

SBD Type : EC30LB02

3A 20V Tj:125°C

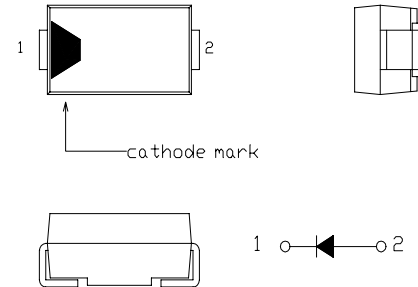
OUTLINE DRAWING

FEATURES

- * Miniature Size, Surface Mount Device
- * Extremely Low Forward Voltage Drop and Low Leakage Current
- * Low Power Loss, High Efficiency
- * High Surge Capability
- * Packaged in 12mm Tape and Reel

APPLICATIONS

- * For Protection use of Battery Reverse Connection



Maximum Ratings

Approx Net Weight:0.06g

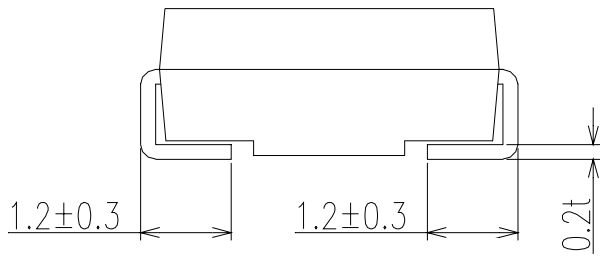
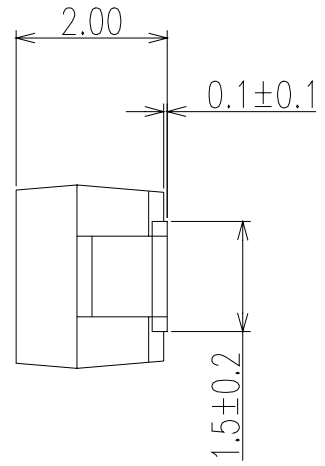
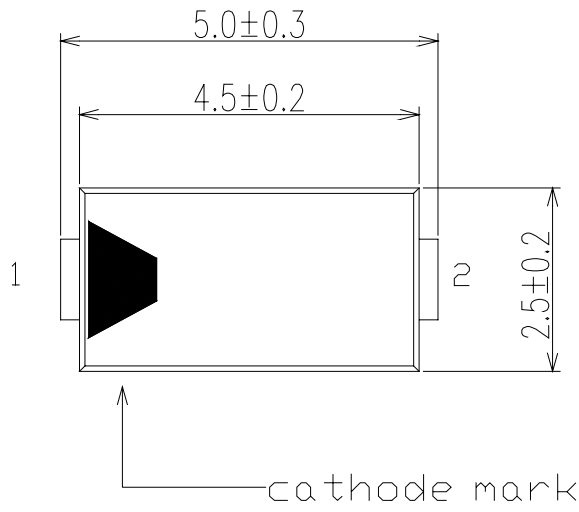
Rating	Symbol	EC30LB02		Unit	
Repetitive Peak Reverse Voltage	V_{RRM}	20		V	
Average Rectified Output Current	I_o	3.0	$T_l=102^\circ\text{C}$ (T_l =Lead Temperature)	Direct Current	A
		2.8	$T_a=28^\circ\text{C}$ *1		
Surge Forward Current	I_{FSM}	80	50Hz Half Sine Wave, 1cycle Non-repetitive		A
Operating Junction Temperature Range	T_{jw}	-40 to +125		°C	
Storage Temperature Range	T_{stg}	-40 to +125		°C	

Electrical • Thermal Characteristics

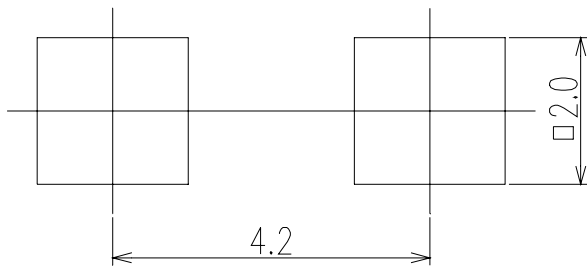
Characteristics		Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current		I_{RM}	$T_j= 25^\circ\text{C}, V_{RM}= V_{RRM}$	-	-	1.0	mA
Peak Forward Voltage		V_{FM}	$T_j= 25^\circ\text{C}, I_{FM}= 3.0\text{A}$	-	-	0.41	V
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	Alumina Substrate mounted *1	-	-	108	°C/W
	Junction to Lead	$R_{th(j-l)}$	-	-	-	23	

