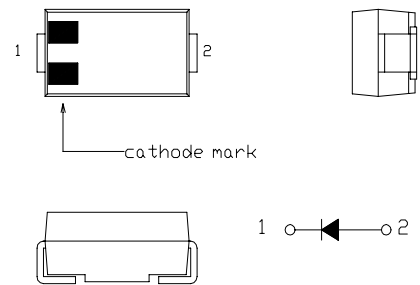


SBD Type : EC30LA02

FEATURES

- * Miniature Size, Surface Mount Device
- * Extremely Low Forward Voltage Drop
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * Packaged in 12mm Tape and Reel
- * Not Rolling During Assembly

OUTLINE DRAWING



Maximum Ratings

Approx Net Weight: 0.06g

Rating	Symbol	EC30LA02		Unit
Repetitive Peak Reverse Voltage	V_{RRM}	20		V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	25 (pulse width $\leq 1\mu s$ duty $\leq 1/50$)		V
Average Rectified Output Current	I_o	2.1	Ta=25°C *1 50Hz Half Sine	A
		3.0	Tl=85°C Tl=Lead Wave Resistive Load	
RMS Forward Current	$I_{F(RMS)}$	4.71		A
Surge Forward Current	I_{FSM}	50	50Hz Half Sine Wave, 1cycle Non-repetitive	A
Operating Junction Temperature Range	T_{jw}	-40 to +125		°C
Storage Temperature Range	T_{stg}	-40 to +125		°C

Electrical • Thermal Characteristics

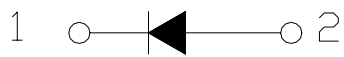
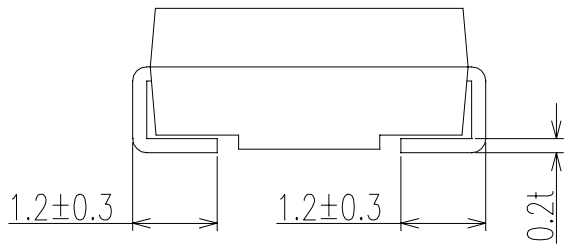
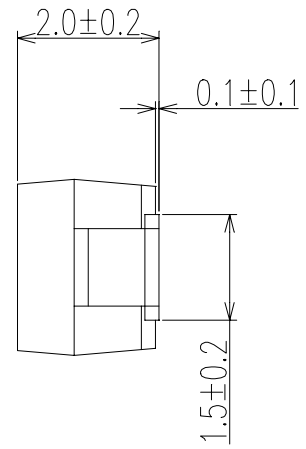
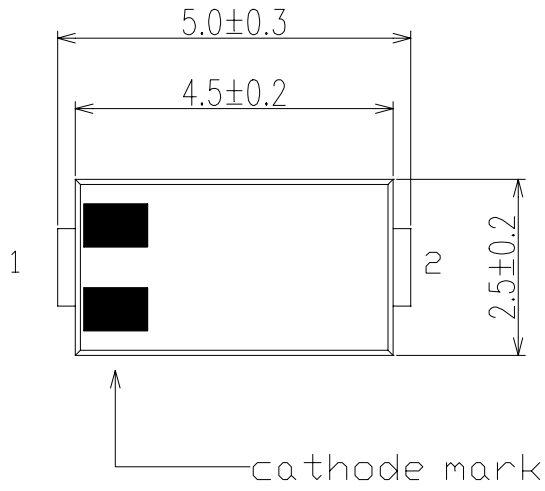
Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	I_{RM}	$T_j = 25^\circ C, V_{RM} = V_{RRM}$	-	-	3	mA
Peak Forward Voltage	V_{FM}	$T_j = 25^\circ C, I_{FM} = 3.0A$	-	-	0.39	V
Thermal Resistance	Junction to Ambient	Alumina Substrate mounted *1	-	-	108	°C/W
	Junction to Lead	-	-	-	23	

*1: Alumina Substrate mounted (Soldering Lands=2x2mm, Both Sides)

