

Technical Data
Data Sheet 2924, Rev. -

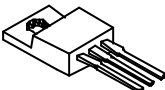
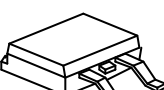
20CTQ200/20CTQ200S/20CTQ200-1
SCHOTTKY RECTIFIER

Applications:

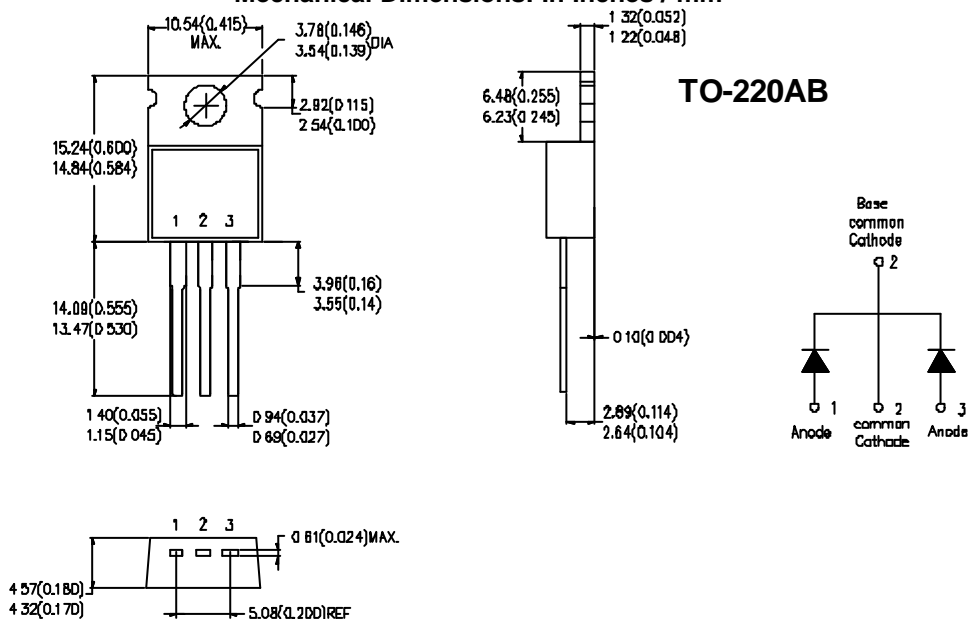
- Switching power supply · Converters · Free-Wheeling diodes · Reverse battery protection

Features:

- 175 °C T_J operation
- Center tap configuration
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability

Case styles		
<p>20CTQ200</p>  <p>TO-220AB</p>	<p>20CTQ200S</p>  <p>D²PAK</p>	<p>20CTQ200-1</p>  <p>TO-262</p>

