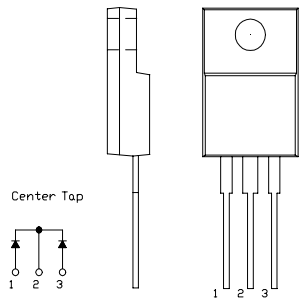
Nihon Inter Electronics Corporation

SBD Type : FCQ30A04

OUTLINE DRAWING



FEATURES

*Similar to TO-220AB Case
*Fully Molded Isolation
*Dual Diodes – Cathode Common
*Low Forward Voltage Drop
*High Surge Capability
*Tj=150 ℃ operation

Maximum Ratings

Approx Net Weight: 1.75g

Rating	Symbol	FCQ30A04			Unit
Repetitive Peak Reverse Voltage	V_{RRM}	40			V
Average Rectified Output Current	I_O	30	Tc=104℃	50 Hz Full Sine Wave Resistive Load	A
RMS Forward Current	$I_{F(RMS)}$	33.3			A
Surge Forward Current	I_{FSM}	250	50Hz Full Sine Wave ,1cycle Non-repetitive		A
Operating JunctionTemperature Range	T_{jw}	-40 to +150			℃
Storage Temperature Range	T_{stg}	-40 to +150			℃
Mounting torque	Ftor	recommended torque = 0.5			N•m

Electrical • Thermal Characteristics

Characteristics	Symbol	Conditions	Min.	Typ.	Max.	Unit
Peak Reverse Current	I_{RM}	Tj= 25℃, V_{RM}= V_{RRM} per arm	-	-	15	mA
Peak Forward Voltage	V_{FM}	Tj= 25℃, I_{FM}= 15 A per arm	-	-	0.55	V
Thermal Resistance	Rth(j-c)	Junction to Case	-	-	1.5	℃/W
	Rth(c-f)	Cace to Fin	-	-	1.5	℃/W

