

30A 40V Cathode Common

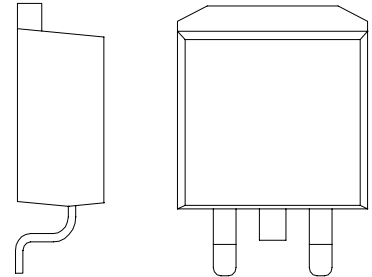
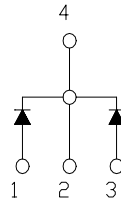
SBD Type : **TCQ30B04**

OUTLINE DRAWING

For High Frequency Rectification

FEATURES

- * High VRM SBD
- * Low Forward Voltage Drop and Low Noise
- * Fully Molded Isolation
- * Dual Diodes Cathode Common



Maximum Ratings

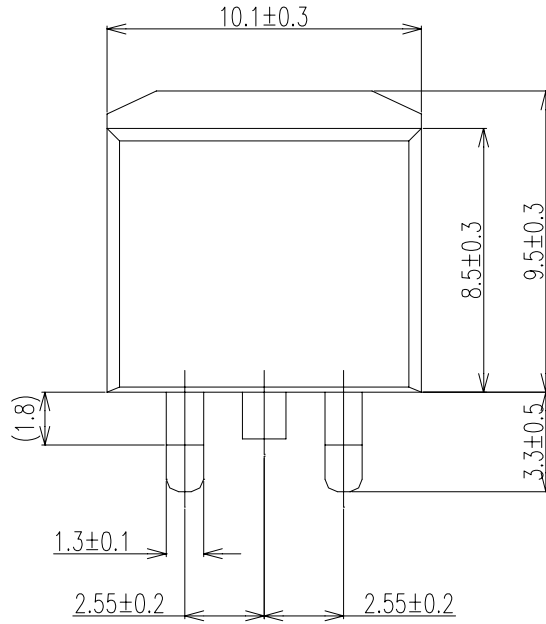
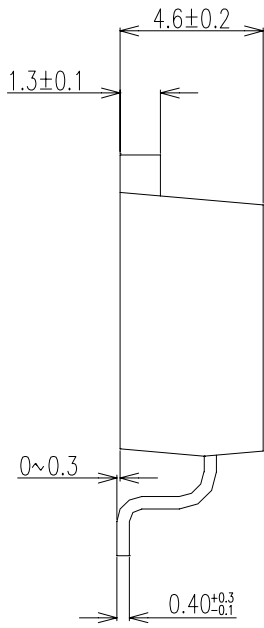
Approx Net Weight:1.4g

Rating	Symbol	TCQ30B04		Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40		V
Average Rectified Output Current	I_O	30	$T_c=100^\circ\text{C}$ 50 Hz, Full Sine Wave Resistive Load	A
RMS Forward Current	$I_{F(RMS)}$	33.3		A
Surge Forward Current	I_{FSM}	150	50 Hz Full 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		$^\circ\text{C}$

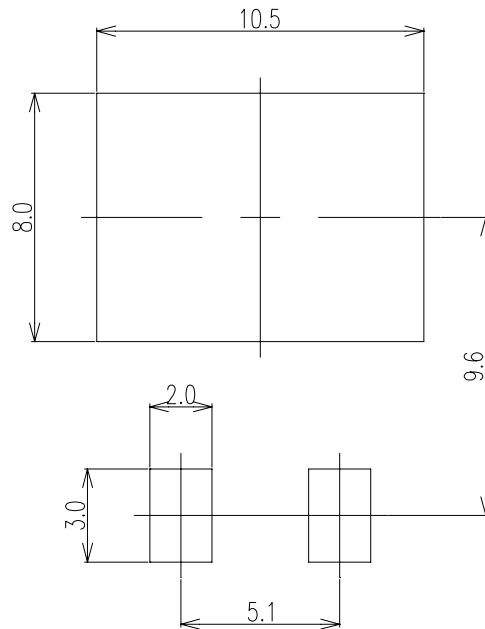
Electrical • Thermal Characteristics

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	I_{RM}	$T_j=25^\circ\text{C}, V_{RM}=V_{RRM}$ per Diode	-	-	10	mA
Peak Forward Voltage	V_{FM}	$T_j=25^\circ\text{C}, I_{FM}=15\text{A}$ per Diode	-	-	0.61	V
Thermal Resistance	$R_{th(j-c)}$	Junction to Case	-	-	1.5	$^\circ\text{C/W}$

