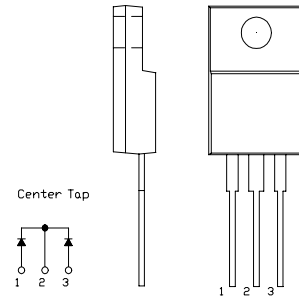


# SBD Type : FCH30B10

OUTLINE DRAWING

**30A 100V Tj:150°C**
**FEATURES**

- \*TO-220AB Case
- \*Fully Molded
- \*Dual Diodes – Cathode Common
- \*Low Forward Voltage Drop
- \*High Surge Capability
- \*Tj=150 °C operation



## Maximum Ratings

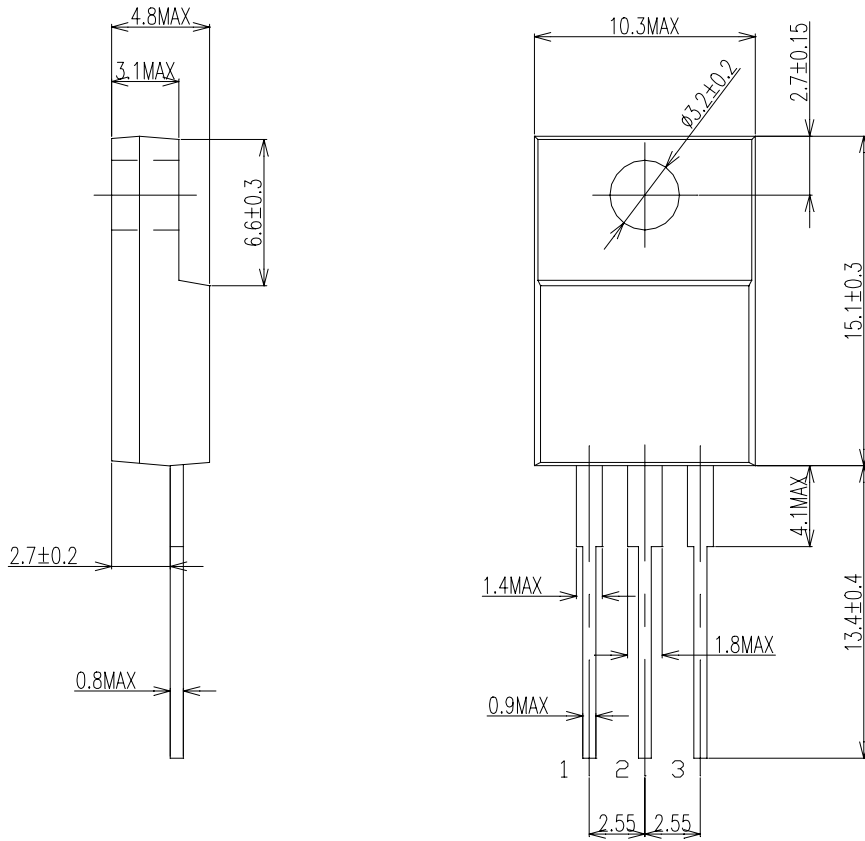
Approx Net Weight: 1.75g

Rating	Symbol	FCH30B10		Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100		V
Average Rectified Output Current	$I_O$	30	$T_c=97^\circ\text{C}$ 50 Hz Full Sine Wave Resistive Load	A
RMS Forward Current	$I_{F(RMS)}$	33.3		A
Surge Forward Current	$I_{FSM}$	150	50Hz Full 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
Mounting torque	$F_{tor}$	recommended torque = 0.5		N•m

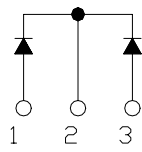
## Electrical • Thermal Characteristics

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	$I_{RM}$	$T_j= 25^\circ\text{C}$ , $V_{RM}= V_{RRM}$ per Arm	-	-	1	mA
Peak Forward Voltage	$V_{FM}$	$T_j= 25^\circ\text{C}$ , $I_{FM}= 15\text{ A}$ per Arm	-	-	0.96	V
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	-	-	1.5	°C/W
	$R_{th(c-f)}$	Case to Fin	-	-	1.5	°C/W

