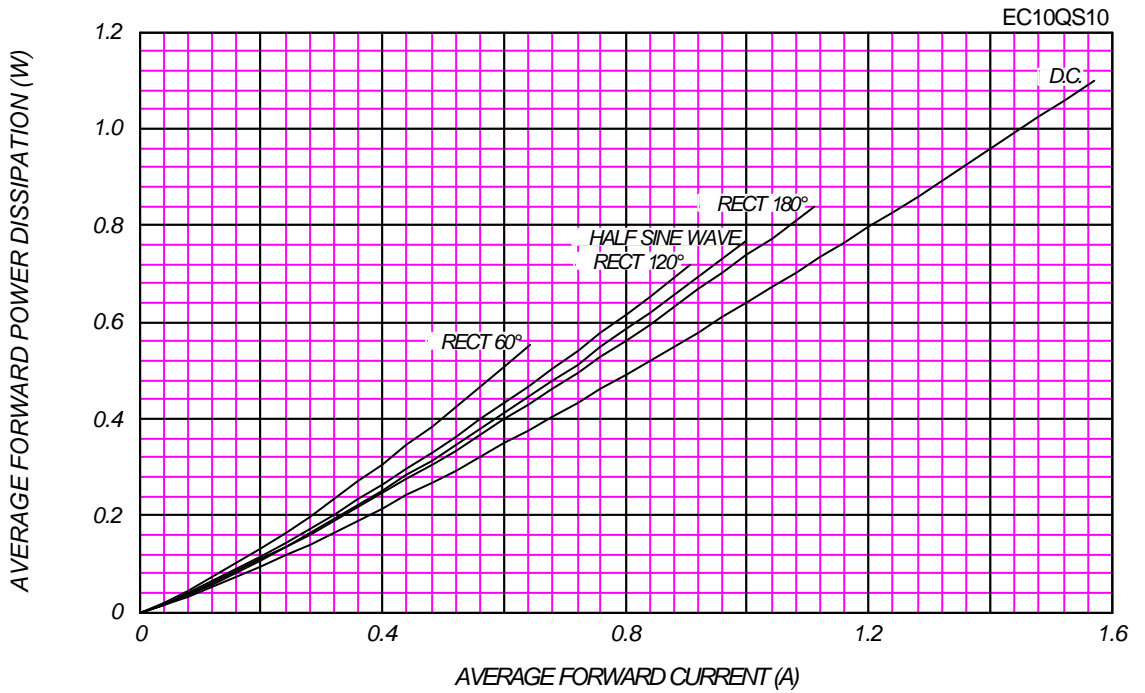
SOLDERING PAD



FORWARD CURRENT VS. VOLTAGE



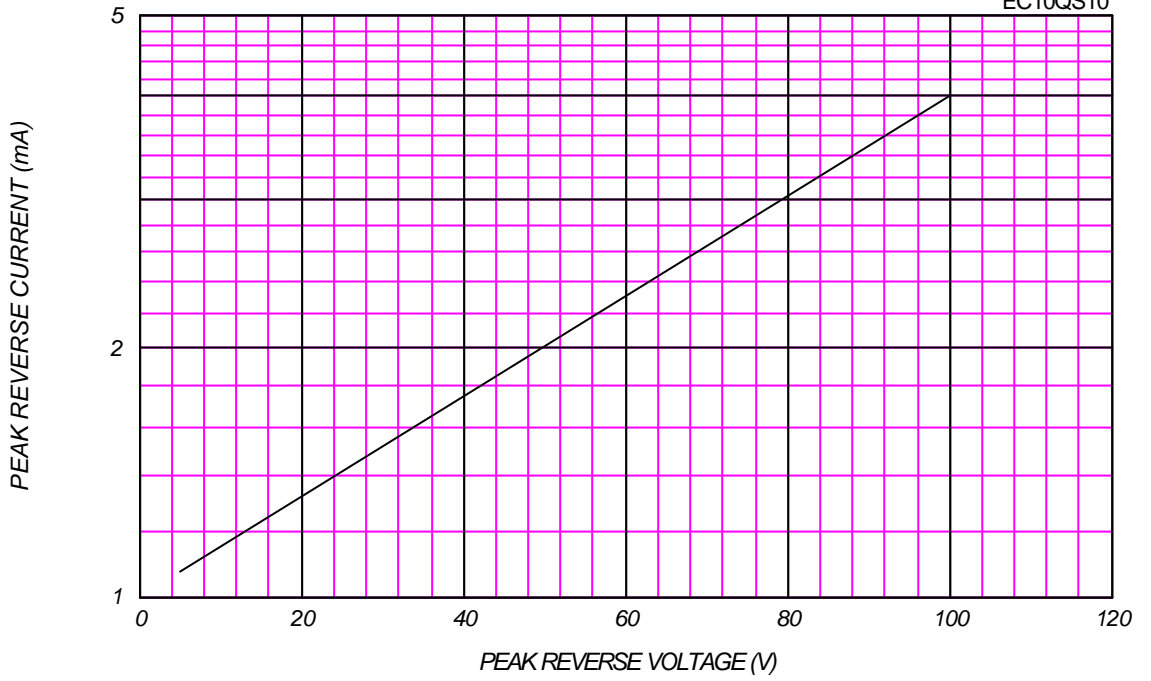
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

