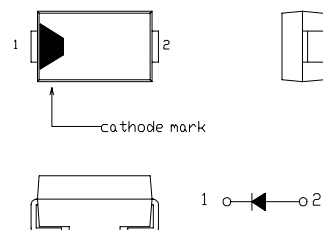


SBD Type : EC31QS04

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	EC31QS04		Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40		V
Average Rectified Output Current	I_O	1.3	$T_a=36\text{ }^\circ\text{C}$ *1	50Hz Half Sine Wave Resistive Load
		3.0	$T_l=81\text{ }^\circ\text{C}$ Tl:Lead Temperature	
RMS Forward Current	$I_{F(RMS)}$	4.71		A
Surge Forward Current	I_{FSM}	60	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		$^\circ\text{C}$

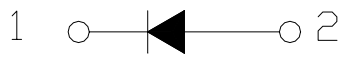
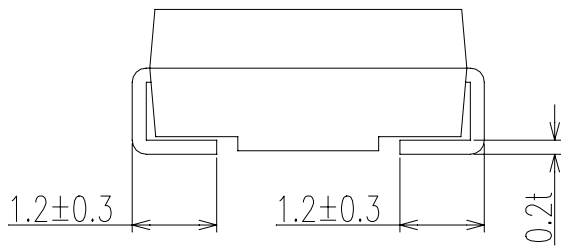
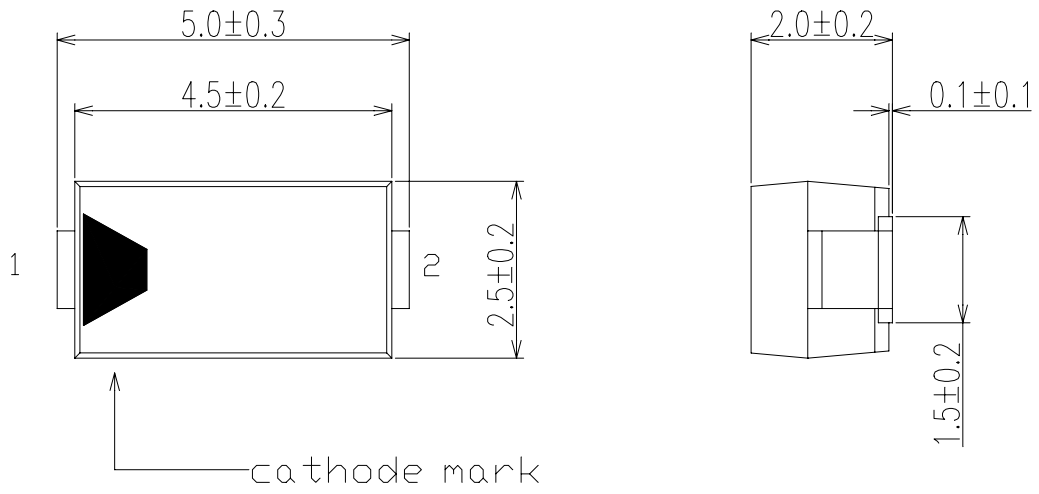
Electrical • Thermal Characteristics

Characteristics		Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current		I_{RM}	$T_j=25\text{ }^\circ\text{C}$, $V_{RM}=V_{RRM}$	-	-	3	mA
Peak Forward Voltage		V_{FM}	$T_j=25\text{ }^\circ\text{C}$, $I_{FM}=3.0\text{A}$	-	-	0.55	V
Thermal Resistance	Junction to Ambient	$R_{th(j-a)}$	*1	-	-	108	$^\circ\text{C}/\text{W}$
	Junction to Lead	$R_{th(j-l)}$	-	-	-	23	