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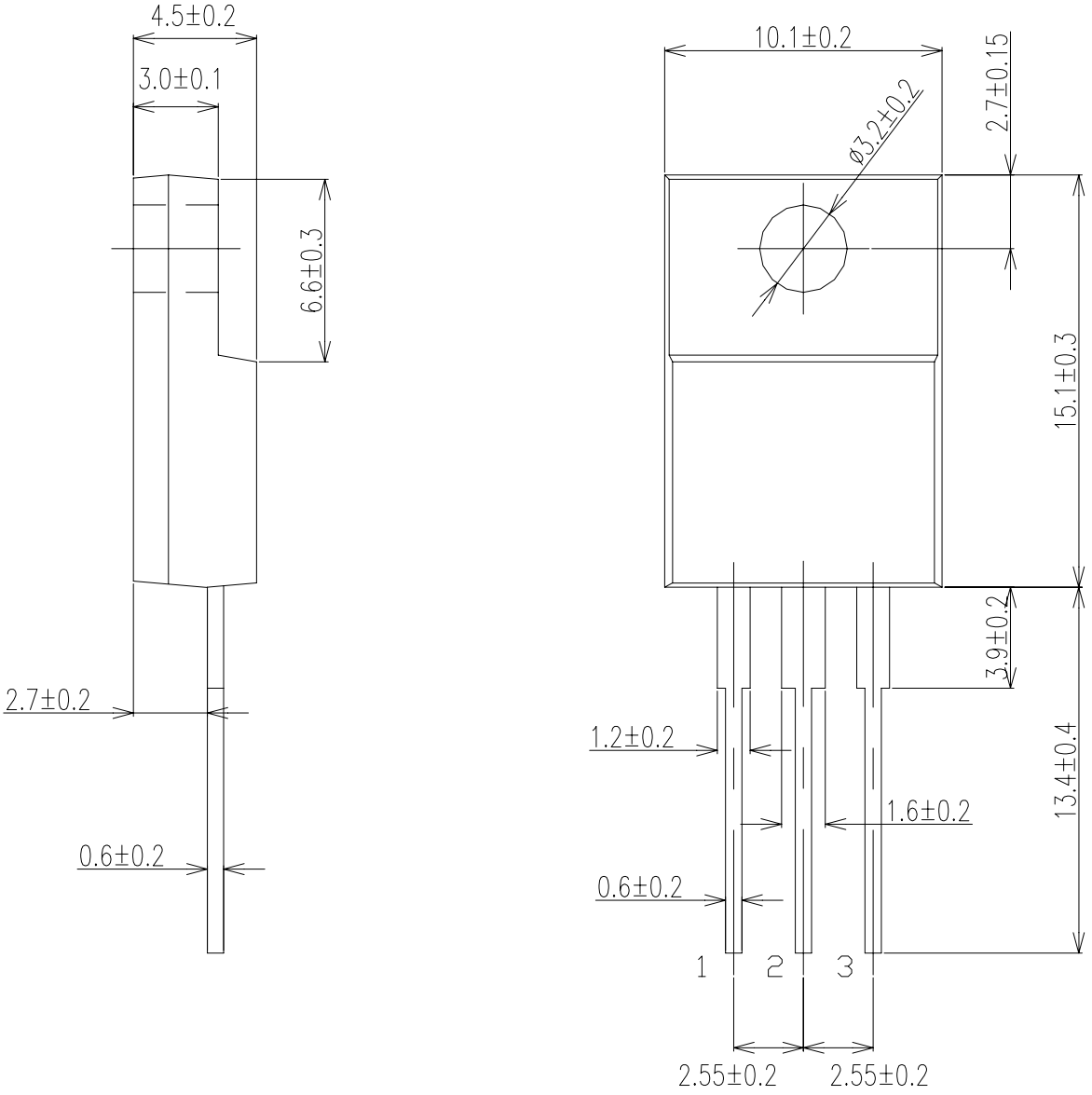
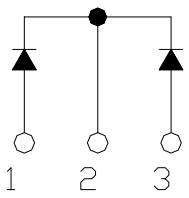
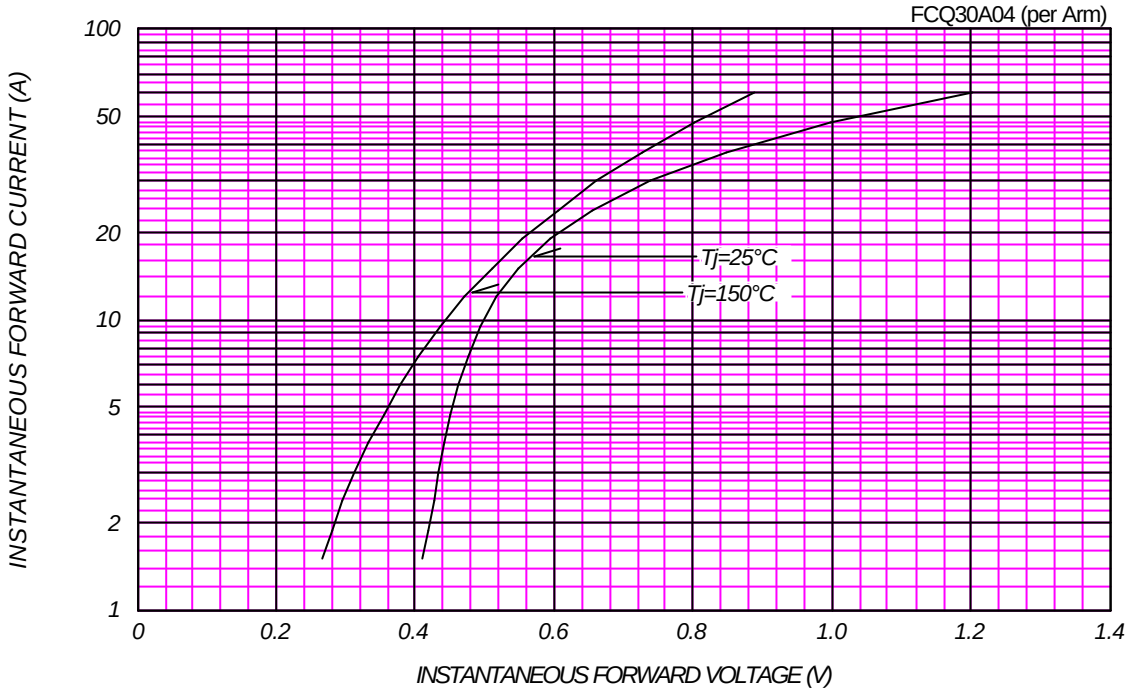
ＦＣＱ_A_外形図（mm）