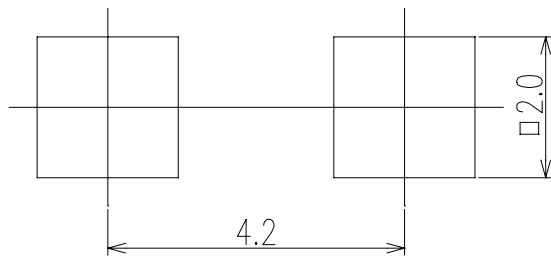
The curves of Average Forward Current vs. Temperature are the value that do not consider Reverse Power Dissipation.

In actual use, consider the Reverse Power Dissipation to avoid thermal runaway of the diode.

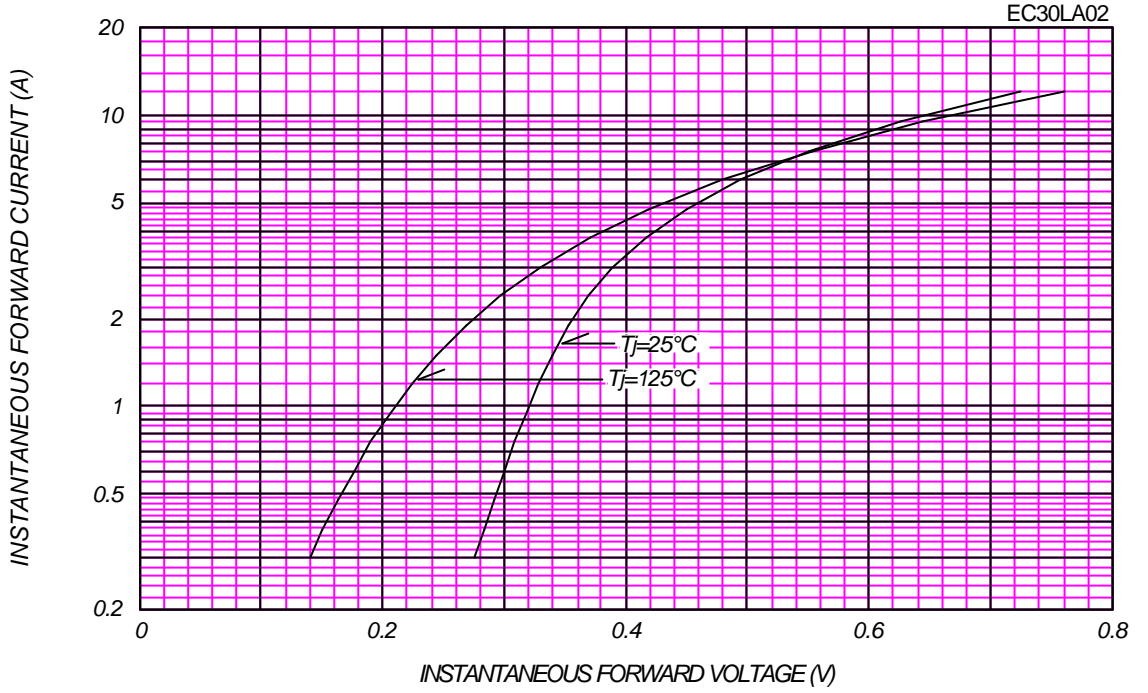
EC30LA_ OUTLINE DRAWING (Dimensions in mm)