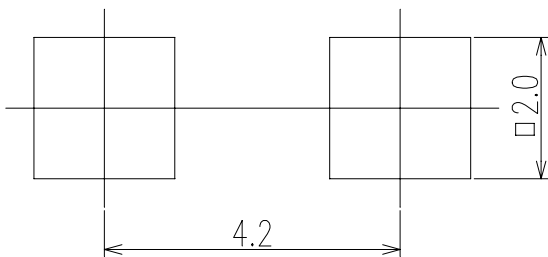
*1 Alumina Substrate Mounted

Soldering Lands=2x2mm, Both Sides

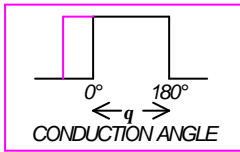
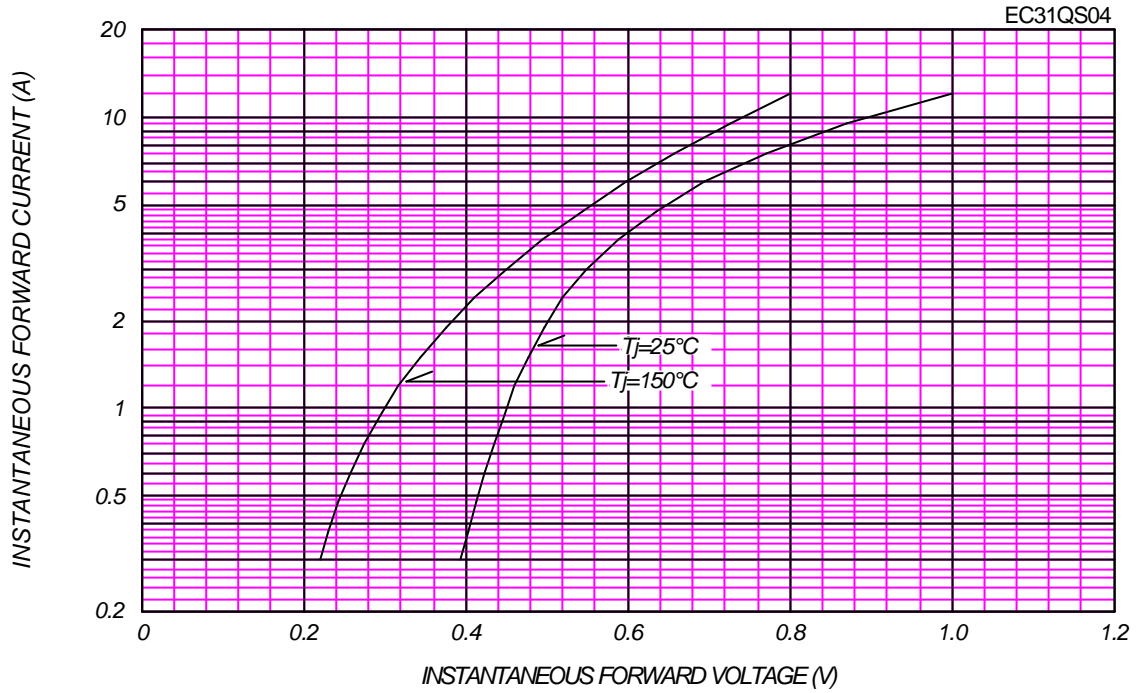
EC31QS_ OUTLINE DRAWING (Dimensions in mm)