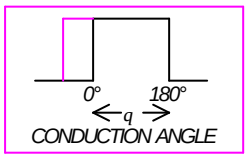


Center Tap

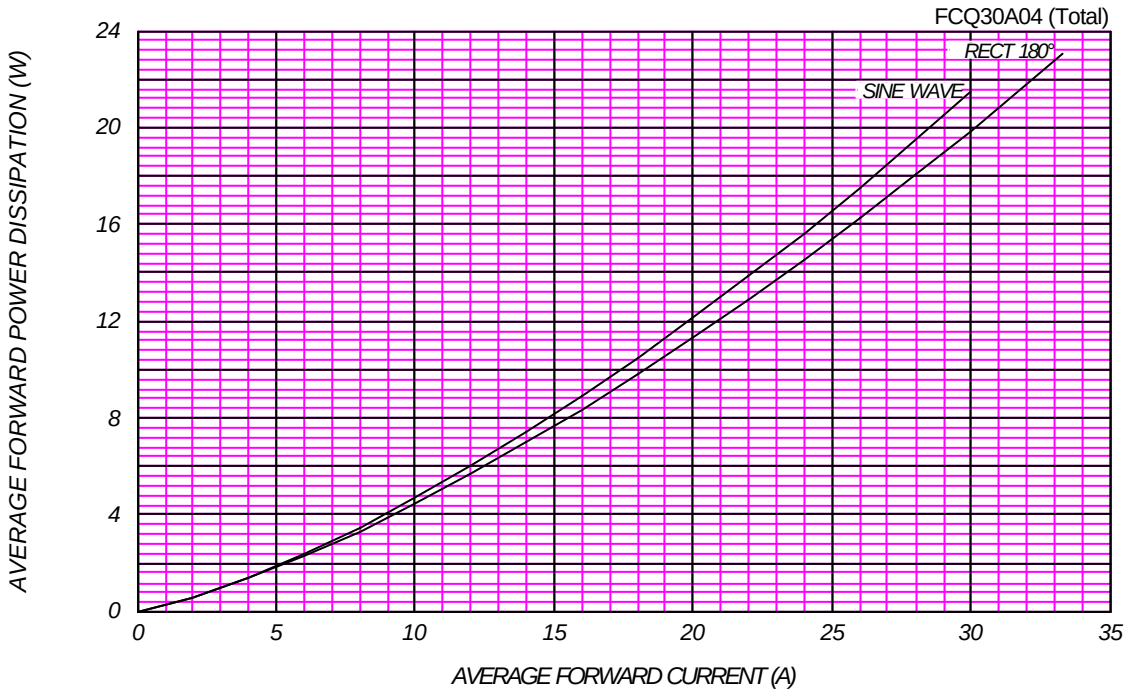


FORWARD CURRENT VS. VOLTAGE





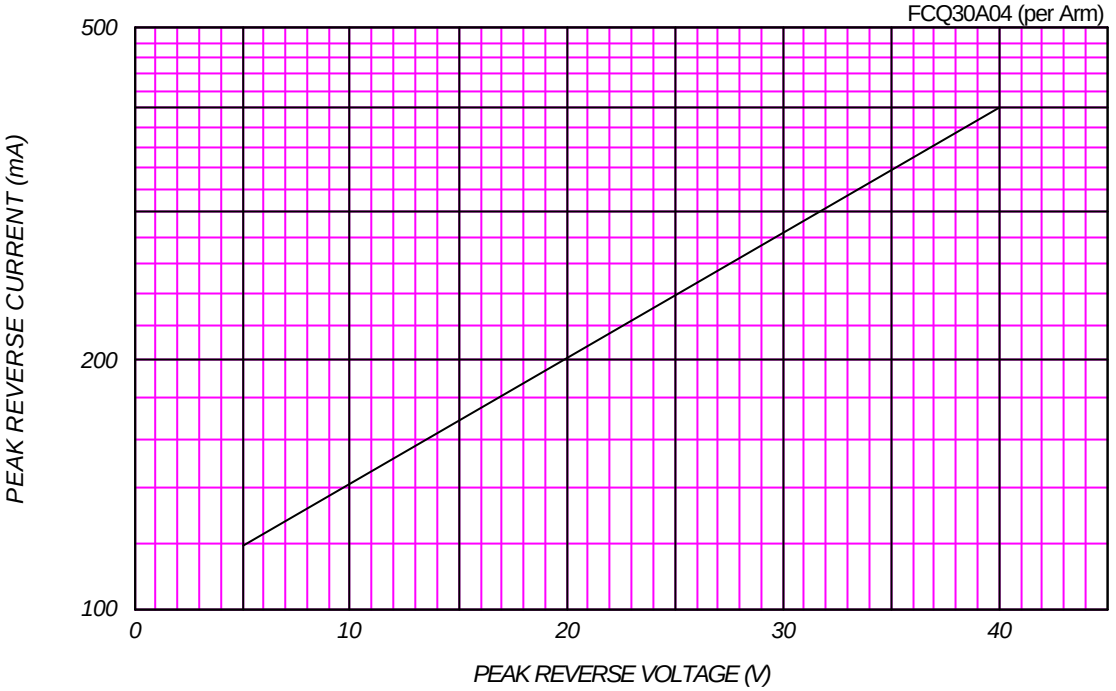