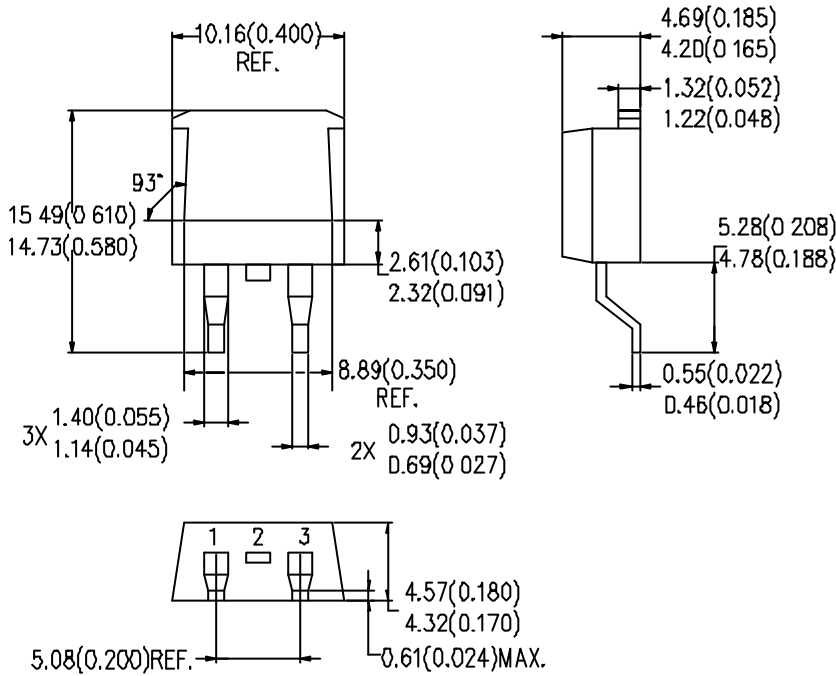
Mechanical Dimensions: In Inches / mm



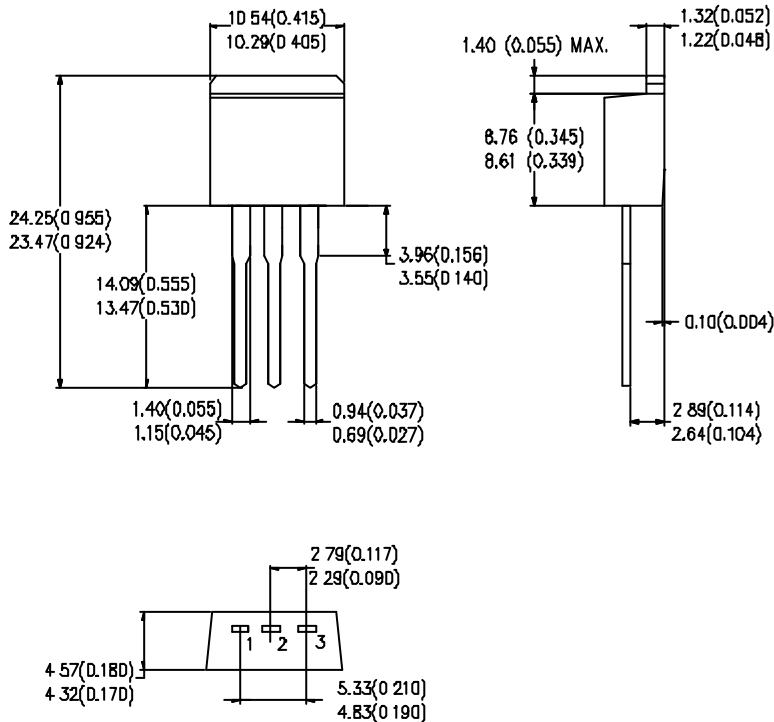
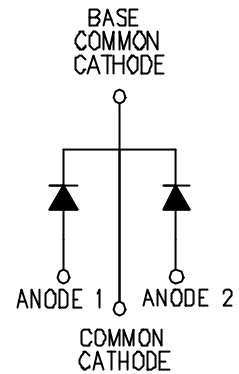
SENSITRON
SEMICONDUCTOR

20CTQ200
20CTQ200S
20CTQ200-1

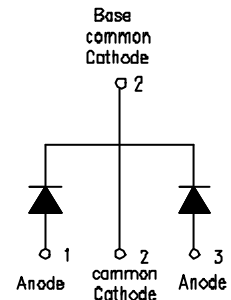
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D²PAK



TO-262



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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	200	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 125^\circ\text{C}$, rectangular wave form	10(Per leg) 20(Per device)	A
Peak Repetitive Forward Current (per leg)	I_{FRM}	Rated V_R , square wave, 20kHz $T_C = 90^\circ\text{C}$	20	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	180	A
Peak Repetitive Reverse Surge Current	I_{RRM}	2.0 μsec 1.0KHz	1.0	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg)*	V_{F1}	@ 10A, Pulse, $T_J = 25^\circ\text{C}$ @ 20A, Pulse, $T_J = 25^\circ\text{C}$	0.90 1.00	V
	V_{F2}	@ 10 A, Pulse, $T_J = 125^\circ\text{C}$ @ 20 A, Pulse, $T_J = 125^\circ\text{C}$	0.80 0.90	V
Max. Reverse Current (per leg)*	I_{R1}	@ $V_R = \text{rated } V_R$, Pulse $T_J = 25^\circ\text{C}$	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R$, Pulse $T_J = 125^\circ\text{C}$	50	mA
Max. Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ $V_{SIG} = 50\text{mV(p-p)}$	500	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	8.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ μs

