

TECHNICAL DATA  
DATA SHEET 5160, REV. -

## LOW DROP SILICON RECTIFIER

DESCRIPTION: 200V 50A Hermetic low drop rectifier in a SHD-3 HP package.

**Features:**

- Designed for Battery Cell Bypass application
- Low package inductance
- High Surge Capacity
- Available with SX or SXV screening

**Maximum Ratings:**

ALL RATINGS ARE @  $T_C = 25\text{ }^\circ\text{C}$  UNLESS OTHERWISE SPECIFIED.

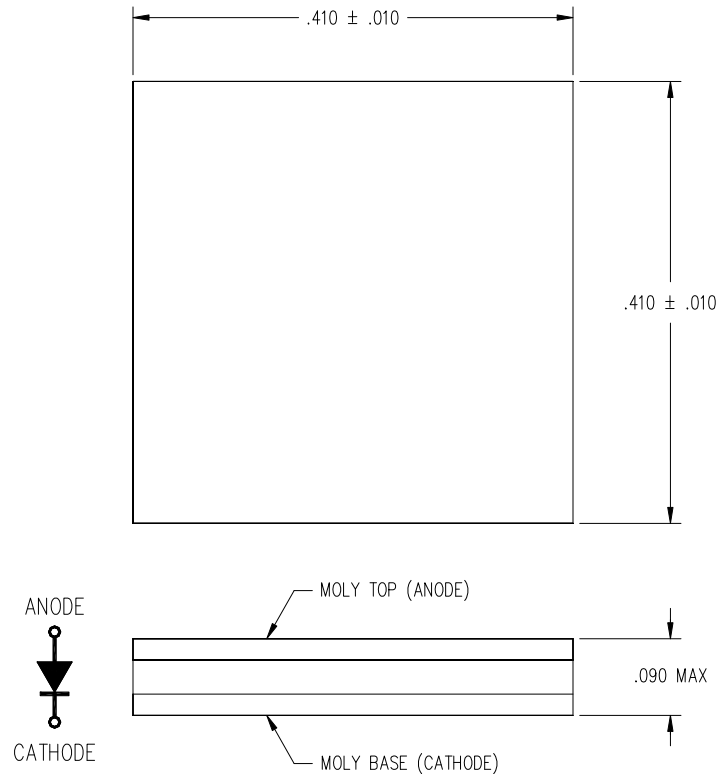
Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	200	V
Max. Average Forward Current	$I_{F(AV)}$	-	50	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine wave	300	A
Maximum Thermal Resistance	$R_{\theta JC}$		1.0	$^\circ\text{C/W}$
Max. Junction Temperature	$T_J$	-	-65 to +175	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-65 to +175	$^\circ\text{C}$

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop	$V_{F1}$	@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.850	V
	$V_{F2}$	@ 10A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.875	V
	$V_{F3}$	@ 25A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.915	V
	$V_{F4}$	@ 50A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.965	V
	$V_{F5}$	@ 100A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.025	V
	$V_{F6}$	@ 5A, Pulse, $T_J = -55\text{ }^\circ\text{C}$	0.940	V
	$V_{F7}$	@ 10A, Pulse, $T_J = -55\text{ }^\circ\text{C}$	0.965	V
	$V_{F8}$	@ 25A, Pulse, $T_J = -55\text{ }^\circ\text{C}$	1.040	V
	$V_{F9}$	@ 50A, Pulse, $T_J = -55\text{ }^\circ\text{C}$	1.090	V
	$V_{F10}$	@ 5A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.715	V
	$V_{F11}$	@ 10A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.750	V
	$V_{F12}$	@ 25A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.815	V
	$V_{F13}$	@ 50A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.865	V
Max. Reverse Current	$I_{R1}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	10	$\mu\text{A}$
	$I_{R2}$	@ $V_R = 200\text{V}$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.5	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 10\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ , $V_{SIG} = 100\text{mV (p-p)}$	400	pF
Max. Reverse Recovery Time	$t_{RR}$	$I_F = 0.5\text{A}$ , $I_R = 1\text{A}$ , $I_{RR} = 0.25\text{A}$ , $T_J = 25\text{ }^\circ\text{C}$	2	$\mu\text{s}$

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**MECHANICAL DIMENSIONS: In Inches / mm**



**SHD-3 HP**

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