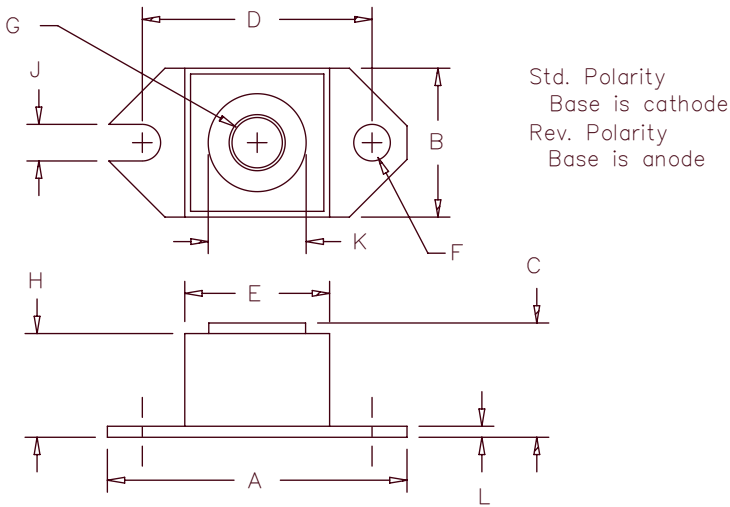


# 180 Amp Schottky Rectifier HS18135–HS18145



Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	1.52	1.56	38.61	39.62	
B	.725	.775	18.42	19.69	
C	.605	.625	15.37	15.88	
D	1.182	1.192	30.02	30.28	
E	.745	.755	18.92	19.18	Sq.
F	.152	.160	3.86	4.06	Dia.
G		1/4–20	UNC–2B		
H	.525	.580	13.34	14.73	
J	.156	.160	3.96	4.06	
K	.495	.505	12.57	12.83	Dia.
L	.120	.130	3.05	3.30	

## HALF-PAK

Microsemi Catalog Number	Industry Part Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage	
HS18135*	181NQ035	35V	35V	<ul style="list-style-type: none"> <li>● Schottky Barrier Rectifier</li> <li>● Guard Ring Protection</li> <li>● Low Forward Voltage</li> <li>● 175°C Junction Temperature</li> <li>● <math>V_{RRM}</math> 35–45 Volts</li> <li>● Reverse Energy Tested</li> <li>● ROHS Compliant</li> </ul>
HS18140*	181NQ040	40V	40V	
HS18145*	181NQ045	45V	45V	

\* Add Suffix R for Reverse Polarity

### Electrical Characteristics

Average forward current	$I_{F(AV)}$ 180 Amps	$T_C = 142^\circ\text{C}$ , square wave, $R_{\theta JC} = 0.3^\circ\text{C/W}$
Maximum surge current	$I_{FSM}$ 2500 Amps	8.3ms, half sine, $T_J = 175^\circ\text{C}$
Maximum repetitive reverse current	$I_{R(OV)}$ 2 Amps	$f = 1\text{ kHz}$ , 1 $\mu\text{s}$ square wave, $T_J = 25^\circ\text{C}$
Max peak forward voltage	$V_{FM}$ 0.70 Volts	$I_{FM} = 180\text{A}$ ; $T_J = 25^\circ\text{C}$ *
Max peak reverse current	$I_{RM}$ 150mA	$V_{RRM}$ , $T_J = 125^\circ\text{C}$ *
Max peak reverse current	$I_{RM}$ 4mA	$V_{RRM}$ , $T_J = 25^\circ\text{C}$
Typical junction capacitance	$C_J$ 7500pF	$V_R = 5.0\text{V}$ , $T_J = 25^\circ\text{C}$ , $f = 1\text{MHz}$

\*Pulse test: Pulse width 300 $\mu\text{sec}$ , Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	$T_{STG}$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Operating junction temp range	$T_J$	$-55^\circ\text{C}$ to $175^\circ\text{C}$
Max thermal resistance	$R_{\theta JC}$	$0.3^\circ\text{C/W}$ junction to case
Typical thermal resistance (greased)	$R_{\theta CS}$	$0.12^\circ\text{C/W}$ case to sink
Mounting Base Torque		15–25 inch pounds
Terminal Torque		20–40 inch pounds
Weight		1.1 ounces (32 grams) typical

