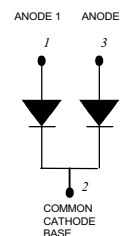
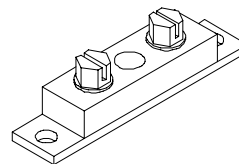
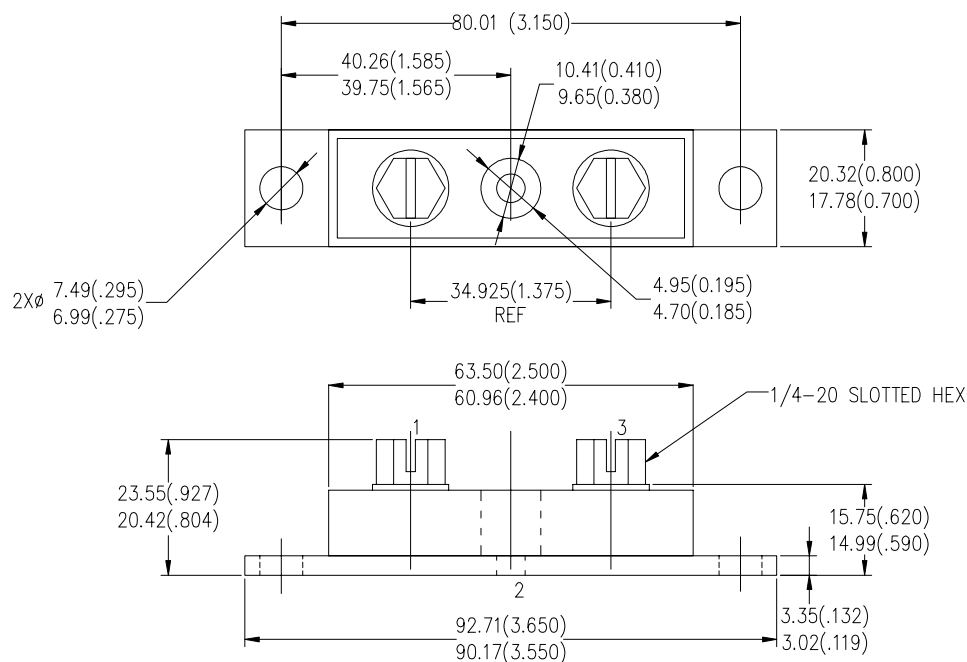


**SENSITRON****SEMICONDUCTOR****444CNQ...SERIES****TECHNICAL DATA
DATA SHEET****444CNQ035/444CNQ040/444CNQ045
SCHOTTKY RECTIFIER****Applications:**

- High current switching power supply • Plating power supply • Free-Wheeling diodes
- Reverse battery protection • Converters • UPS system • Welding

Features:

- 125 °C T_J operation
- Center tap module
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Mechanical Dimensions: In Inches / mm**PRM4(Non-Isolated)**

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	35	V
			40	
			45	
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 81^\circ\text{C}$, rectangular wave form	440	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	4560	A
Non-Repetitive Avalanche Energy (per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 40\text{A}$, $L = 0.34\text{mH}$	270	mJ
Repetitive Avalanche Current (per leg)	I_{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical	40	A

Electrical Characteristics:

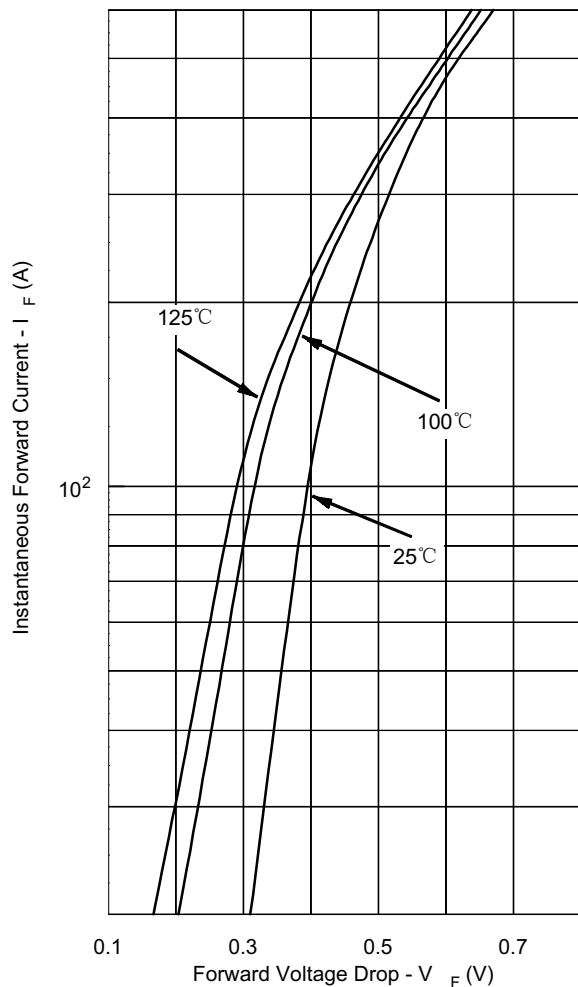
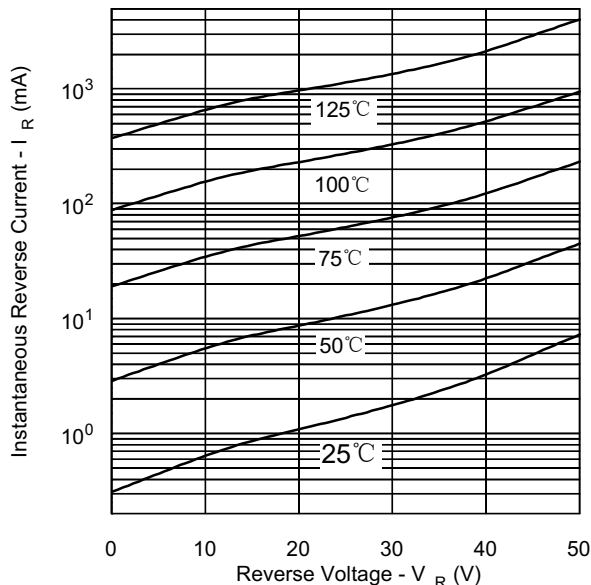
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 220A, Pulse, $T_J = 25^\circ\text{C}$	0.53	V
		@ 440 A, Pulse, $T_J = 25^\circ\text{C}$	0.69	
	V_{F2}	@ 220 A, Pulse, $T_J = 100^\circ\text{C}$	0.51	V
		@ 440 A, Pulse, $T_J = 100^\circ\text{C}$	0.68	
Max. Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	20	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	2400	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	10300	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	5.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μs

* Pulse Width < 300 μs , Duty Cycle <2%**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification		Units
Max. Junction Temperature	T _J	-	-55 to +125		°C
Max. Storage Temperature	T _{stg}	-	-55 to +125		°C
Maximum Thermal Resistance Junction to Case (per leg)	R _{θJC}	DC operation	0.20		°C/W
Maximum Thermal Resistance Junction to Case (per package)	R _{θJC}	DC operation	0.10		°C/W
Maximum Thermal Resistance, Case to Heat Sink	R _{θCS}	Mounting surface, smooth and greased	0.10		°C/W
Approximate Weight	wt	-	79		g
Mounting Torque	T _M	-	Mounting Torque Base	24 (min) 35 (max)	Kg-cm
			Mounting Torque Center Hole	13.5(Typ)	

**SENSITRON****SEMICONDUCTOR****444CNQ...SERIES**

			Terminal Torque	35(min) 46 (max)	
Case Style	PRM4 Non-Isolated				

Typical Forward Characteristics**Typical Reverse Characteristics****Typical Junction Capacitance**