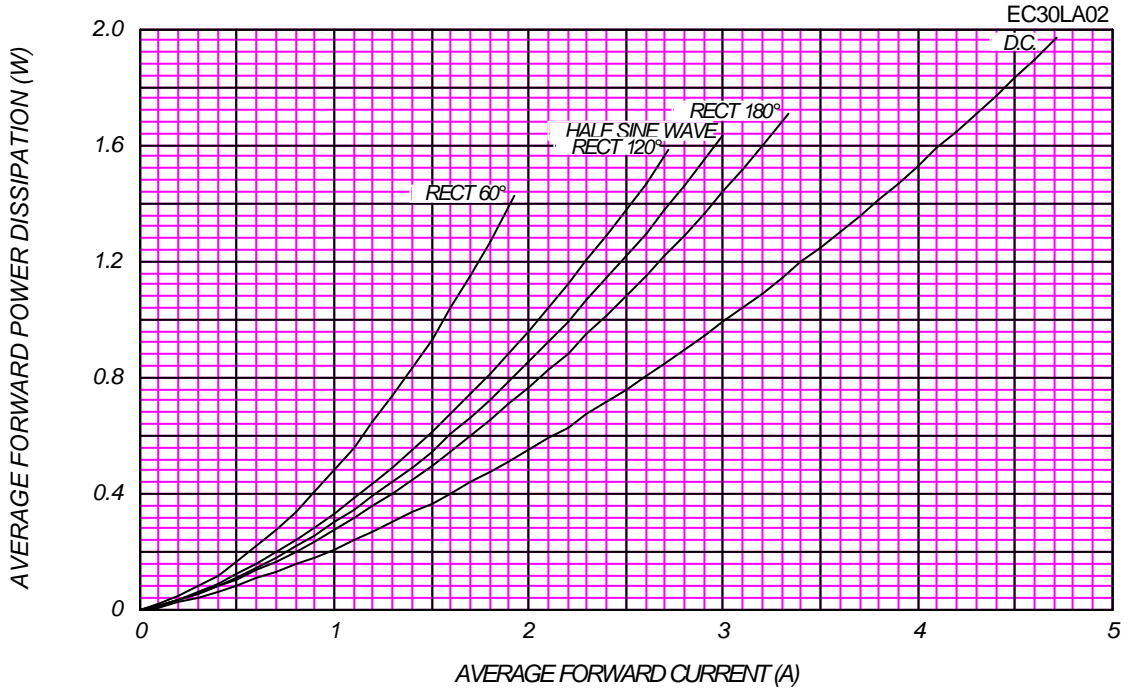
soldering pad



FORWARD CURRENT VS. VOLTAGE



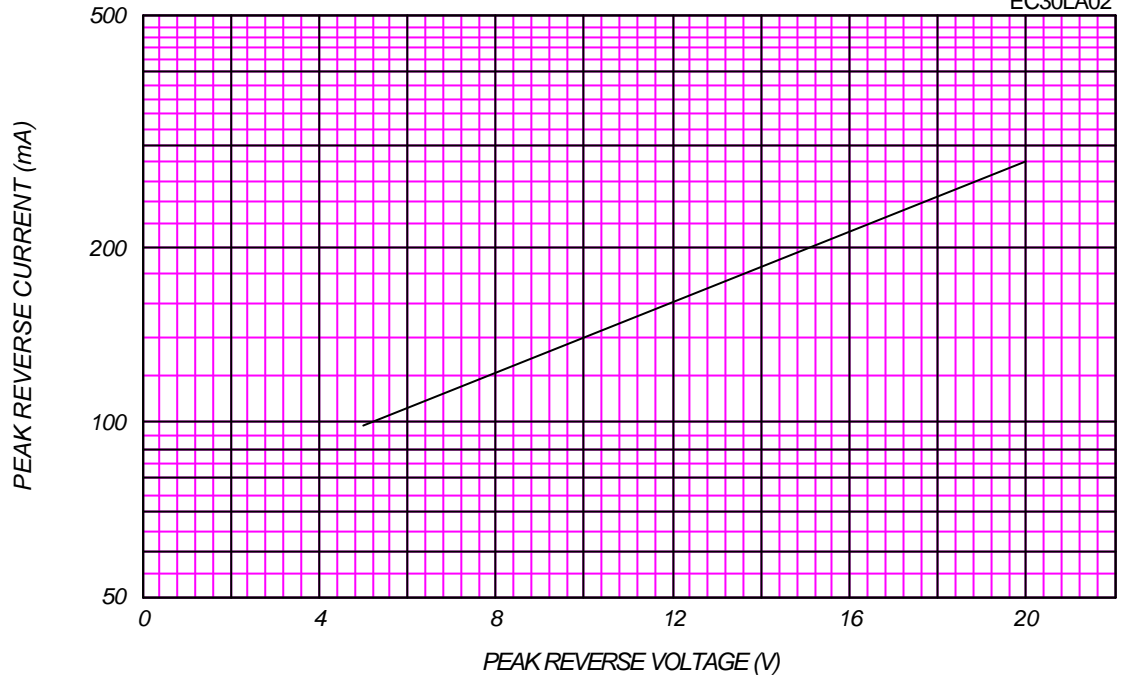
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