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

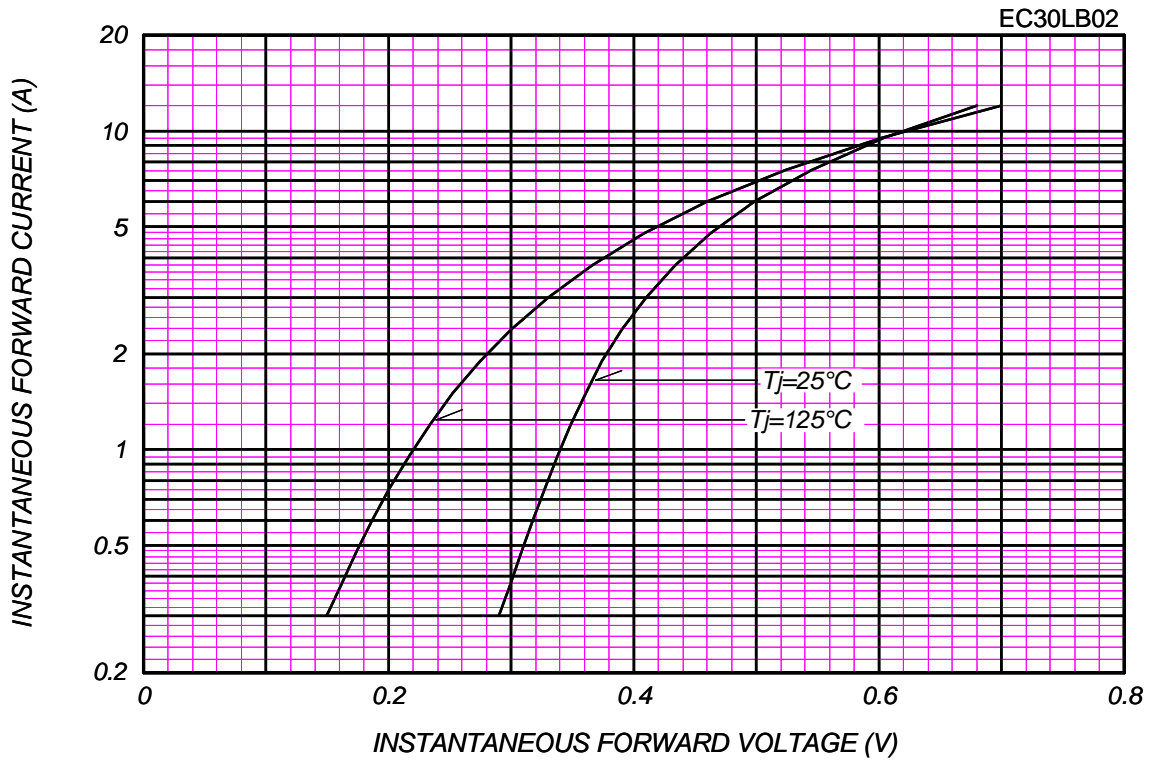
EC30LB02 OUTLINE DRAWING (Dimensions in mm)