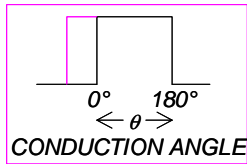
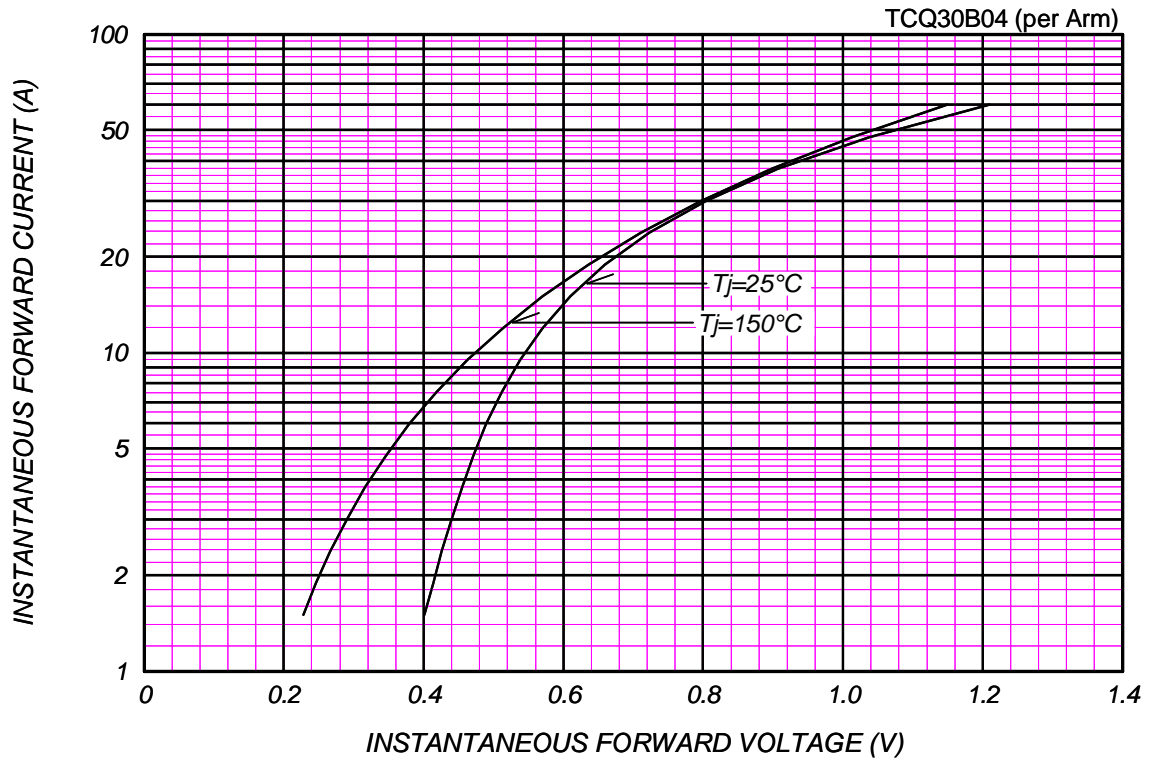
C_T_ OUTLINE DRAWING (Dimensions in mm)



