

Technical Data  
Data Sheet 3126, Rev. -

## 20CJQ030 SCHOTTKY RECTIFIER

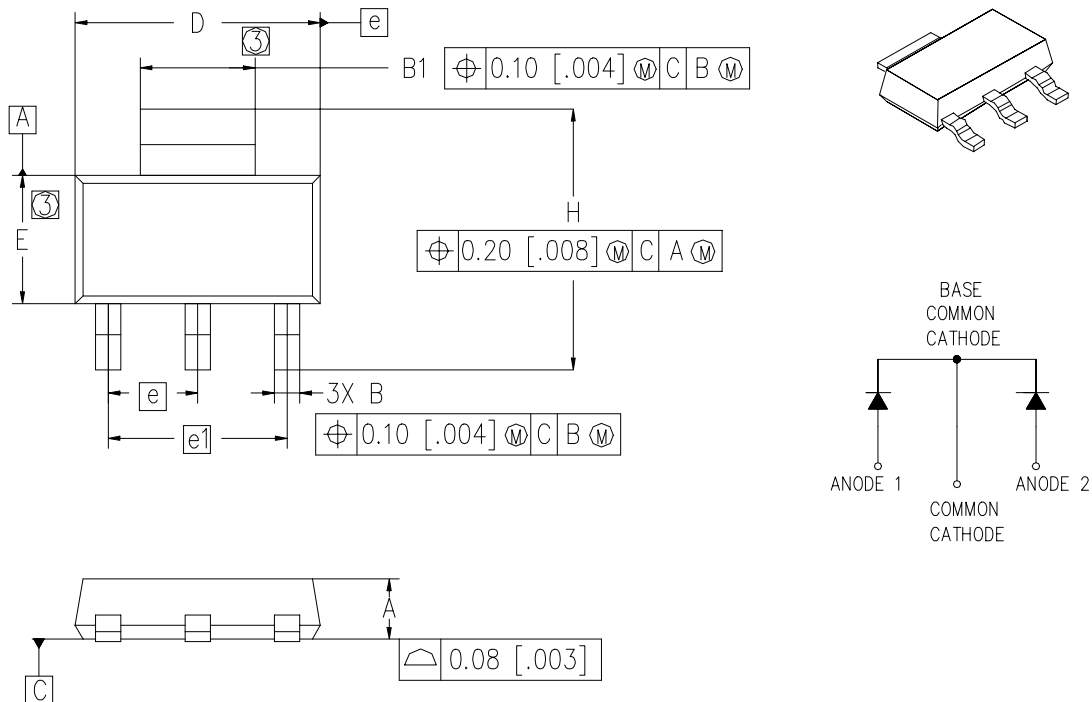
### Applications:

- Switching Power Supply • Converters • Automotive system • Free-Wheeling Diodes
- Reverse battery protection • Battery charging

### Features:

- Small footprint, surface mountable
- Low profile
- Very Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Common cathode

### Mechanical Dimensions: In Inches / mm



### SOT-223 (TO-261AA)

Data Sheet 3126, Rev. -

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	30	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 135^\circ\text{C}$ , rectangular wave form	2	A
Max. Average Forward Current		50% duty cycle @ $T_C = 117^\circ\text{C}$ , rectangular wave form	4	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	$I_{FSM}$	8.3 ms, half Sine pulse	28.8	A
Non-Repetitive Avalanche Energy (per leg)	$E_{AS}$	$T_J = 25^\circ\text{C}$ , $I_{AS} = 0.2\text{ A}$ , $L = 850\text{ mH}$	17	mJ
Repetitive Avalanche Current (per leg)	$I_{AR}$	Current decaying linearly to zero in $1\ \mu\text{sec}$ Frequency limited by $T_J$ max. $V_A = 1.5 \times V_R$ typical	0.2	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 1 A, Pulse, $T_J = 25^\circ\text{C}$	0.50	V
		@ 2 A, Pulse, $T_J = 25^\circ\text{C}$	0.69	
	$V_{F2}$	@ 1 A, Pulse, $T_J = 125^\circ\text{C}$	0.42	V
		@ 2 A, Pulse, $T_J = 125^\circ\text{C}$	0.52	
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.1	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ\text{C}$	15	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{ V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{ MHz}$	120	pF
Typical Series Inductance (per leg)	$L_S$	Measured lead to lead 5 mm from package body	6.0	nH
Max. Voltage Rate of Change	dv/dt	-	4600	V/ $\mu\text{s}$