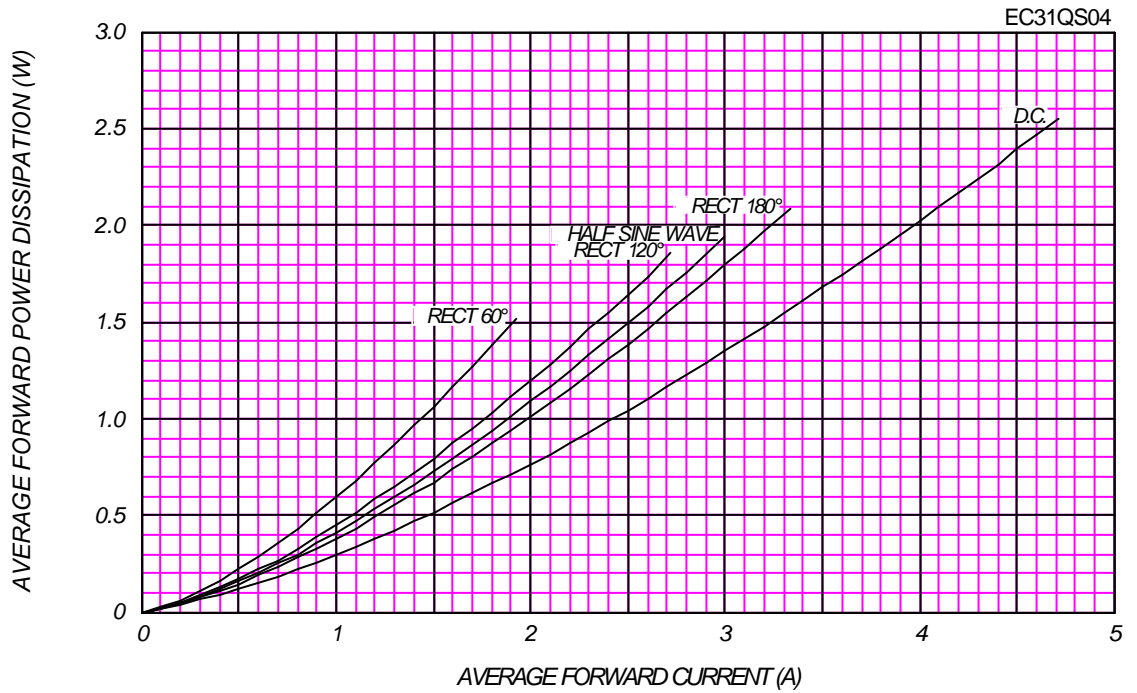
SOLDERING PAD



FORWARD CURRENT VS. VOLTAGE



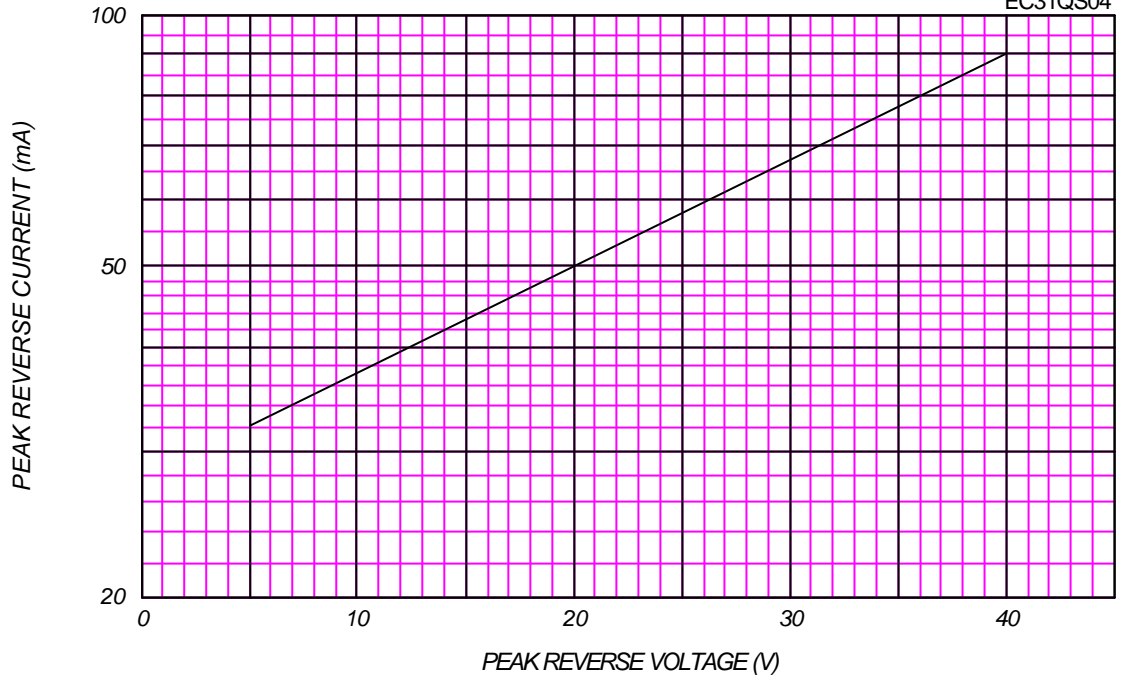
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