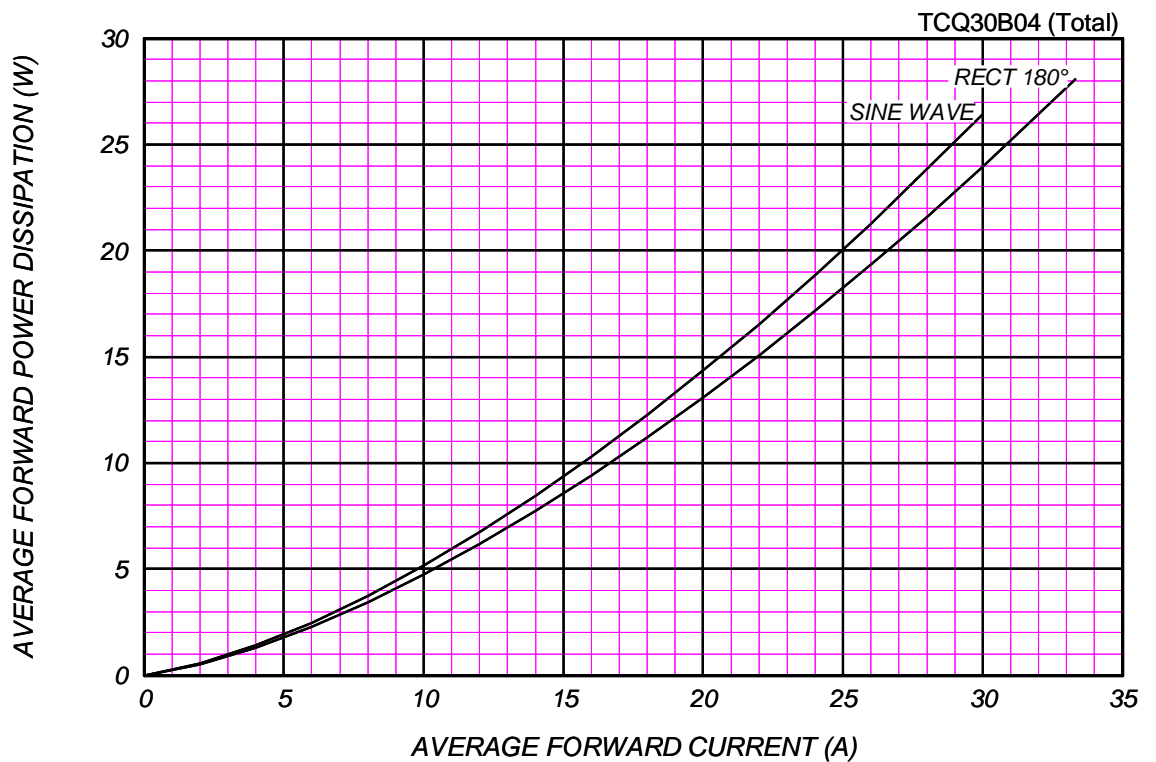
SOLDERING PAD



FORWARD CURRENT VS. VOLTAGE



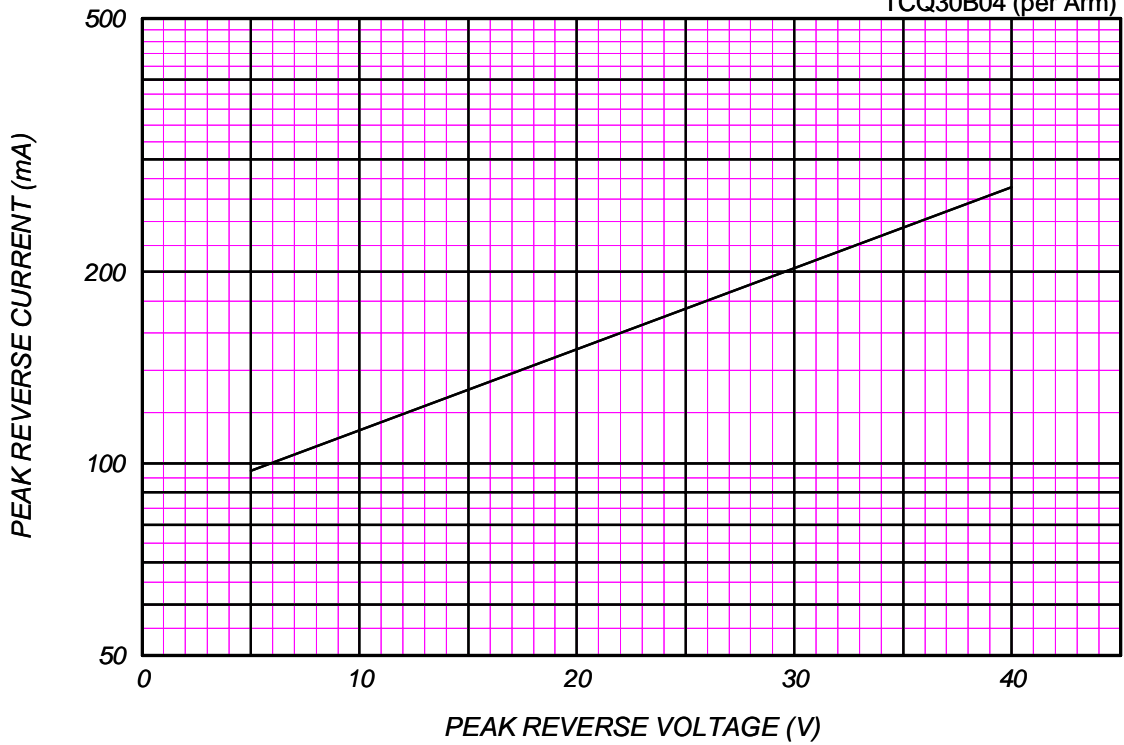
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

