

SENSITRON
SEMICONDUCTOR

31DQ15

Technical Data
Data Sheet 2860, Rev. -

31DQ15 SCHOTTKY RECTIFIER

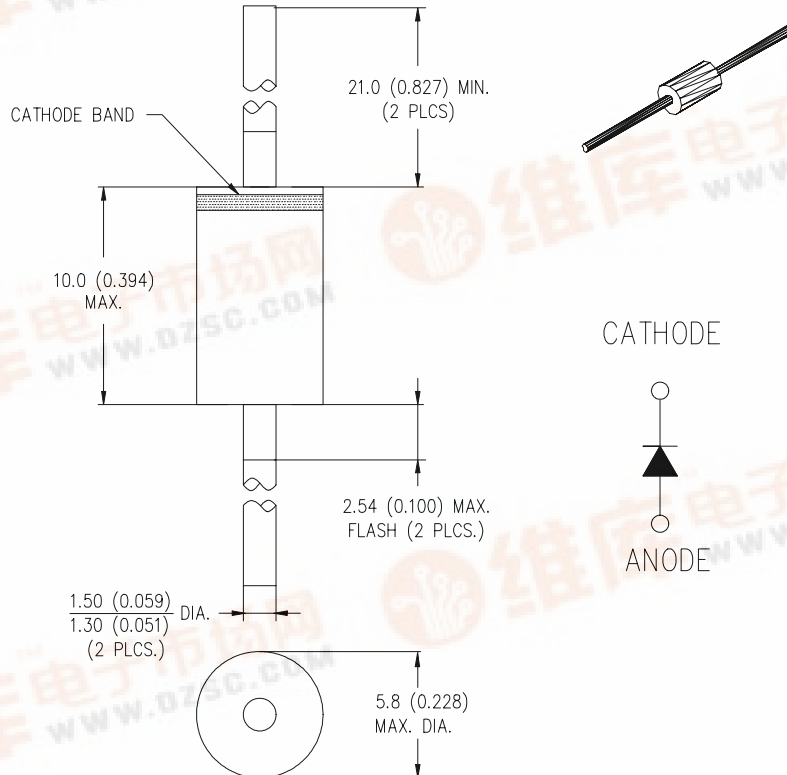
Applications:

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

Features:

- Low profile, axial leaded outline
- 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



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Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	150	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_L = 53.4\text{ }^\circ\text{C}$, rectangular wave form	3.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	55	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@3 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.86	V
	V_{F2}	@3 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.70	V
Max. Reverse Current *	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1	mA
	I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125\text{ }^\circ\text{C}$	3	mA
Max. Junction Capacitance	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	110	pF
Typical Series Inductance	L_S	Measured lead to lead 5 mm from package body	9.0	nH
Max. Voltage Rate of Change (Rated V_R)	dv/dt		10,000	V/ μs

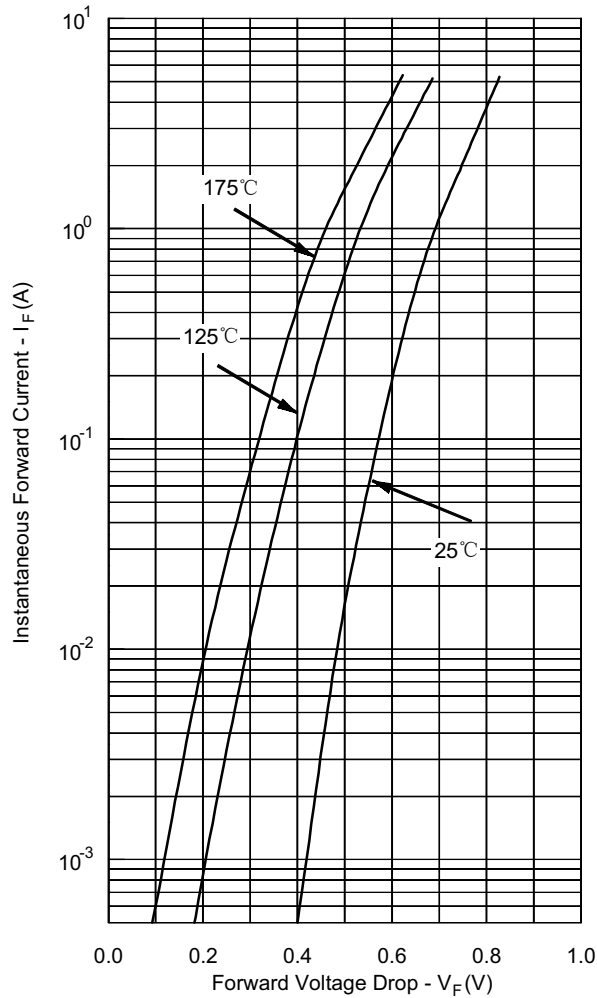
* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications:

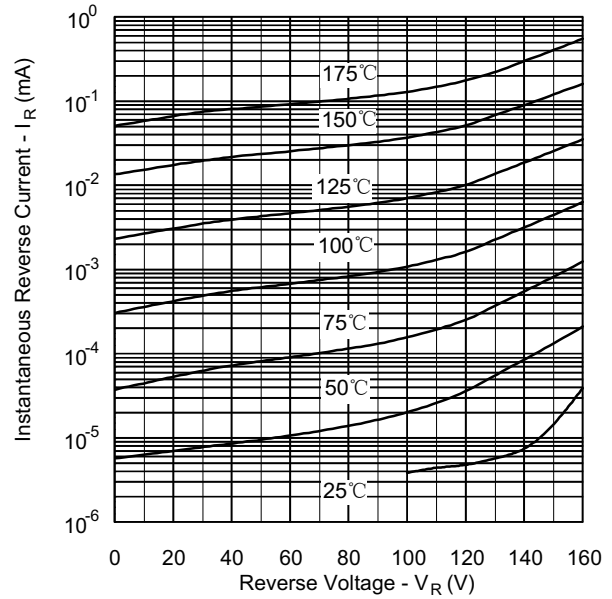
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-40 to +175	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-40 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	80	$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	34	$^\circ\text{C/W}$
Approximate Weight	wt	-	1.2	g
Case Style		DO-201AD		

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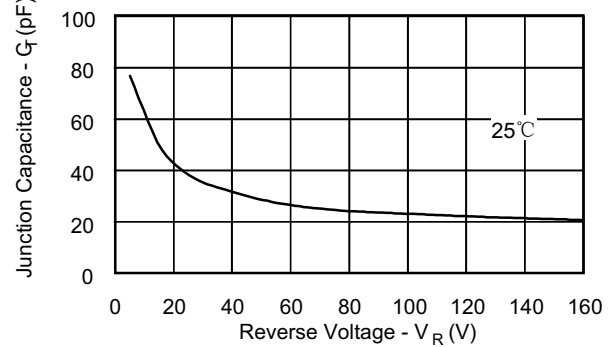
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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