AVERAGE FORWARD POWER DISSIPATION



PEAK REVERSE CURRENT VS. PEAK REVERSE VOLTAGE

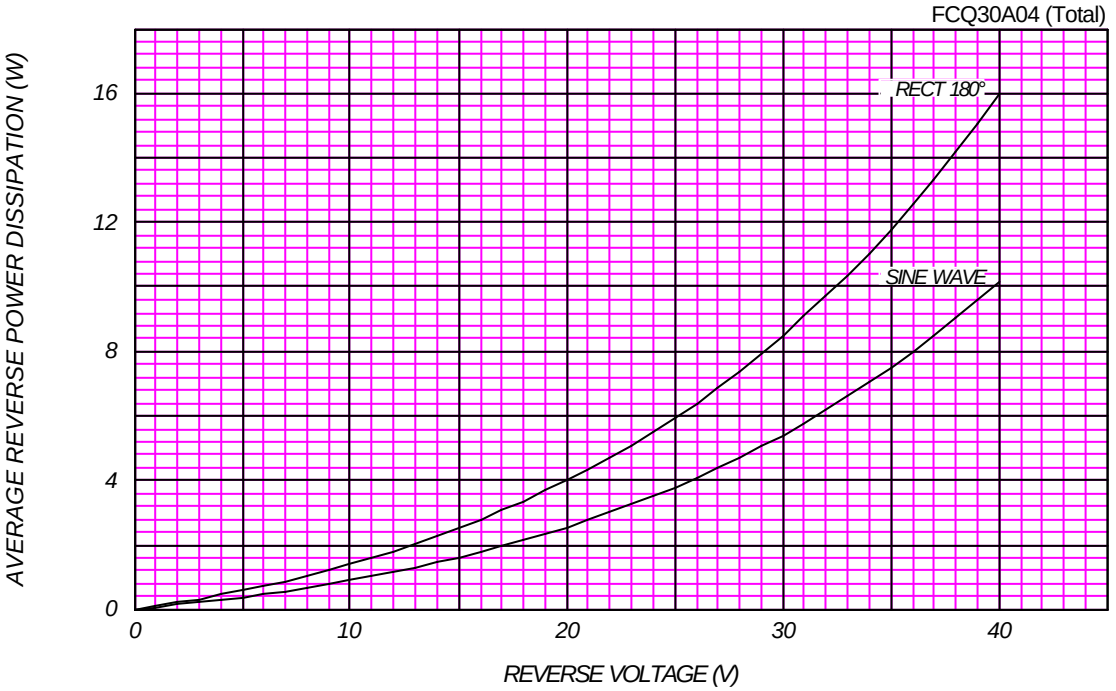
Tj= 150 °C

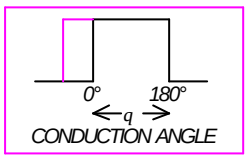
FCQ30A04 (per Arm)



