

50HQ035/50HQ040/50HQ045 SCHOTTKY RECTIFIER



Features

- 150 °C T_J operation
- Low forward voltage drop
- Hermetic packaging
- High frequency operation
- Stud cathode
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	35(50HQ035) 40(50HQ040) 45(50HQ045)	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _c =101°C, rectangular wave form	60	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	10 ms, Half Sine pulse, T _C = 25 °C	1150	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 60A, Pulse, T _J = 25 °C @ 120A, Pulse, T _J = 25 °C	0.58 0.74	0.60 0.78	V
	V _{F2}	@ 60A, Pulse, T _J = 125 °C @ 120A, Pulse, T _J = 125 °C	0.55 0.68	0.58 0.70	V
Reverse Current*	I _{R1}	@V _R = rated V _R T _J = 25 °C	0.15	5	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	33	200	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	2170	2600	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units	
Junction Temperature	T_J	-	-55 to +150	°C	
Storage Temperature	T_{stg}	-	-55 to +150	°C	
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	0.83	°C/W	
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.25	°C/W	
Mounting Torque	T_M	Non-lubricated threads	Min.	23	Kg-cm
			Max.	46	
Approximate Weight	wt	-	15	g	

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

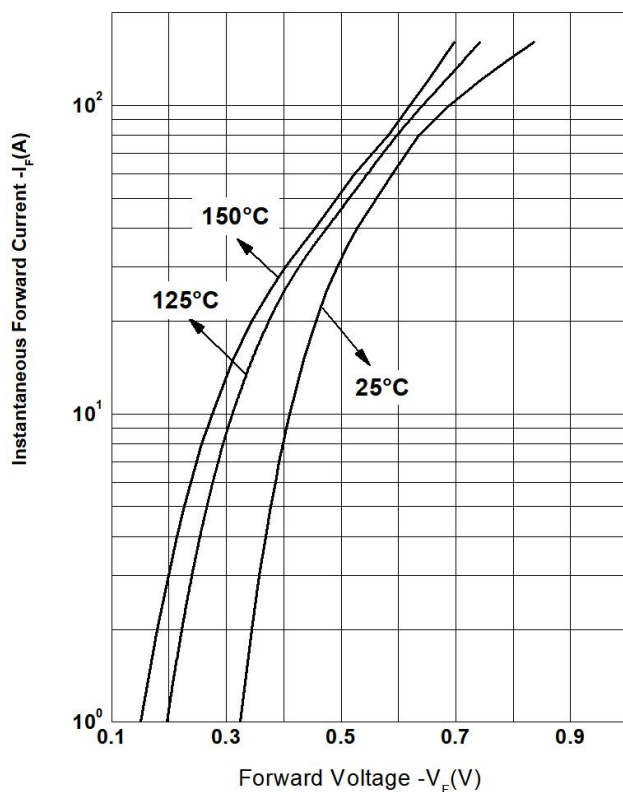


Figure 2 Typical Reverse Characteristics

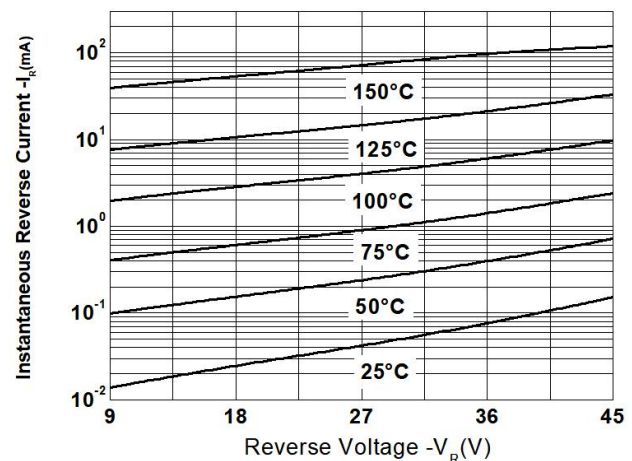
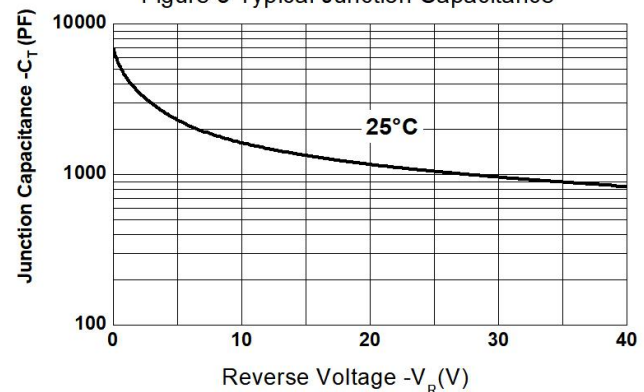
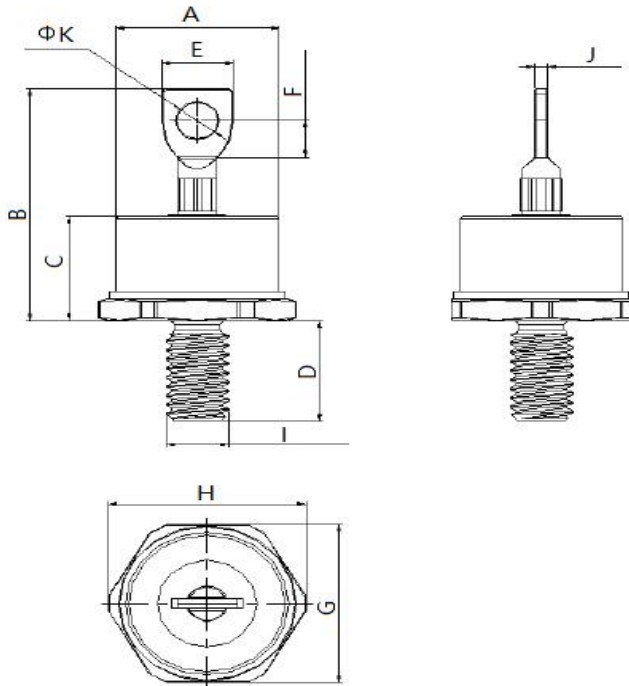


Figure 3 Typical Junction Capacitance



Mechanical Dimensions DO-5



SYMBOL	Millimeters	
	Min.	Max.
ΦA	15.0	
B	-	25.4
C	9.4	10.2
D	11.0	
E	6.1	6.7
F	3.0	-
G	17.3	
H	19.0	
I	M6	
J	0.9	1.5
ΦK	-	-

Ordering Information:

Device	Package	Shipping
50HQ035(040)(045)	DO-5(Pb-Free)	100pcs / box

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Stud

Where XXXXX is YYWWL

50HQ035 = Part name
YY = Year
WW = Week
L = Lot Number

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