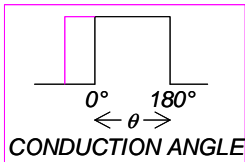
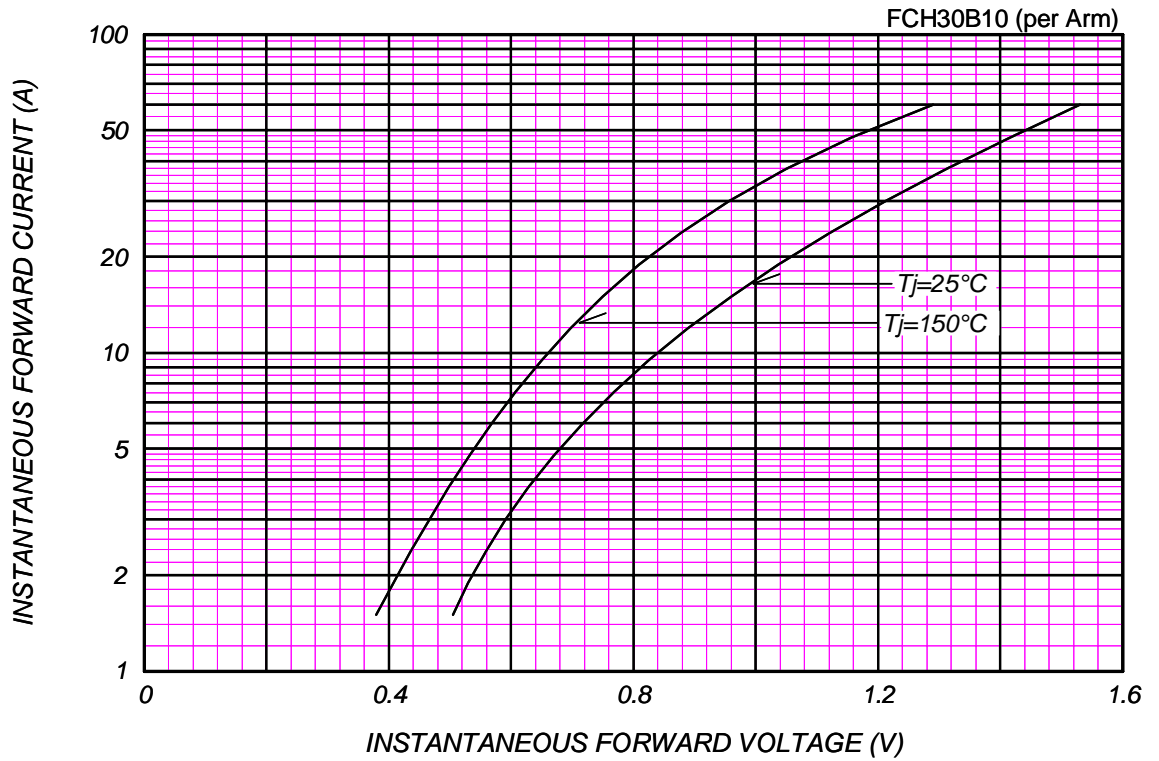
FCHxxB OUTLINE DRAWING (Dimensions in mm)