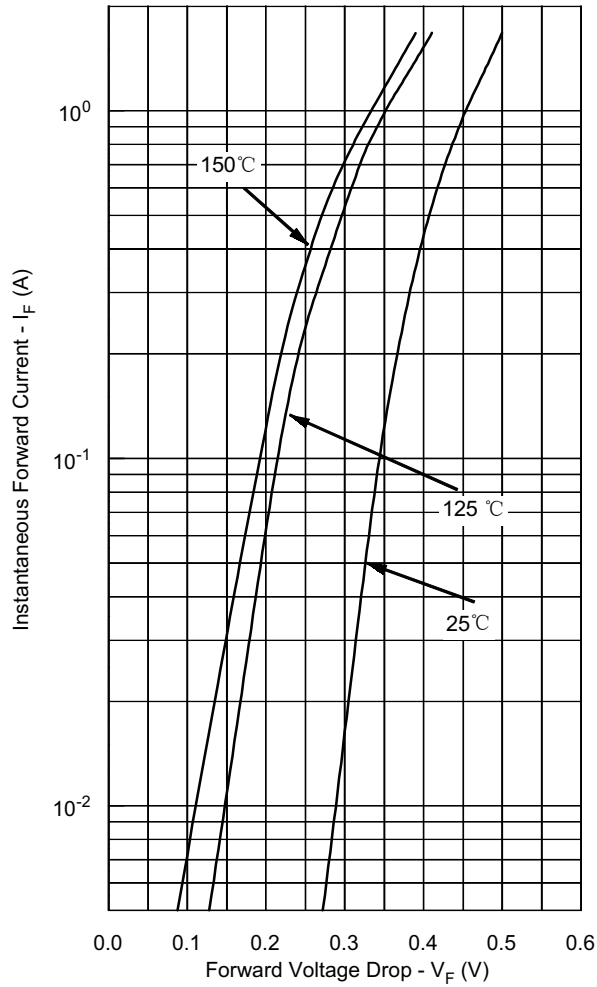
\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle <2%

**Thermal-Mechanical Specifications:**

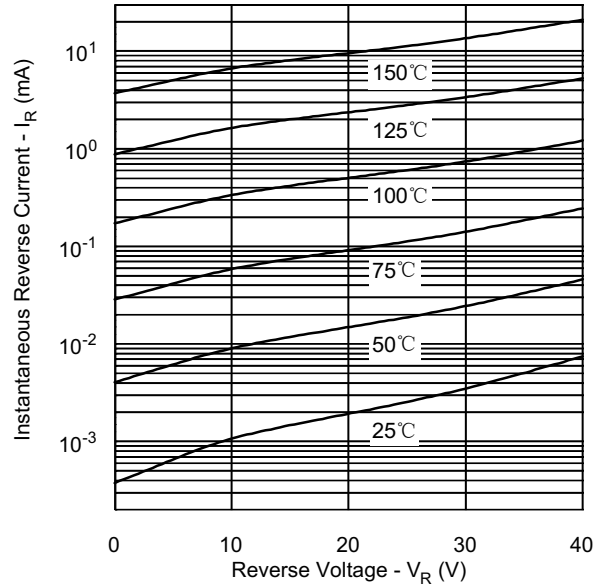
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	65	$^\circ\text{C/W}$
Maximum Thermal Resistance, Junction to Lead	$R_{\theta JL}$	DC operation	25	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.13	g
Case Style		SOT-223		

Data Sheet 3126, Rev. -

**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**