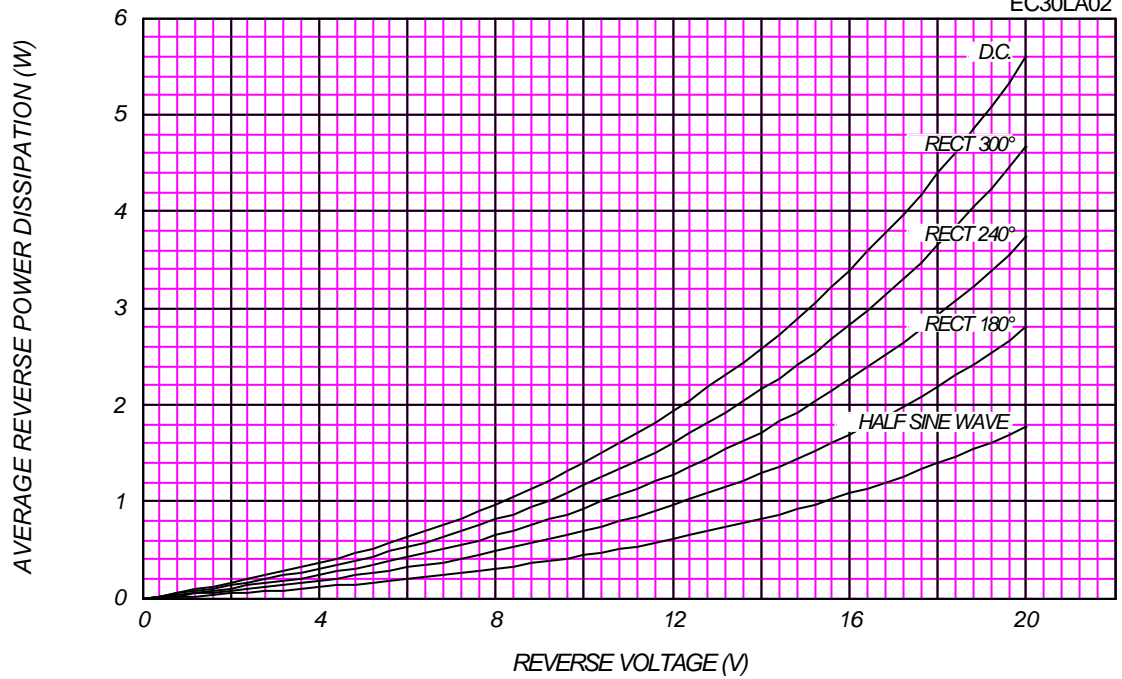
$T_j = 125\text{ }^\circ\text{C}$

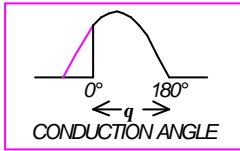
EC30LA02



AVERAGE REVERSE POWER DISSIPATION

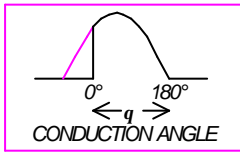