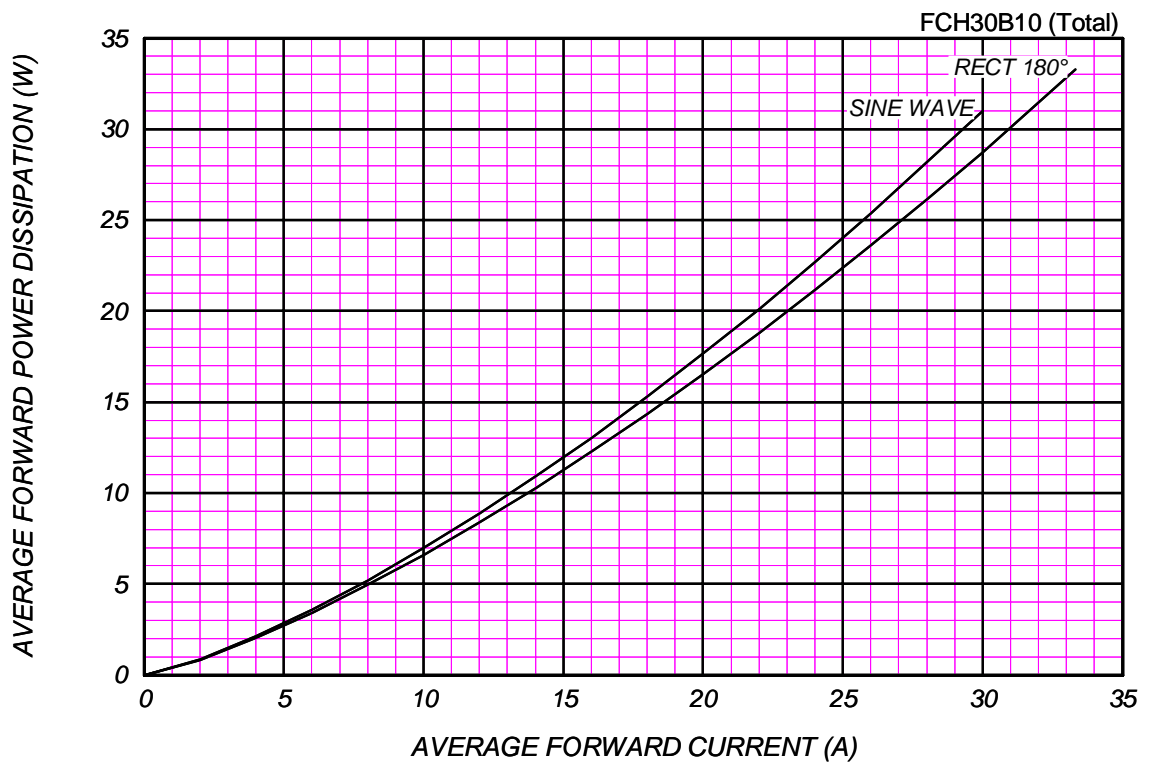
Center Tap



### FORWARD CURRENT VS. VOLTAGE



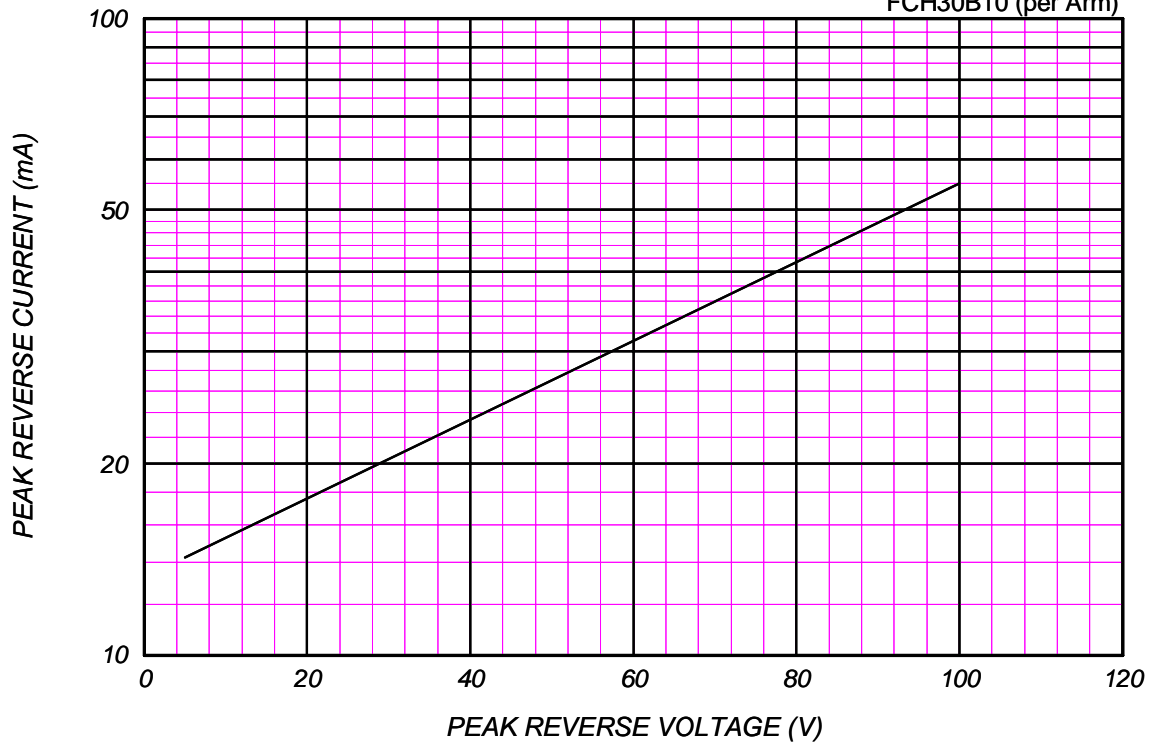
### AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