# HS18135–HS18145

Figure 1  
Typical Forward Characteristics

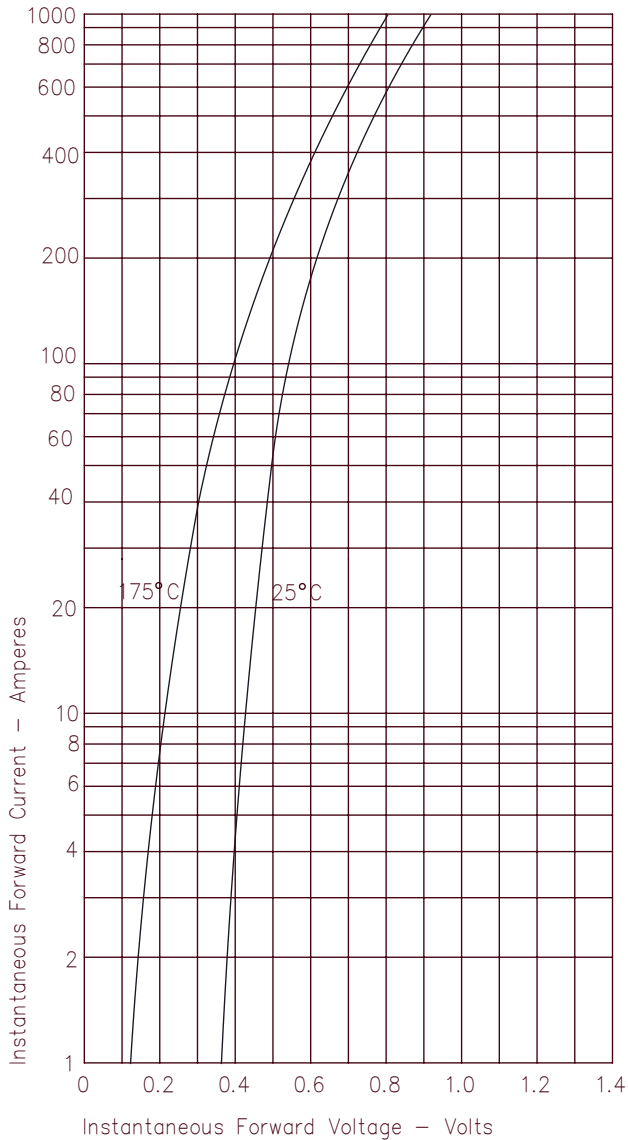


Figure 3  
Typical Junction Capacitance

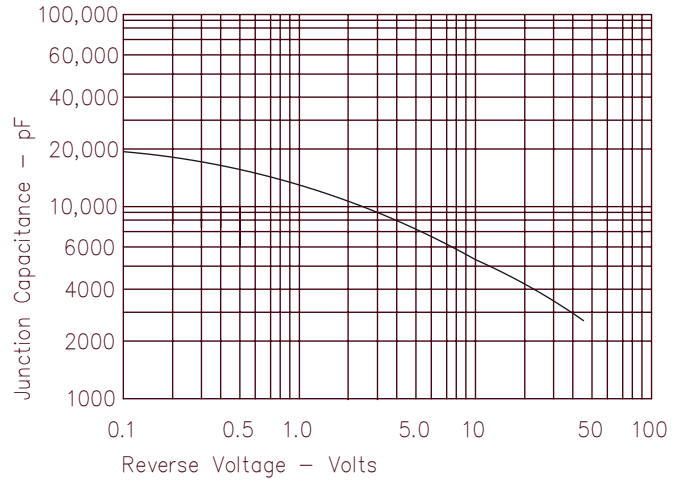


Figure 4  
Forward Current Derating

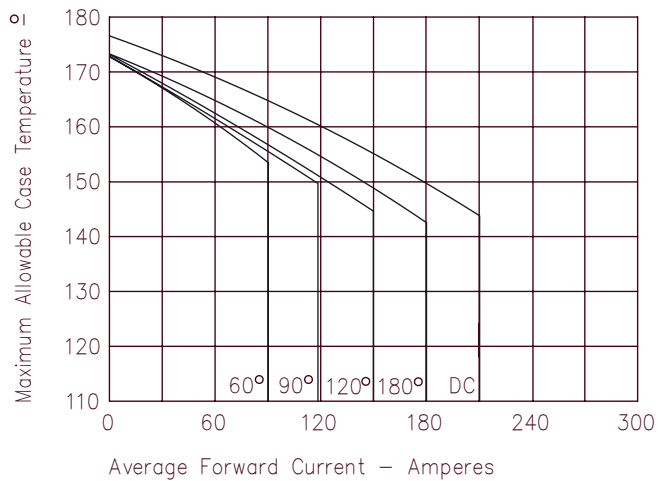


Figure 2  
Typical Reverse Characteristics

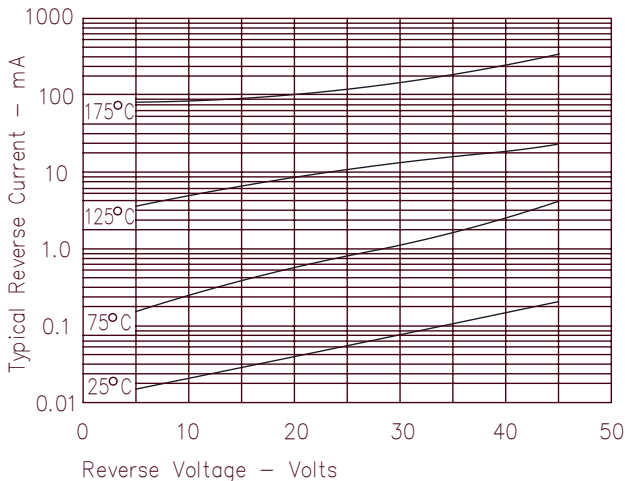
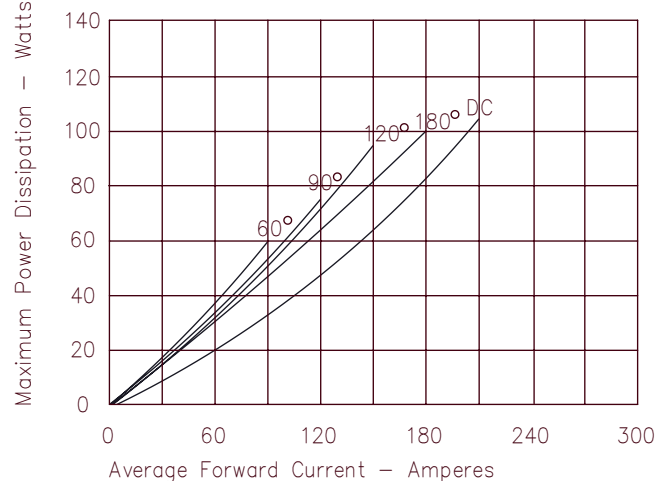


Figure 5  
Maximum Forward Power Dissipation



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