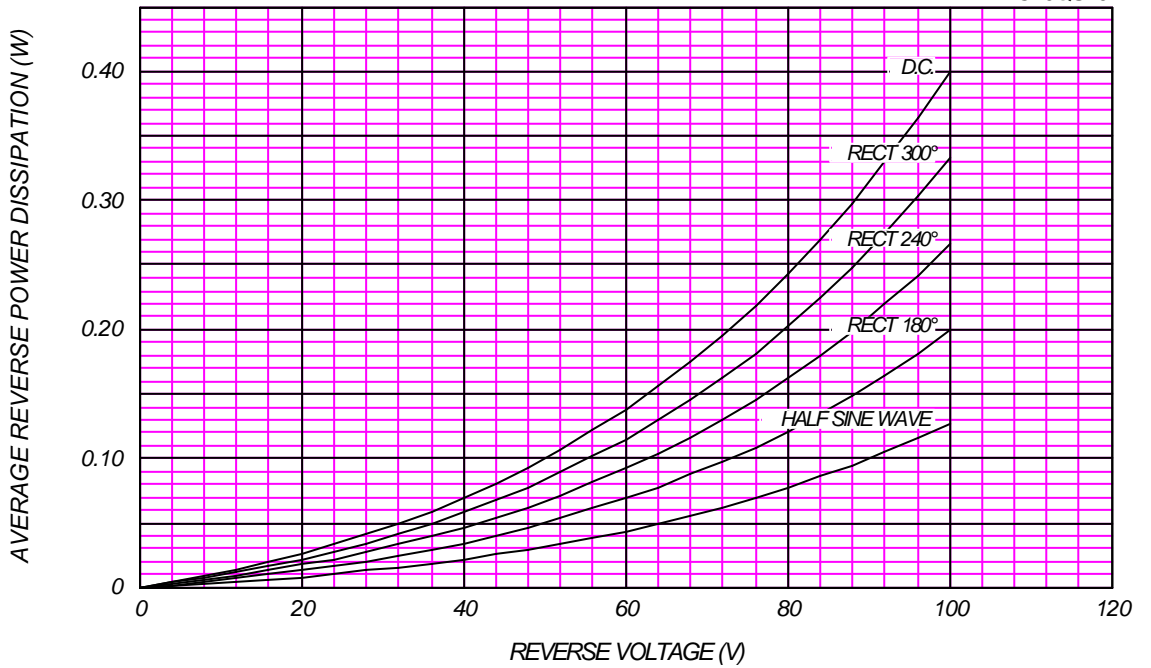
T<sub>j</sub> = 150 °C

EC10QS10



AVERAGE REVERSE POWER DISSIPATION

EC10QS10

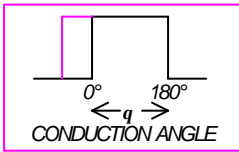
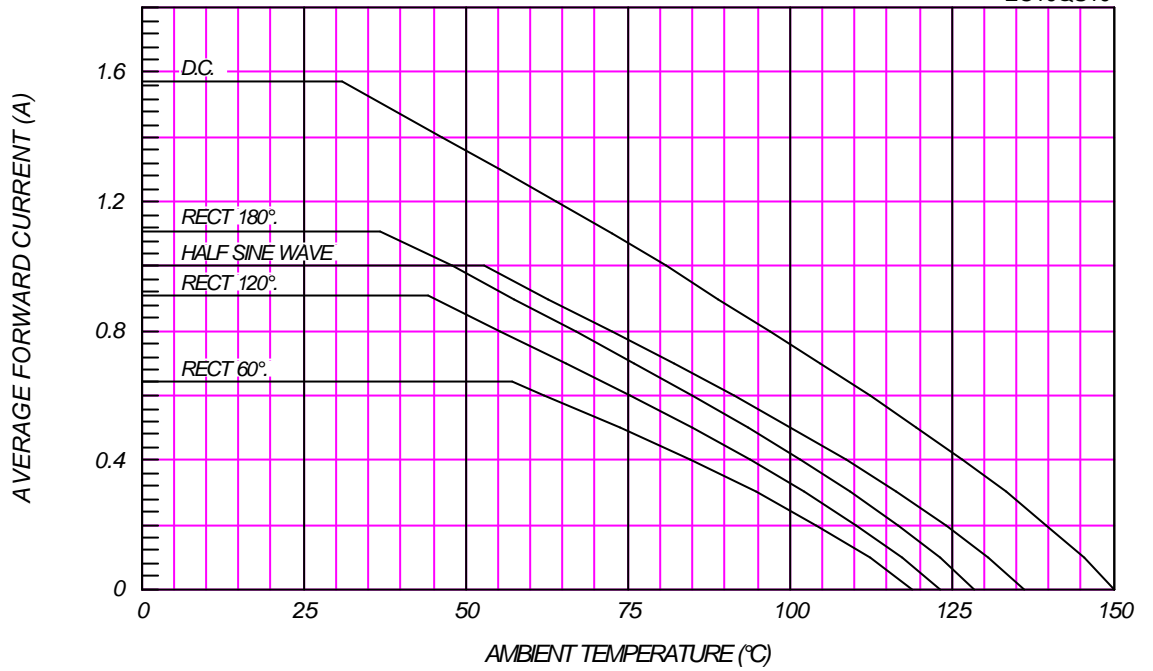




### AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Alumina Substrate Mounted (Land=2x2mm),  $V_{RM}=100V$

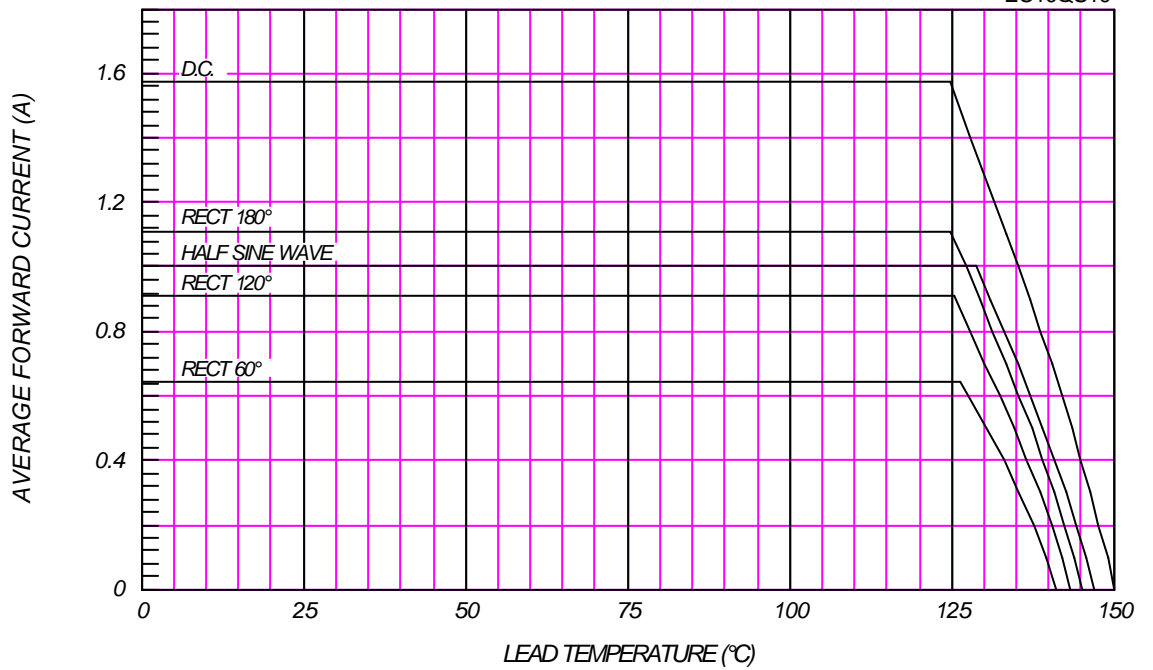
EC10QS10



### AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

$V_{RM}=100V$