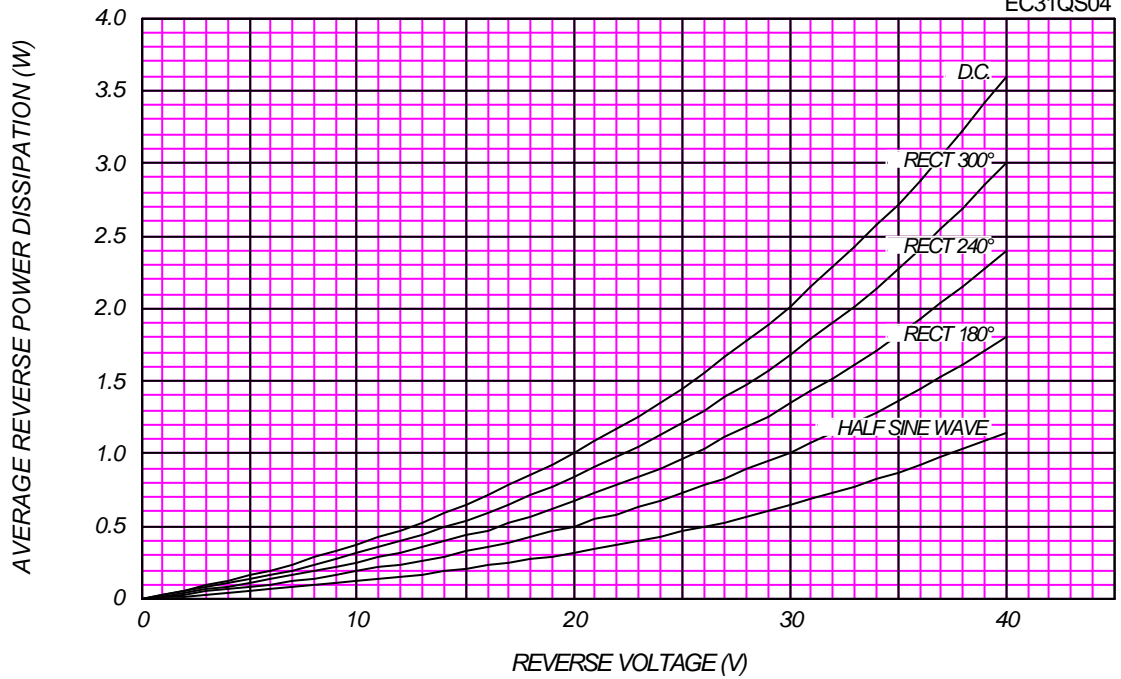
T_j = 150 °C

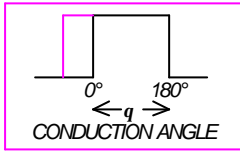
EC31QS04



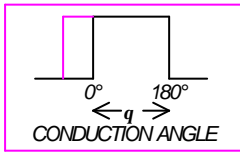
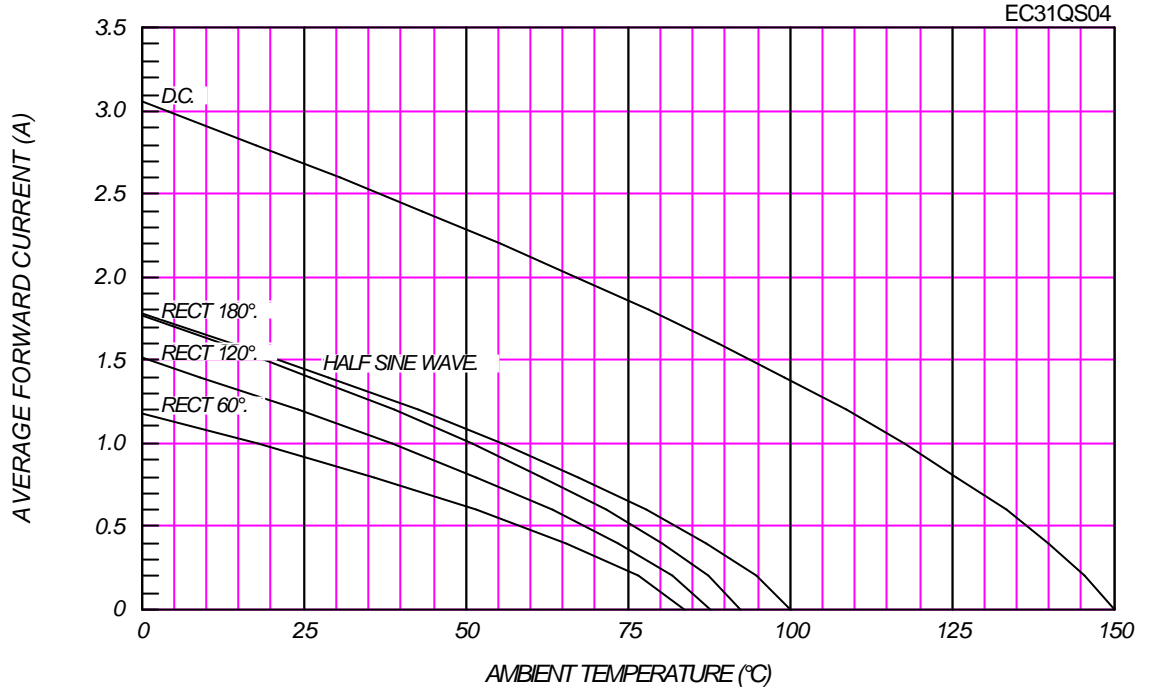
AVERAGE REVERSE POWER DISSIPATION