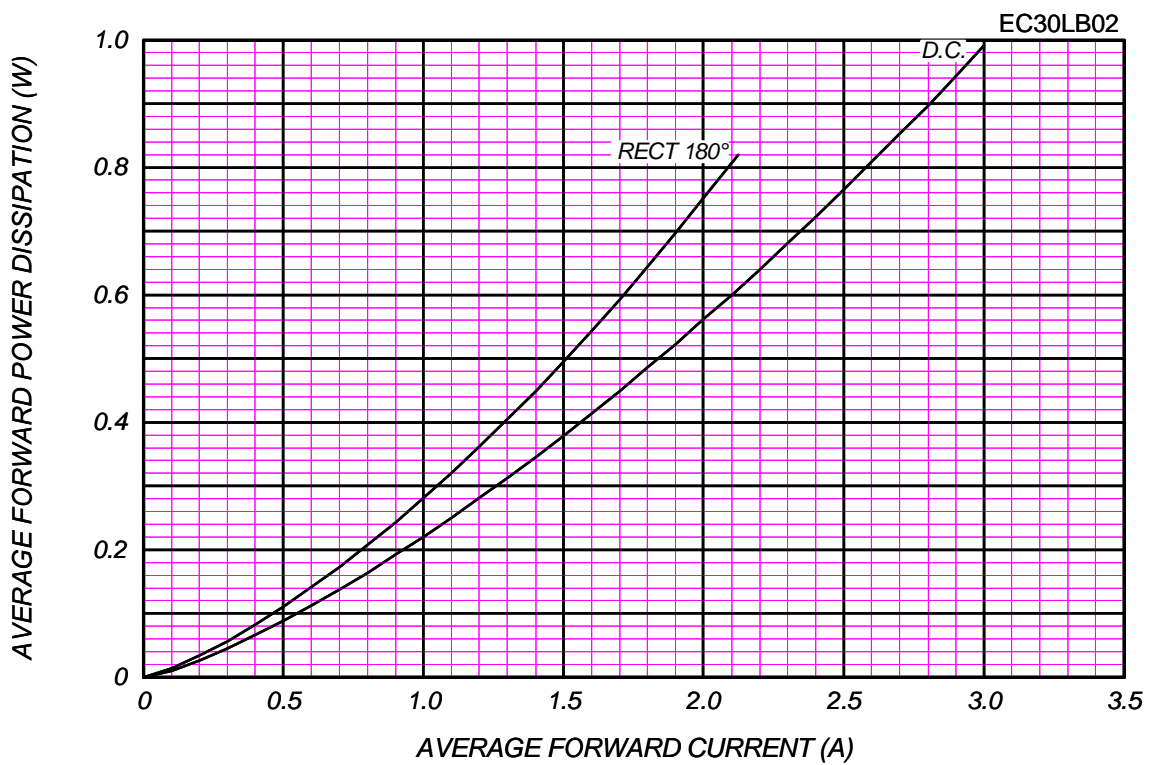
SOLDERING PAD



FORWARD CURRENT VS. VOLTAGE



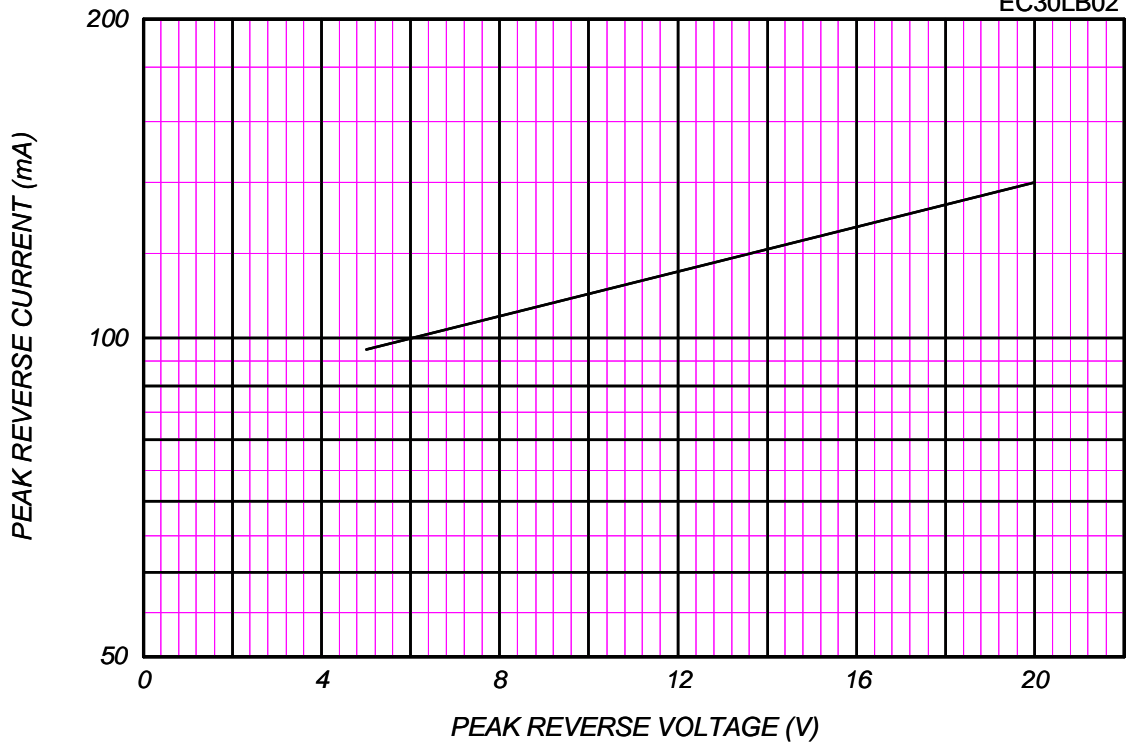
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