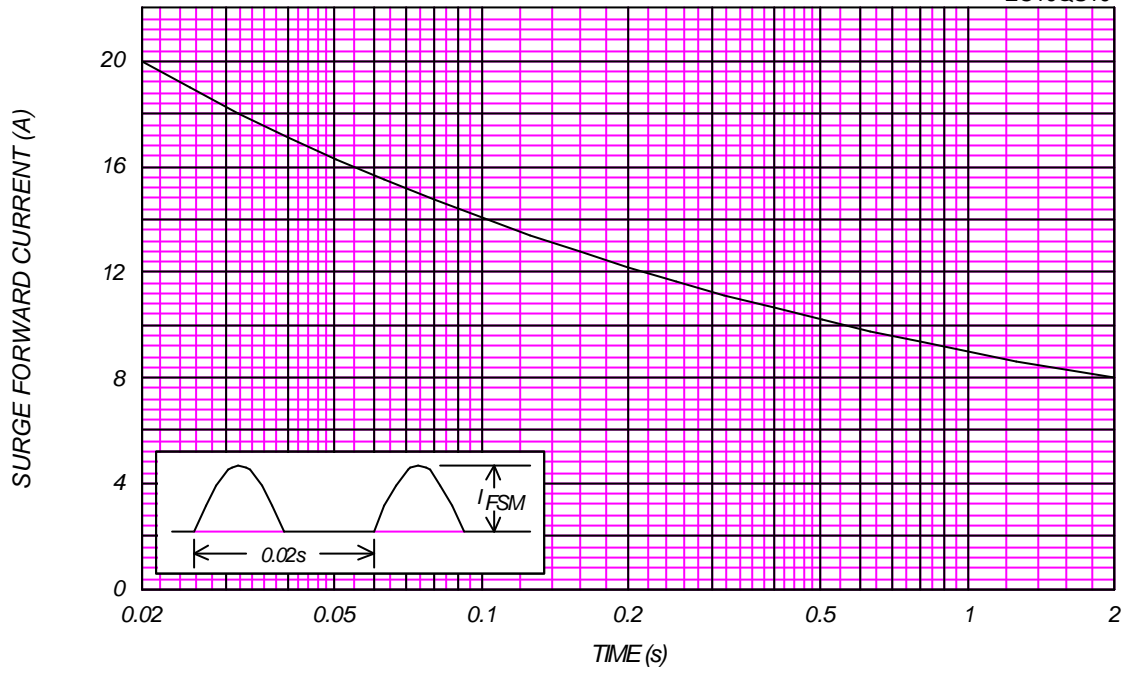
EC10QS10



### SURGE CURRENT RATINGS

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

EC10QS10



### JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

EC10QS10