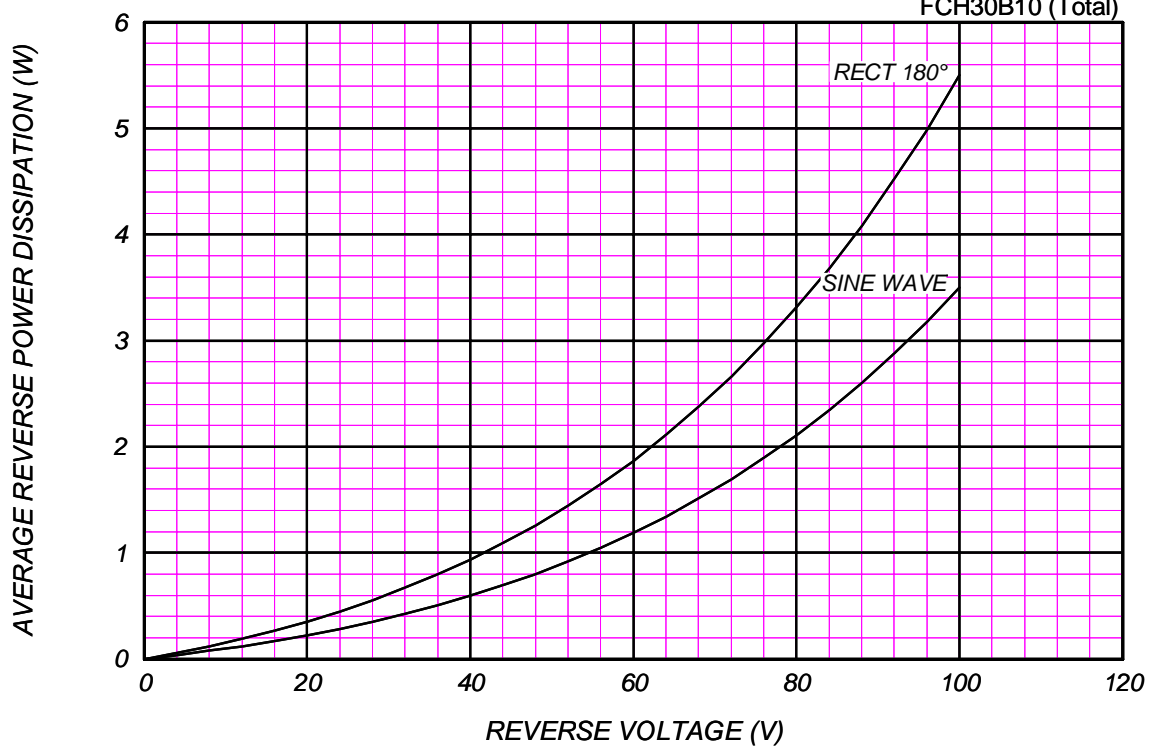
T<sub>j</sub> = 150 °C

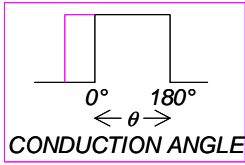
FCH30B10 (per Arm)



AVERAGE REVERSE POWER DISSIPATION

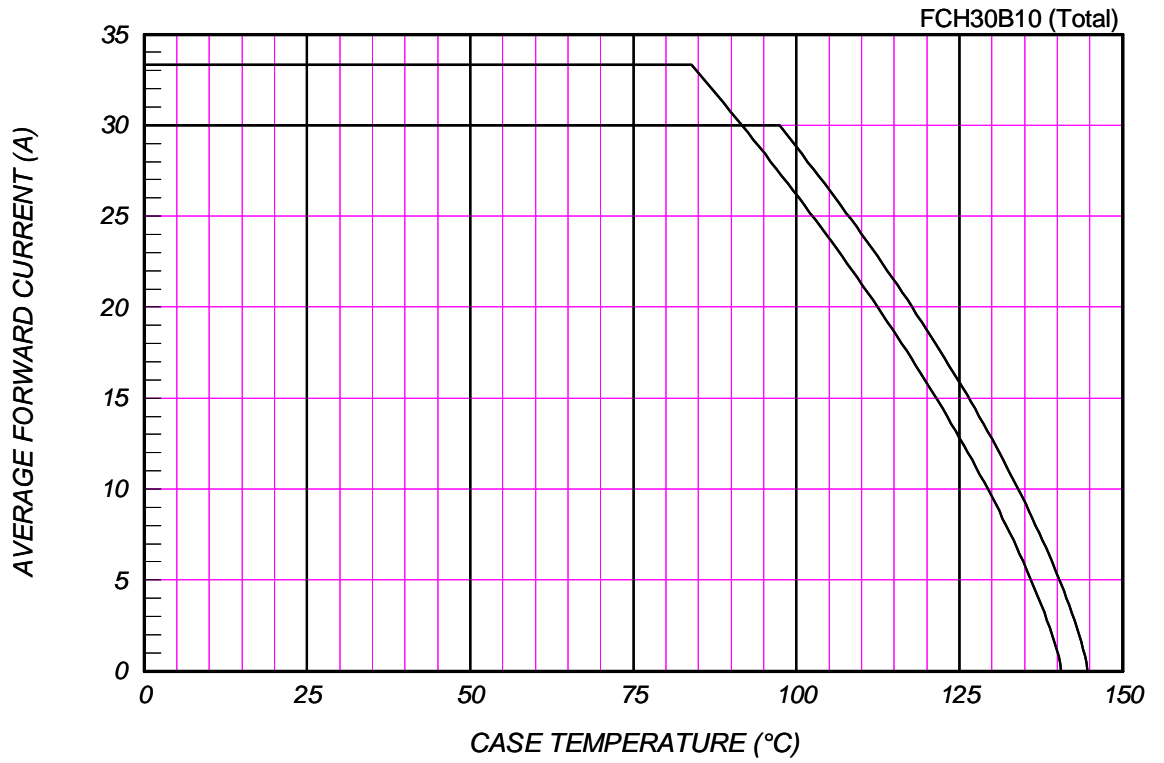
FCH30B10 (Total)