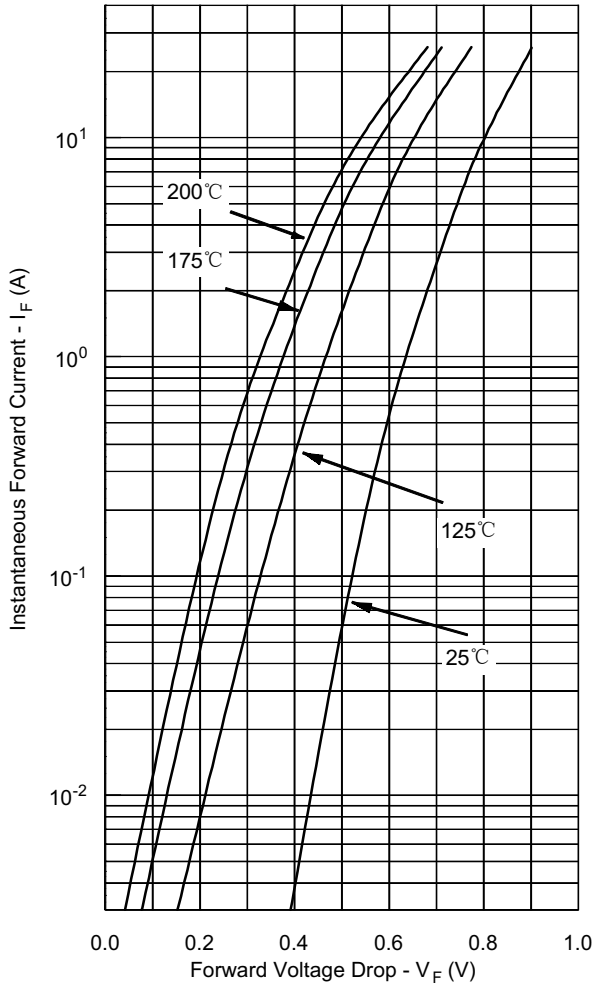
* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications:

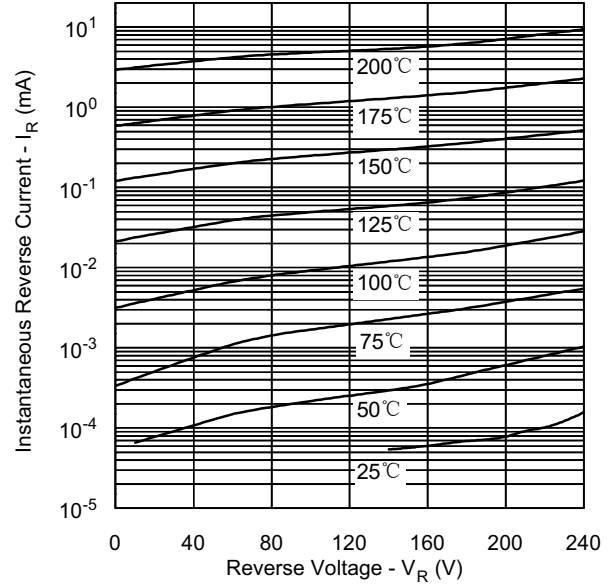
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-65 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.0	$^\circ\text{C/W}$
Approximate Weight	wt	-	2.0	g
Mounting Torque	T_M	-	6(Min.) 12(Max.)	Kg-cm
Case Style	TO-220AB D ² PAK TO-262(Suffix"-1" for TO-262; MBRB x for D ² PAK)			

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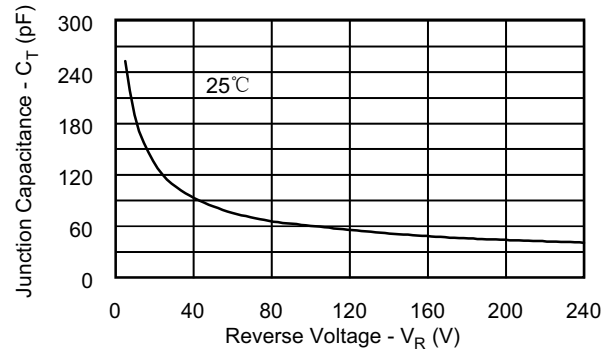
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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