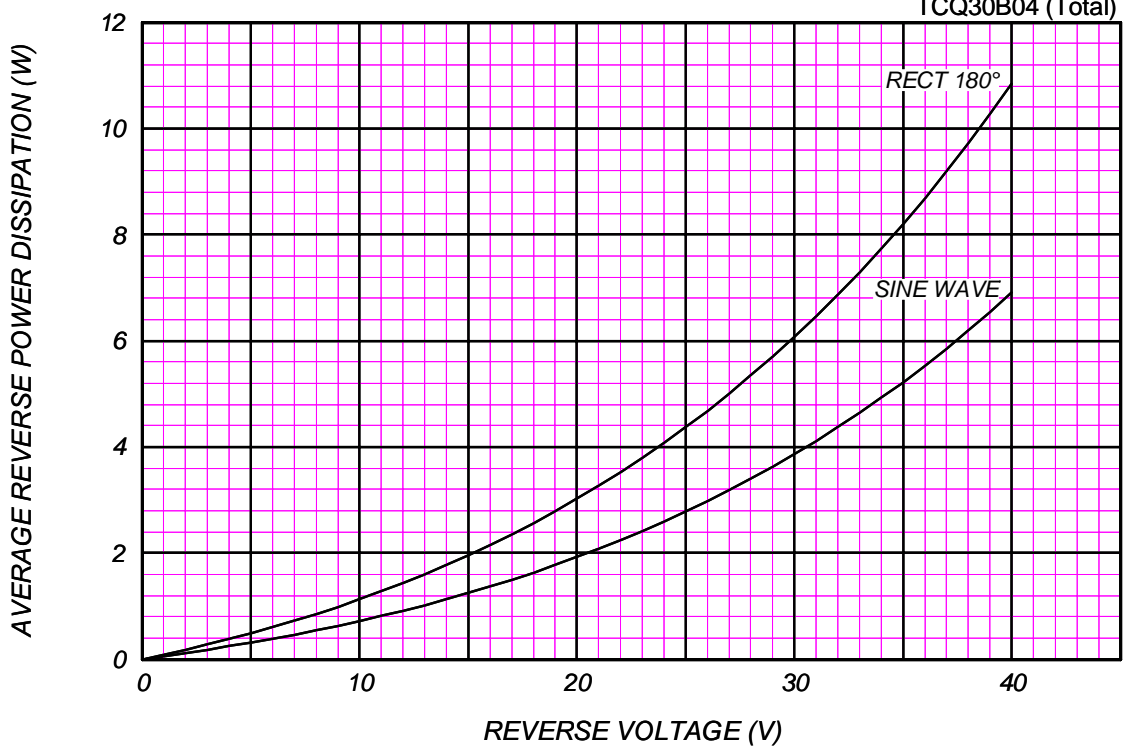
$T_j = 150\text{ }^\circ\text{C}$

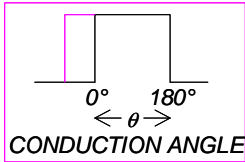
TCQ30B04 (per Arm)



AVERAGE REVERSE POWER DISSIPATION

TCQ30B04 (Total)