AVERAGE REVERSE POWER DISSIPATION

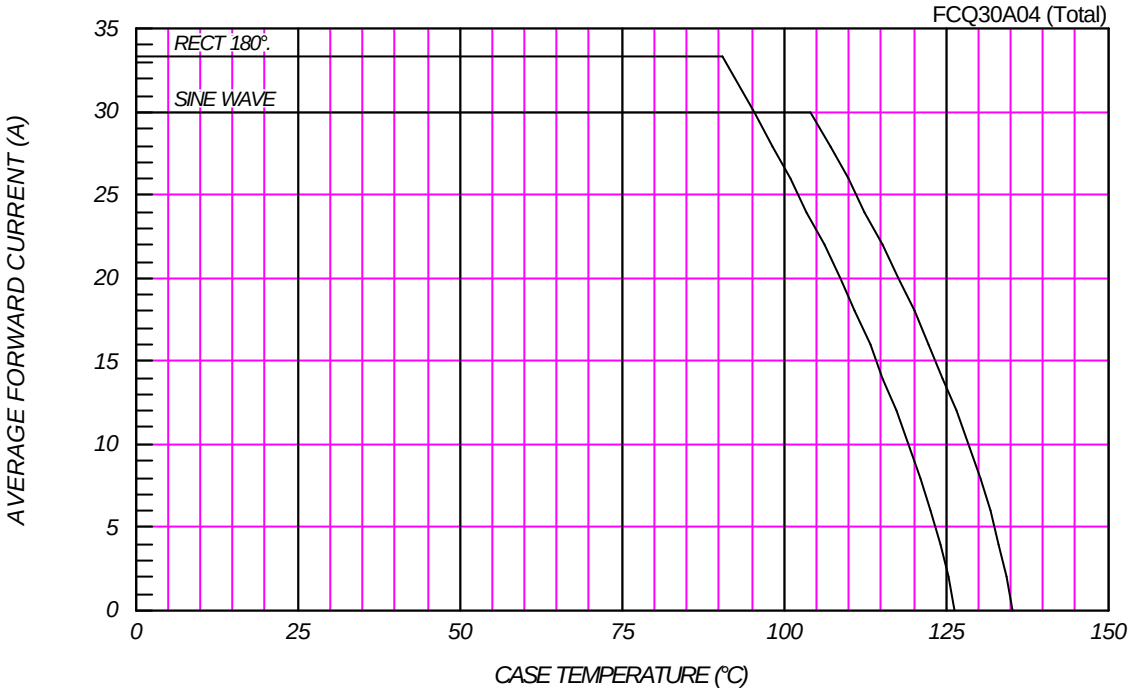
FCQ30A04 (Total)





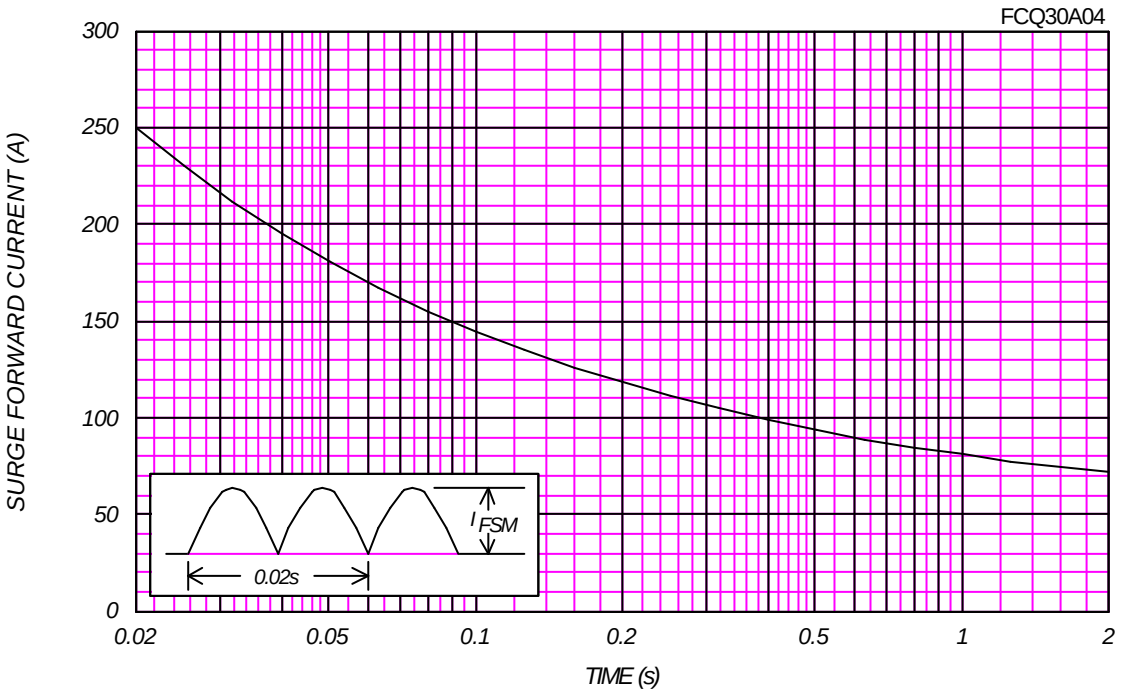
AVERAGE FORWARD CURRENT VS. CASE TEMPERATURE

