

31DQ05-G/31DQ06-G SCHOTTKY RECTIFIER

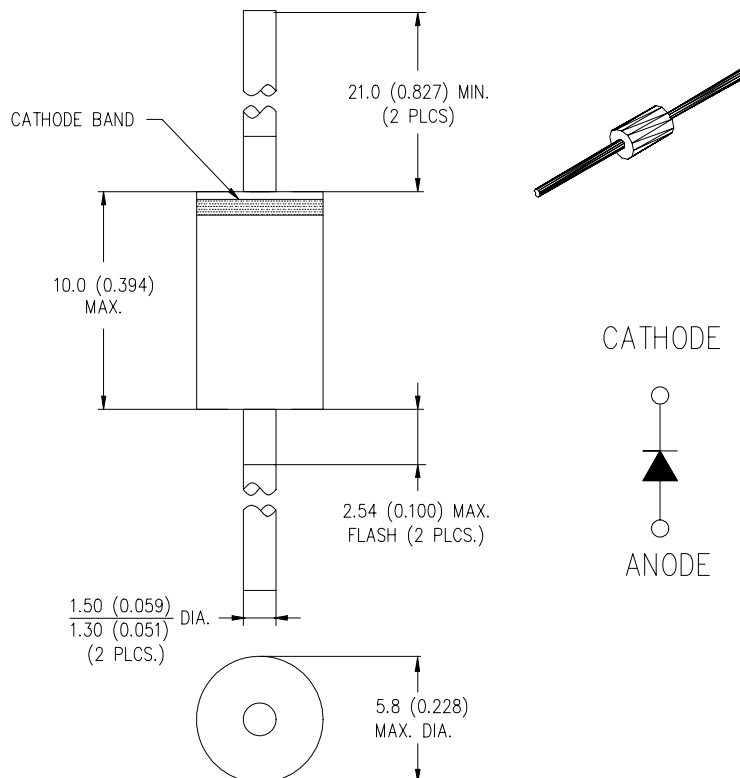
Applications:

- 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
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance with the RoHS Directive

Mechanical Dimensions: In Inches / mm



DO-201AD

Data Sheet 3378, Rev. -
Maximum Ratings:

Green Products

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	50	(30DQ05-G)
			60	(30DQ06-G)
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 40^\circ\text{C}$, rectangular wave form	3.3	A
Max. Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	66	A

Electrical Characteristics:

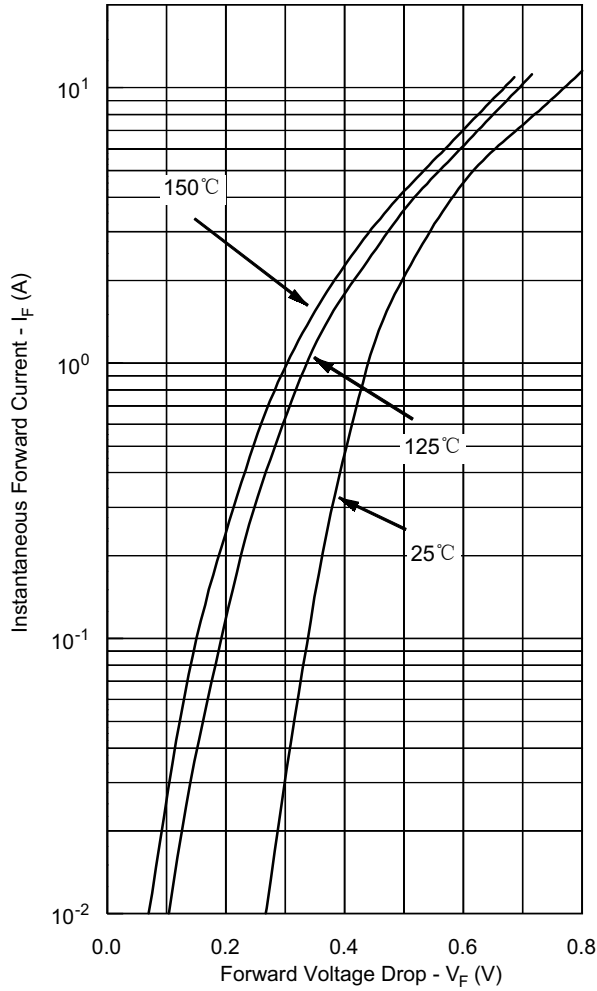
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V_{F1}	@3 A, Pulse, $T_J = 25^\circ\text{C}$	0.62	V
		@6 A, Pulse, $T_J = 25^\circ\text{C}$	0.78	
	V_{F2}	@3 A, Pulse, $T_J = 125^\circ\text{C}$	0.54	V
		@6 A, Pulse, $T_J = 125^\circ\text{C}$	0.65	
Max. Reverse Current *	I_{R1}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25^\circ\text{C}$	2	mA
		I_{R2}	@ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125^\circ\text{C}$	15
Max. Junction Capacitance	C_T	@ $V_R = 5\text{ V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	160	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%

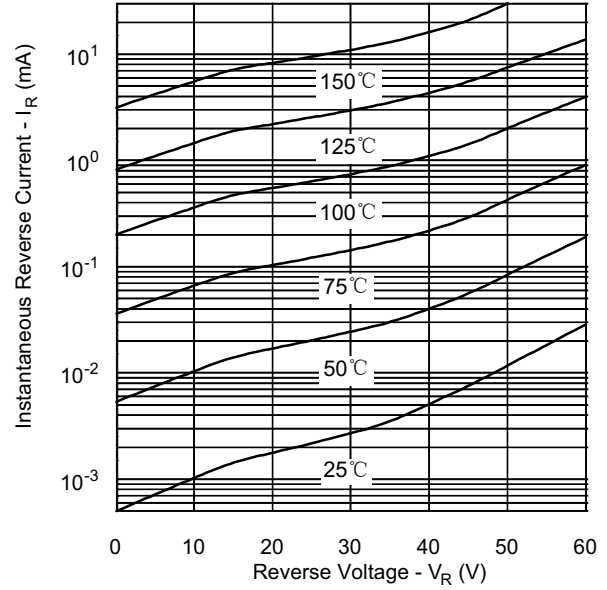
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T_J	-	-40 to +150	$^\circ\text{C}$
Max. Storage Temperature	T_{stg}	-	-40 to +150	$^\circ\text{C}$
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			

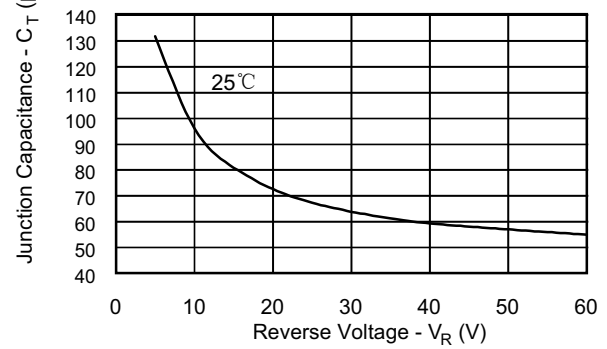
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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