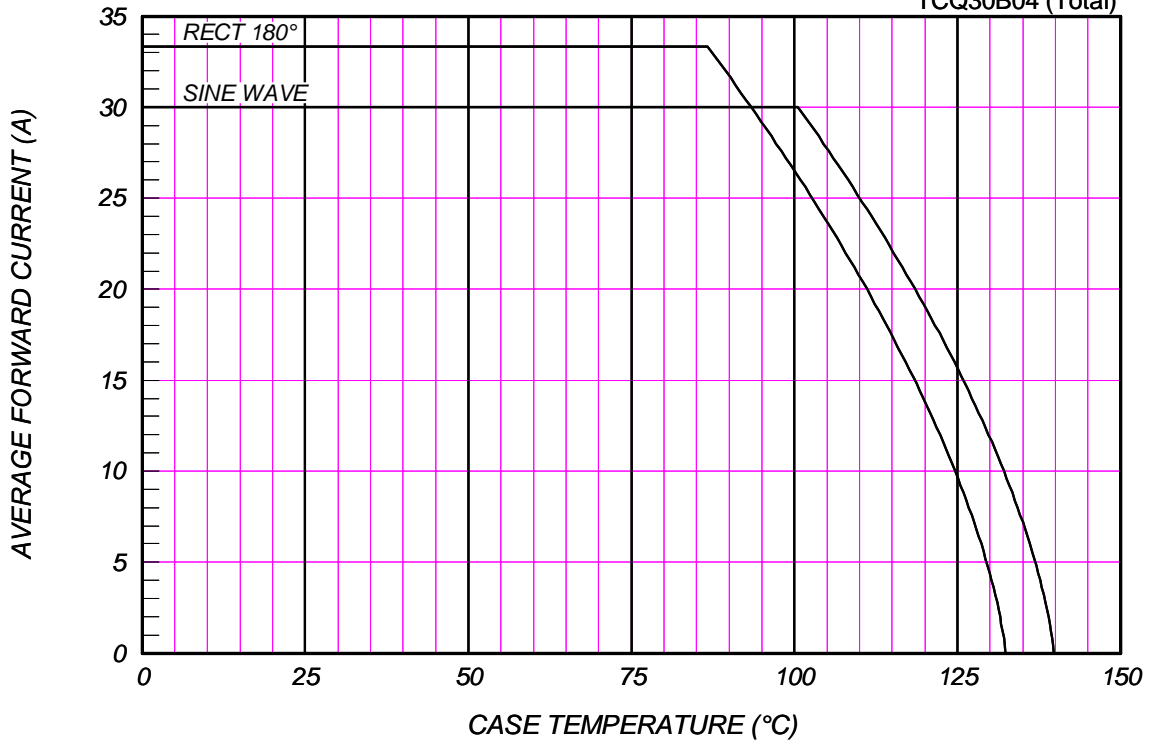




AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

$V_{RM}=40V$

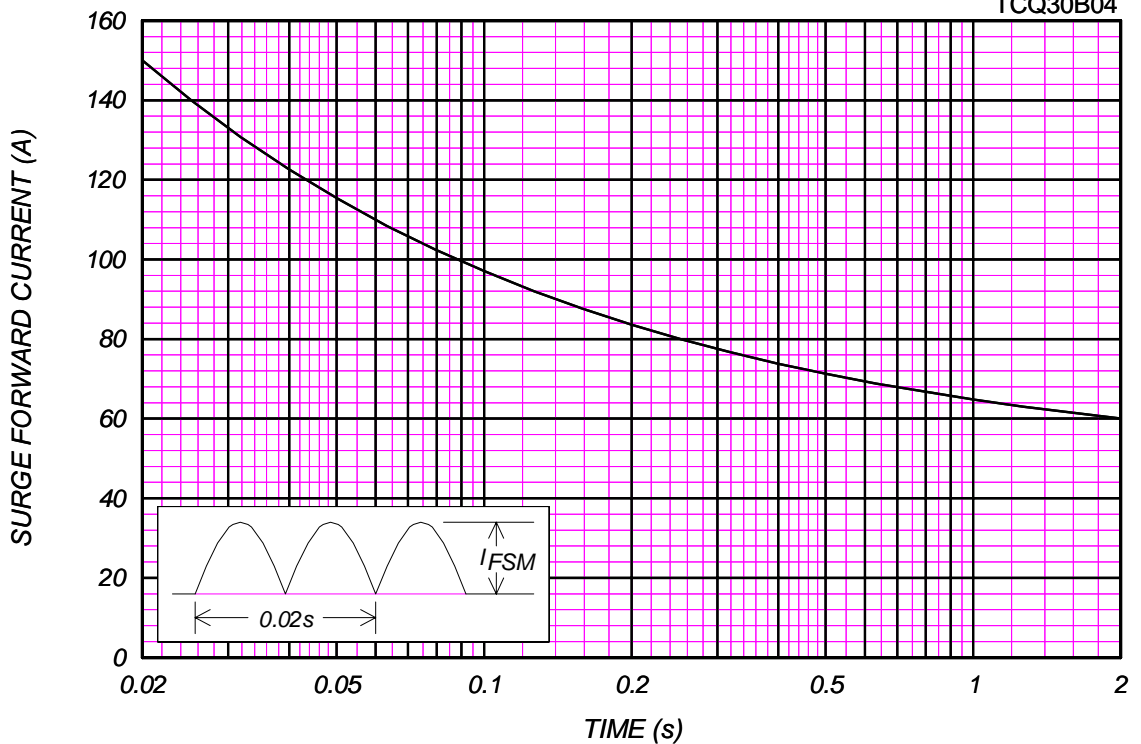
TCQ30B04 (Total)



SURGE CURRENT RATINGS

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

TCQ30B04



JUNCTION CAPACITANCE VS. REVERSE VOLTAGE

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

TCQ30B04 (per Arm)