EC31QS04

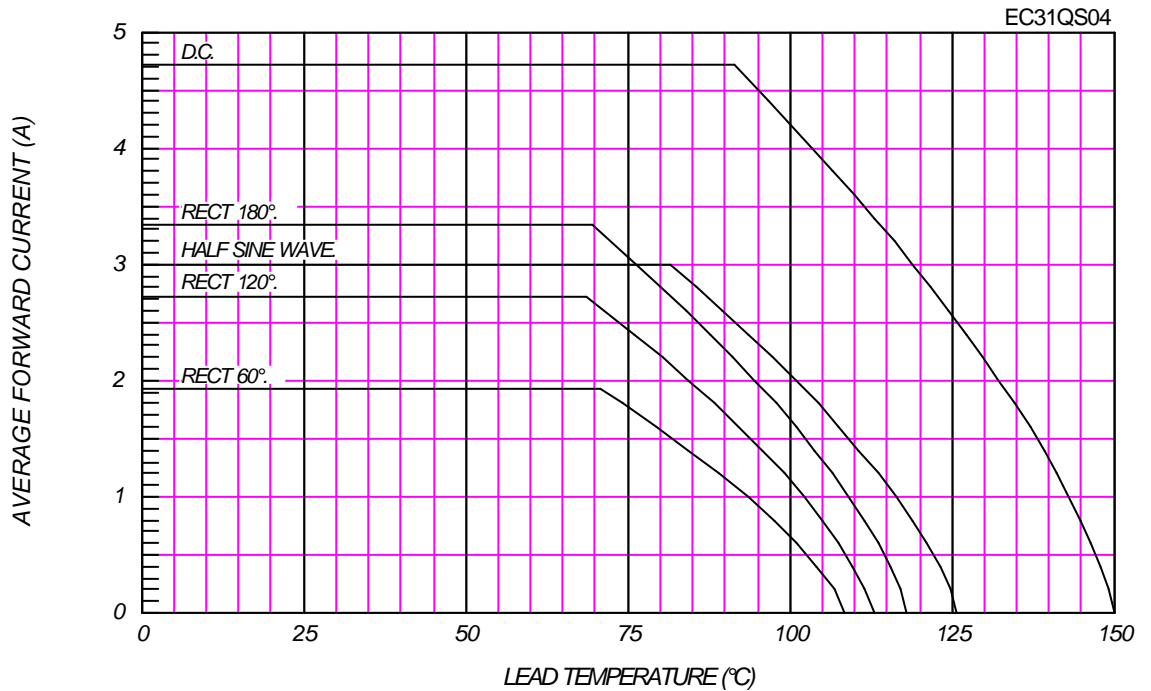




AVERAGE FORWARD CURRENT VS. AMBIENT TEMPERATURE
 Alumina Substrate Mounted (Soldering Land = 2x2 mm), $V_{RM} = 40V$