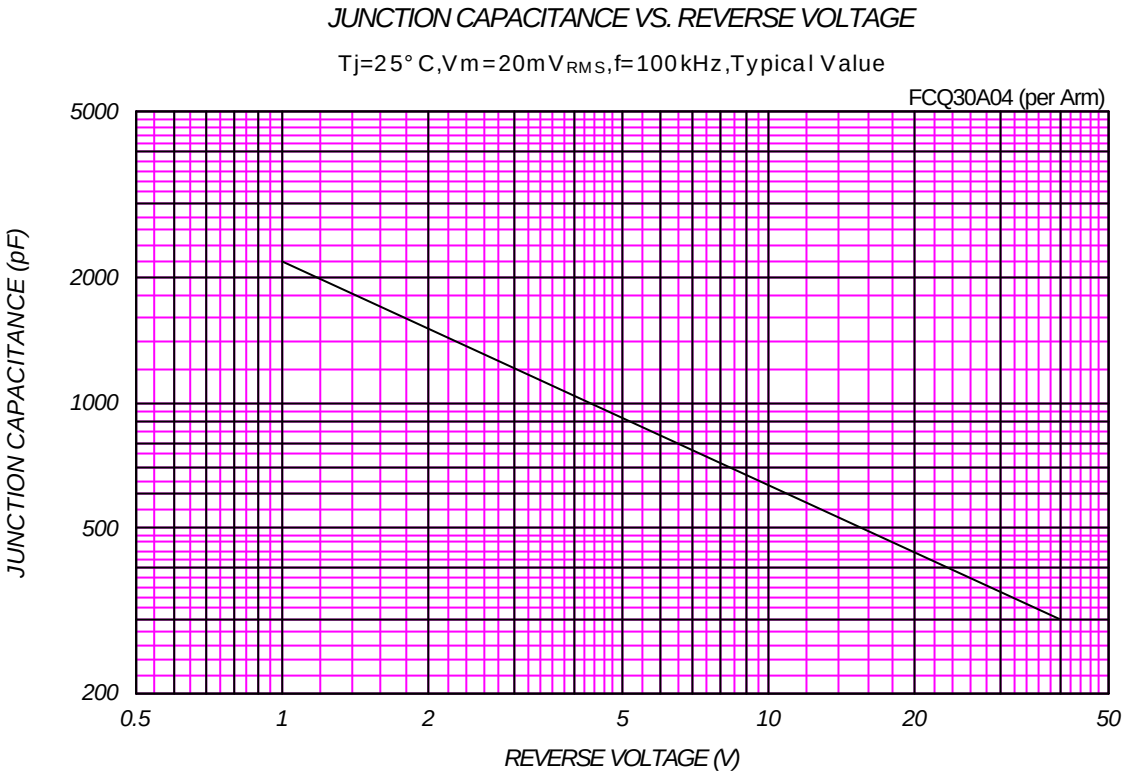
V_{RM}=40 V



SURGE CURRENT RATINGS

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




JUNCTION CAPACITANCE VS. REVERSE VOLTAGE
Tj=25° C,Vm=20mV RMS,f=100kHz,Typical Value
FCQ30A04 (per Arm)
JUNCTION CAPACITANCE (pF)
5000
2000
1000
500
200
0.5
1
2
5
10
20
50
REVERSE VOLTAGE (V)