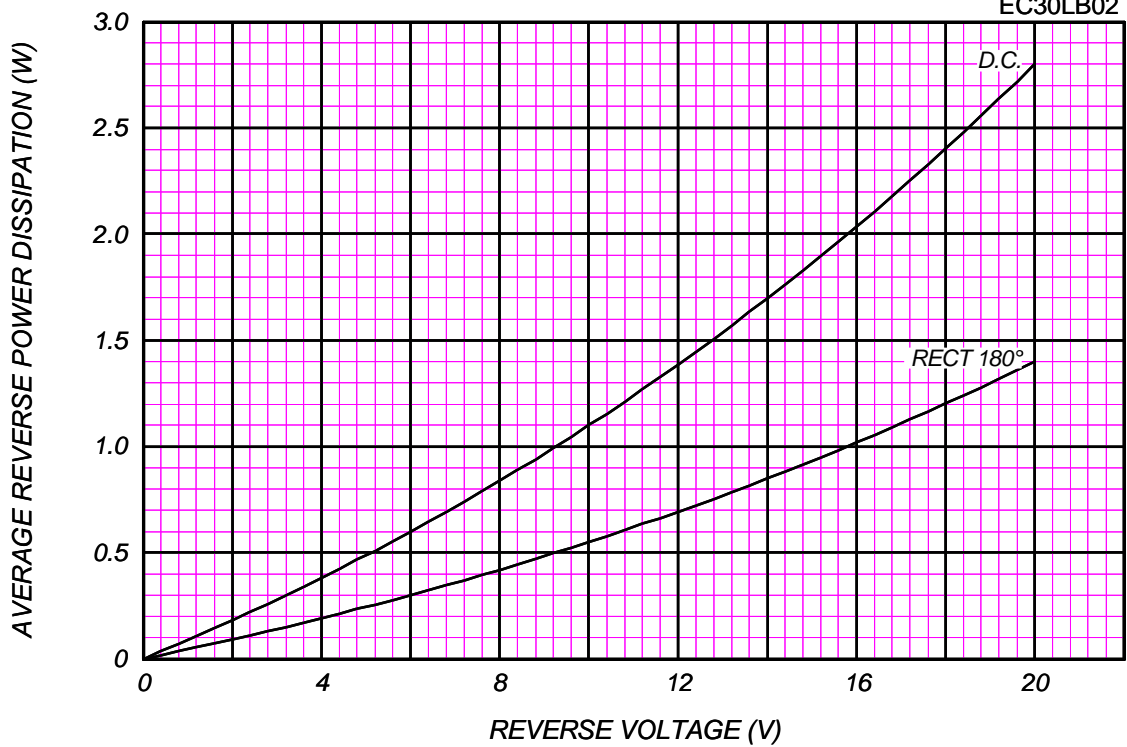
$T_j = 125\text{ }^\circ\text{C}$

EC30LB02



AVERAGE REVERSE POWER DISSIPATION

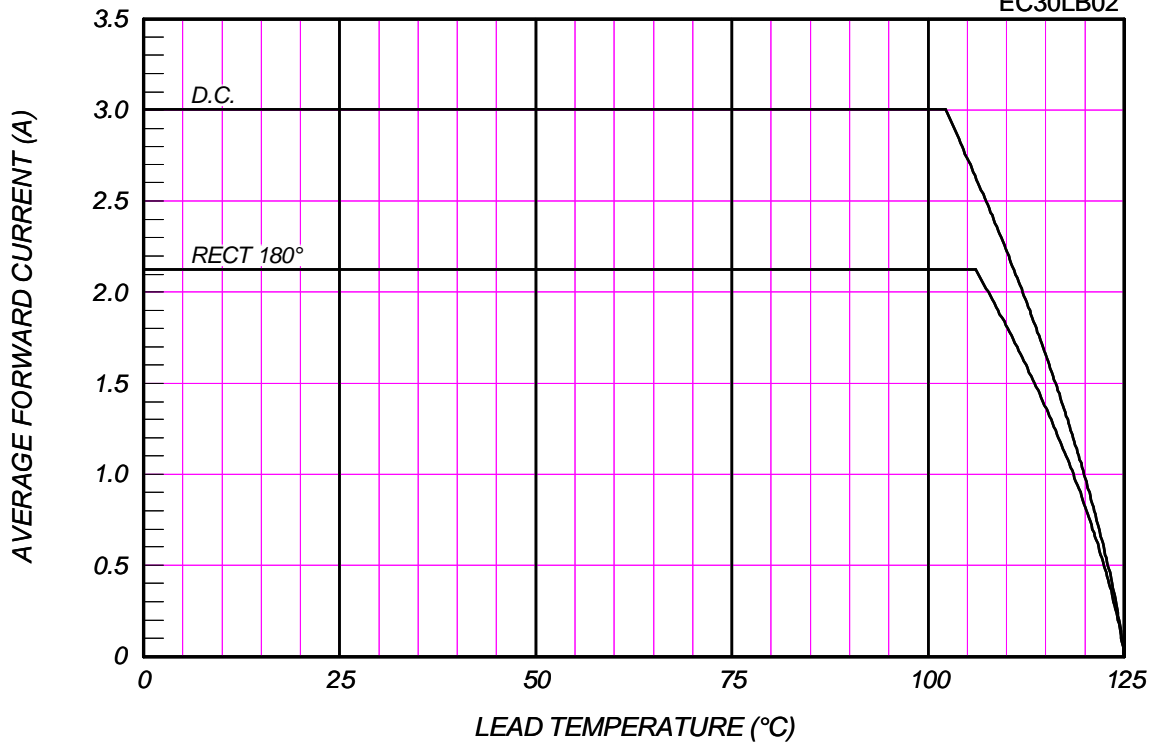
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AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE

$V_{RM}=0V$

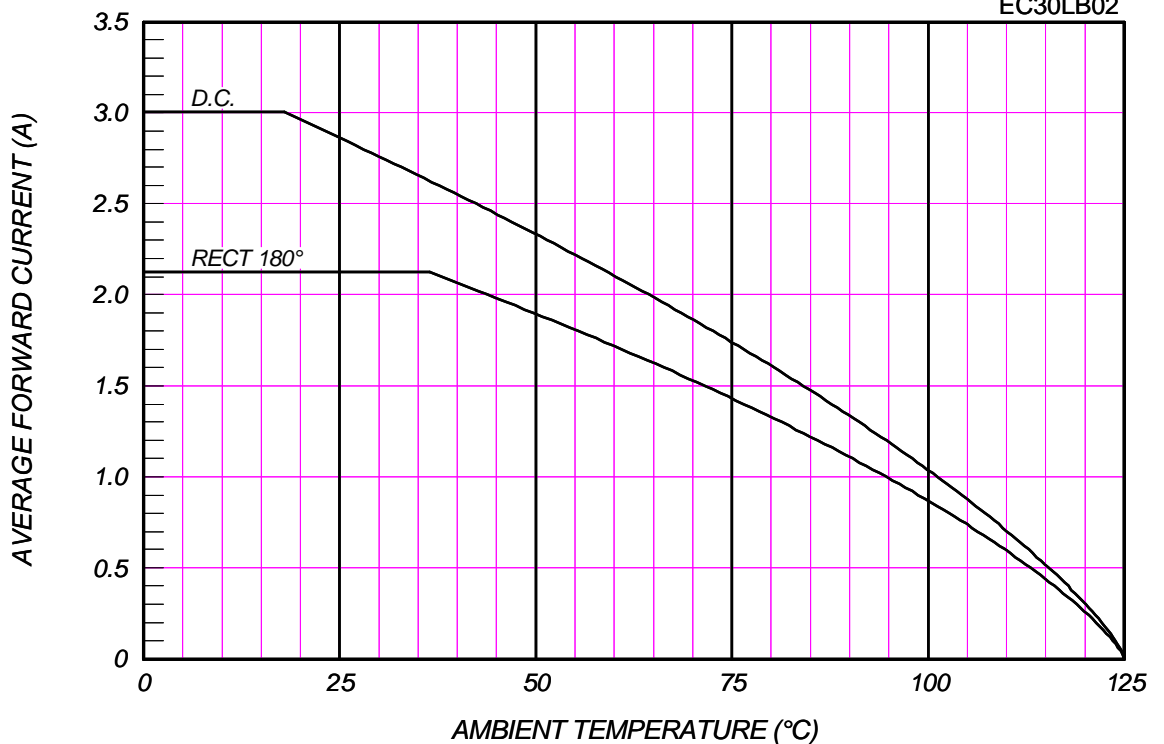
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AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE