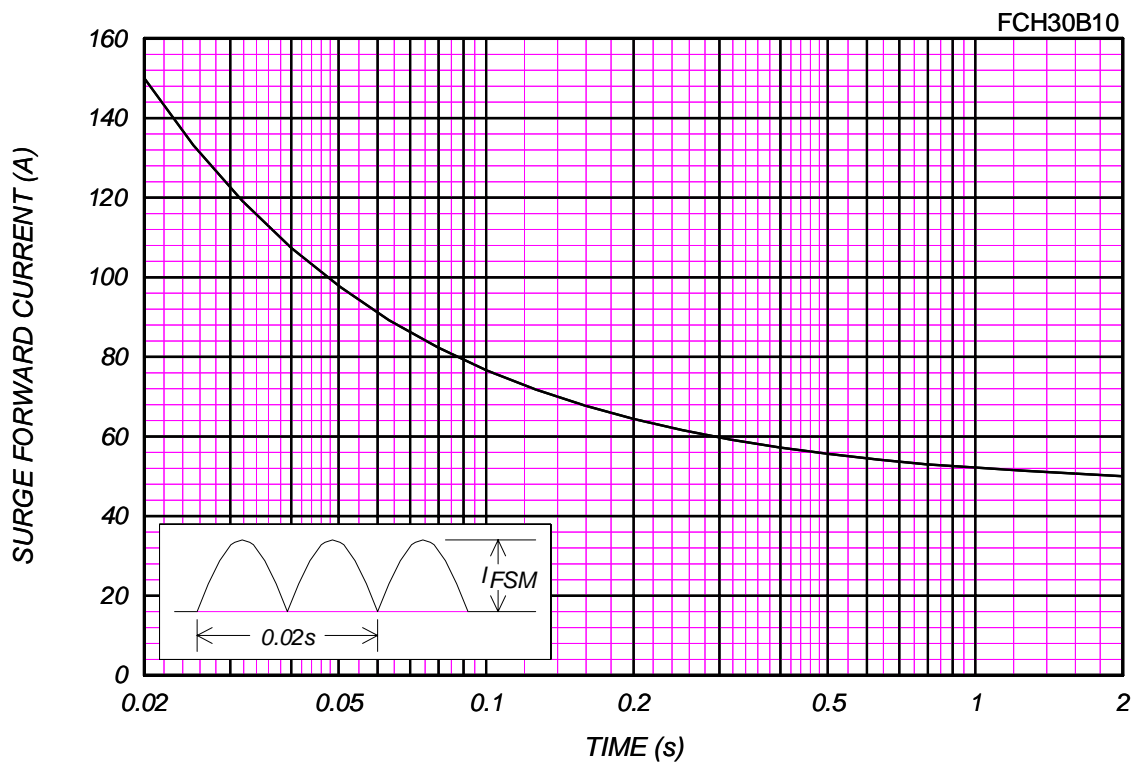
### AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=100V$



### SURGE CURRENT RATINGS

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



# JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

FCH30B10 (per Arm)