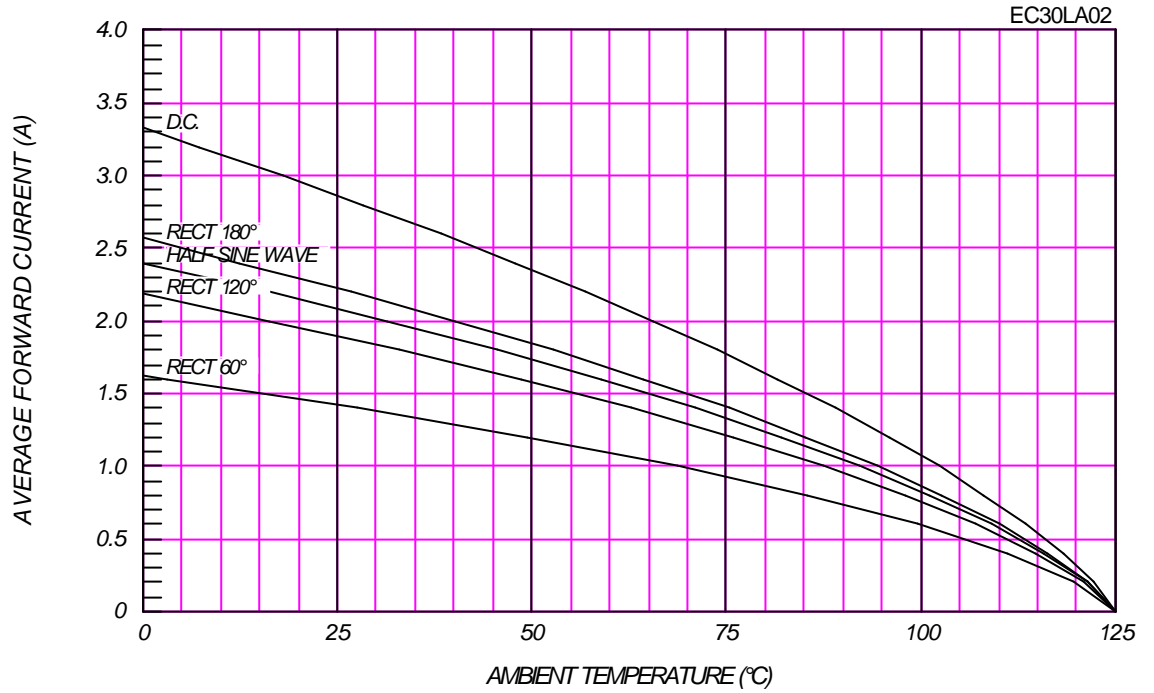
EC30LA02





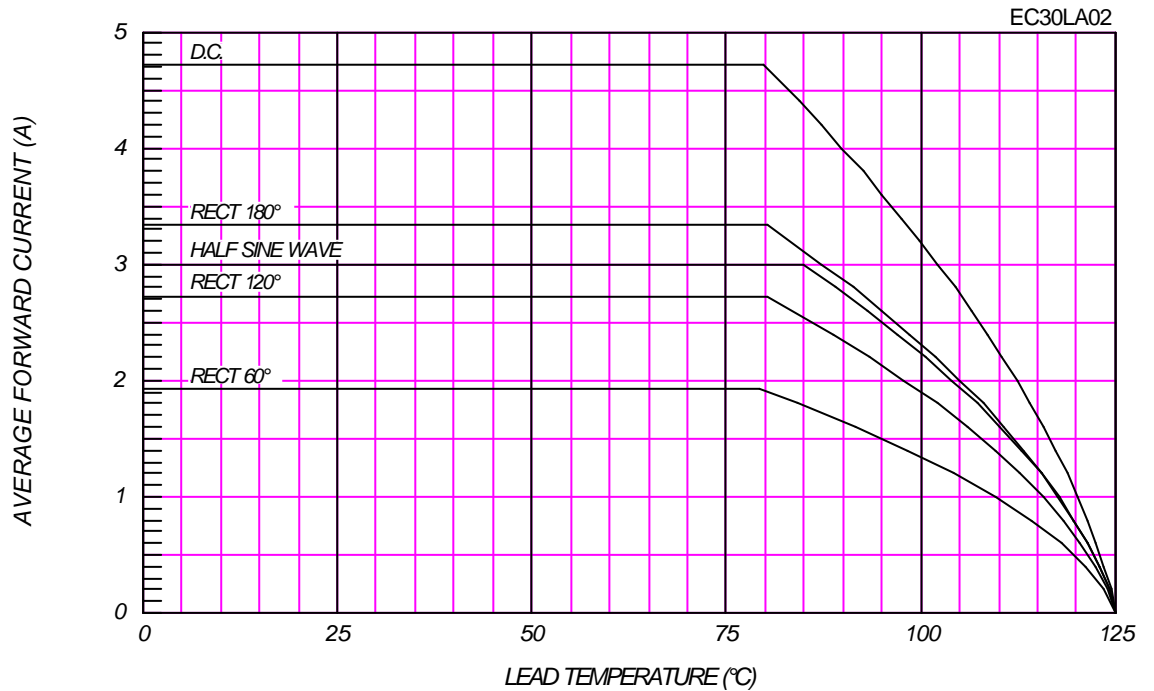
AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Alumina Substrate mounted ($L_{and}=2 \times 2 \text{mm}$), $V_{RM}=0V$



AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

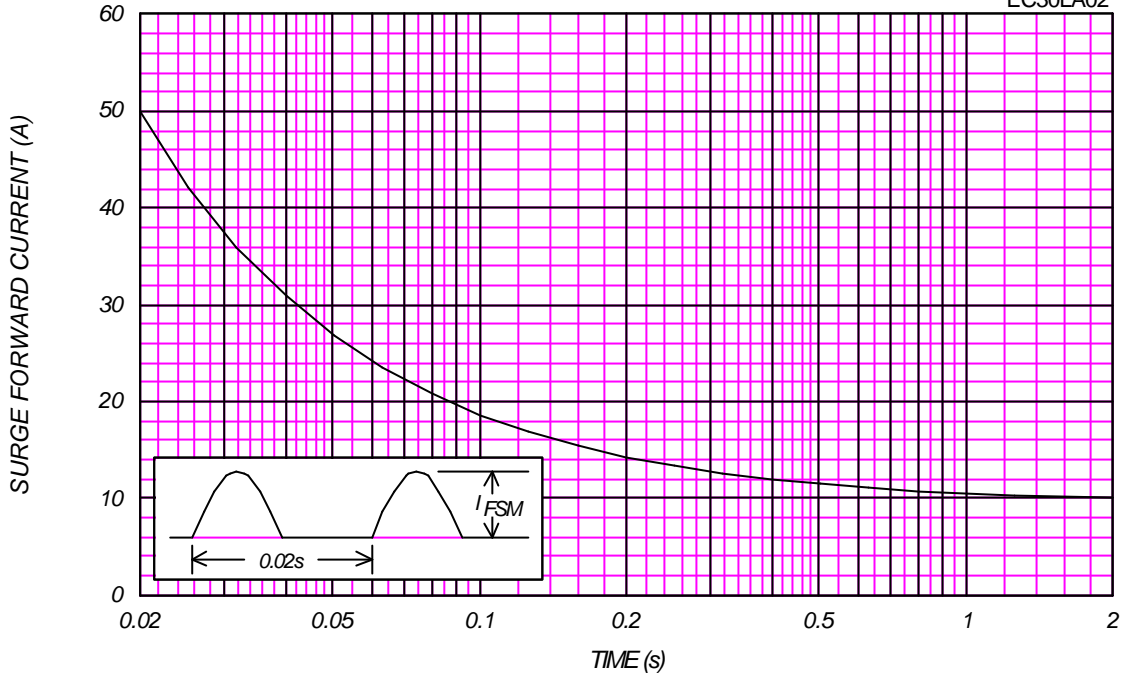
$V_{RM}=0V$



SURGE CURRENT RATINGS

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

EC30LA02



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

EC30LA02