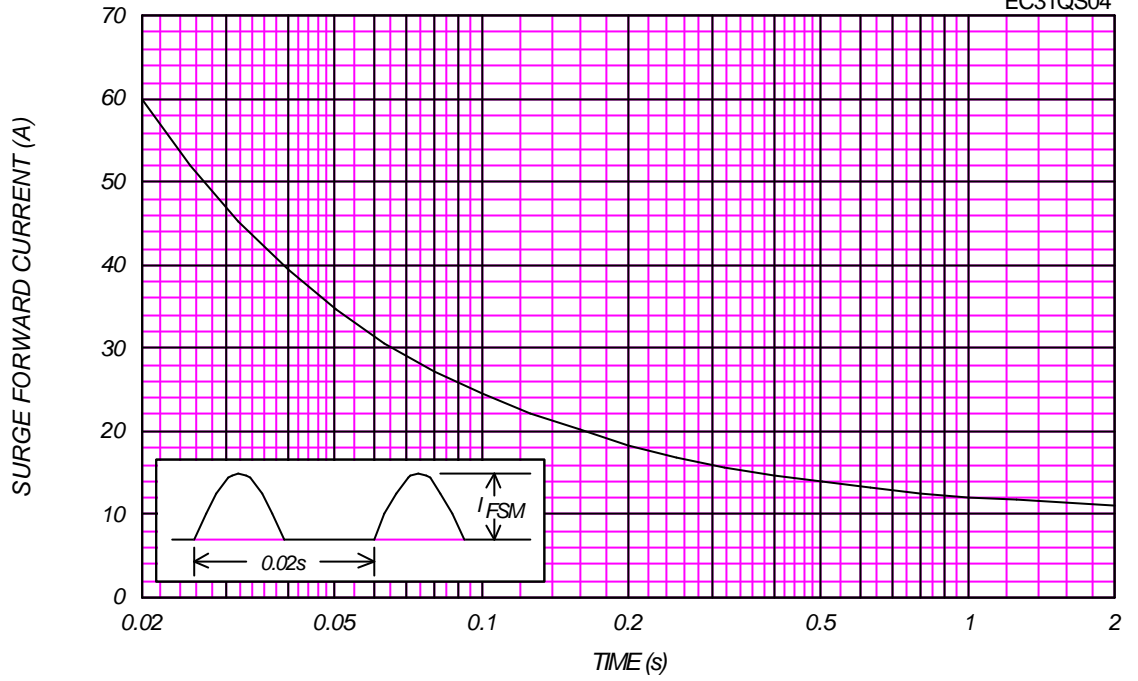
AVERAGE FORWARD CURRENT VS. LEAD TEMPERATURE
 $V_{RM} = 40V$



SURGE CURRENT RATINGS

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

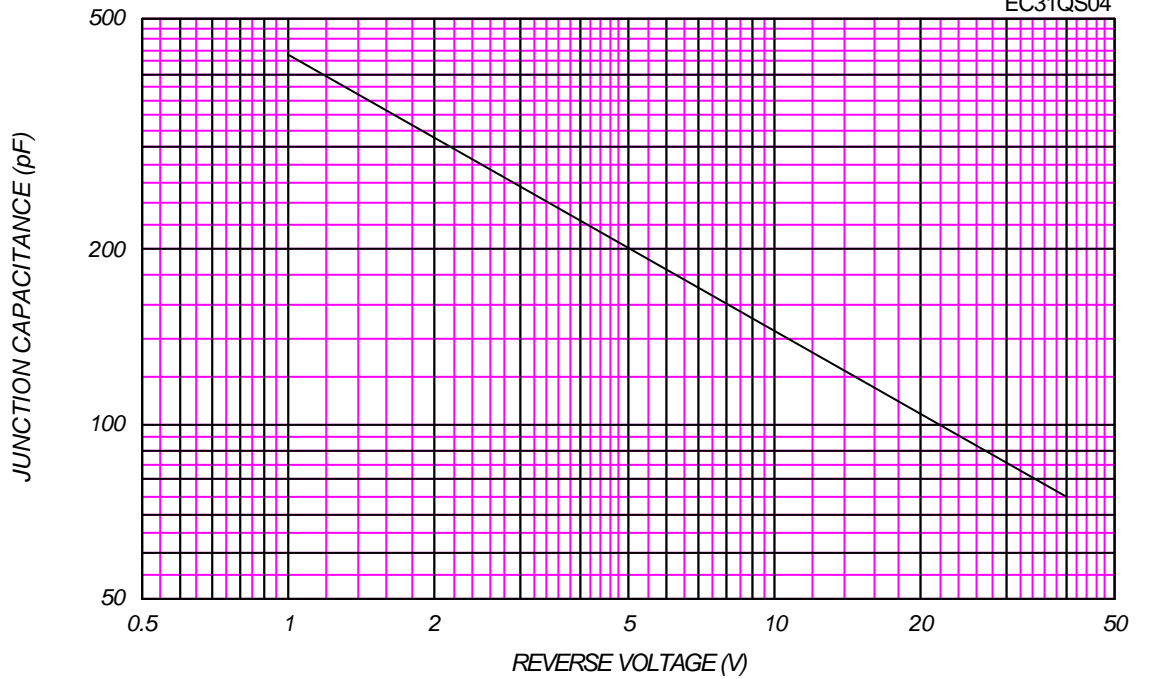
EC31QS04



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

EC31QS04



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