Alumina Substrate Mounted (Soldering Land=2x2mm), $V_{RM}=0V$

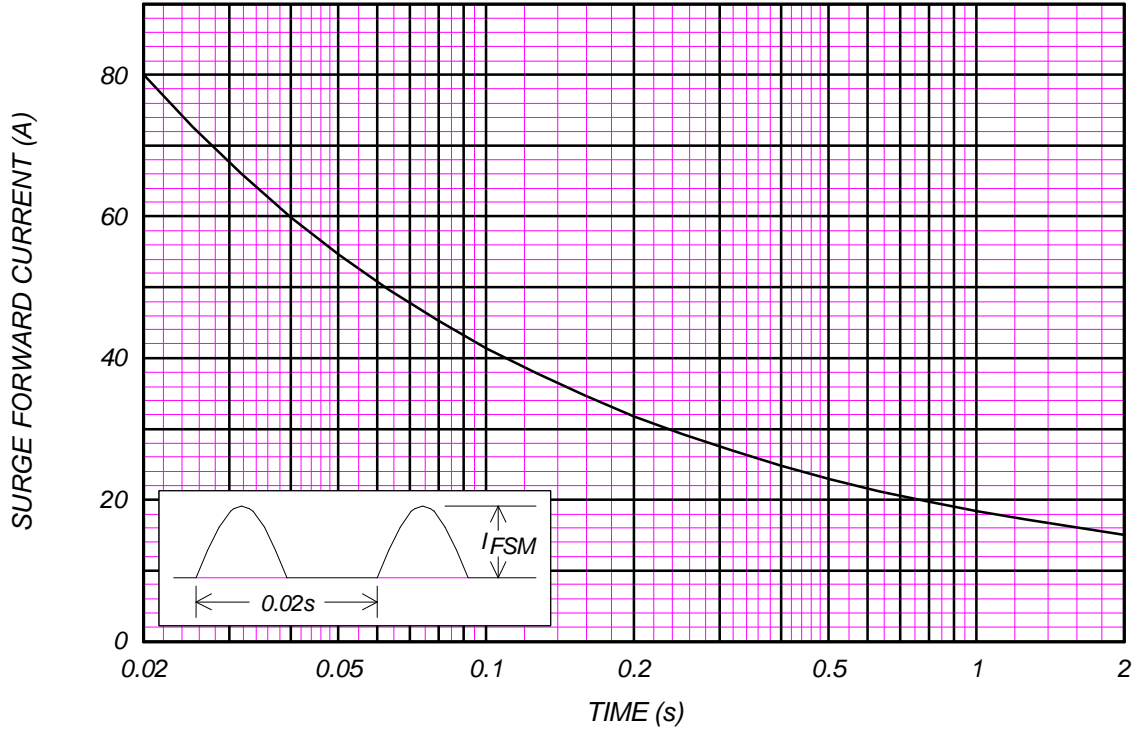
EC30LB02



SURGE CURRENT RATINGS

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

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JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

T_j=25°C, V_m=20mV_{RMS}, f=100kHz, Typical Value

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