

50HQ035/50HQ040/50HQ045 SCHOTTKY RECTIFIER



Features

- 150 °C T_J operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- 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	- -	0.60 0.78	V
	V _{F2}	@ 60A, Pulse, T _J = 125 °C @ 120A, Pulse, T _J = 125 °C	- -	0.53 0.69	V
Reverse Current*	I _{R1}	@V _R = rated V _R T _J = 25 °C	-	5	mA
	I _{R2}	@V _R = rated V _R T _J = 125 °C	-	200	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	-	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	$^{\circ}\text{C}$	
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$	
Typical Thermal Resistance Junction to Case	$R_{\theta\text{JC}}$	DC operation	0.83	$^{\circ}\text{C/W}$	
Typical Thermal Resistance, case to Heat Sink	$R_{\theta\text{cs}}$	Mounting surface, smooth and greased	0.25	$^{\circ}\text{C/W}$	
Mounting Torque	T_M	Non-lubricated threads	Min.	23	Kg-cm
			Max.	46	
Approximate Weight	wt	-	15	g	

Ratings and Characteristics Curves

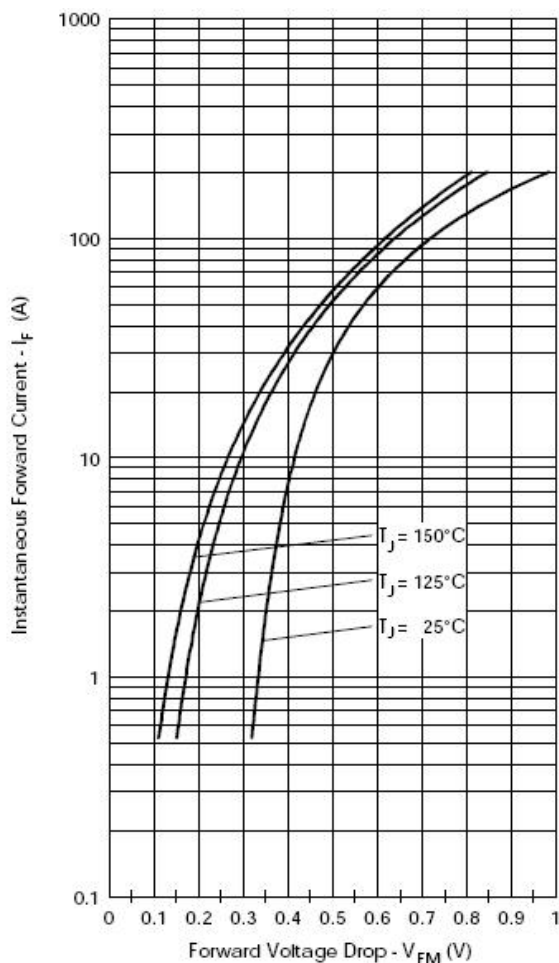


Fig. 1 - Maximum Forward Voltage Drop Characteristics

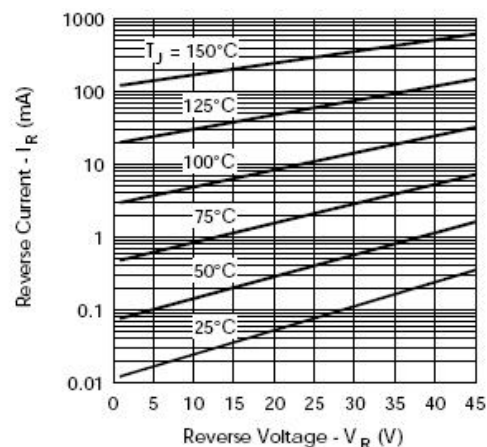


Fig. 2 - Typical Values of Reverse Current Vs. Reverse Voltage

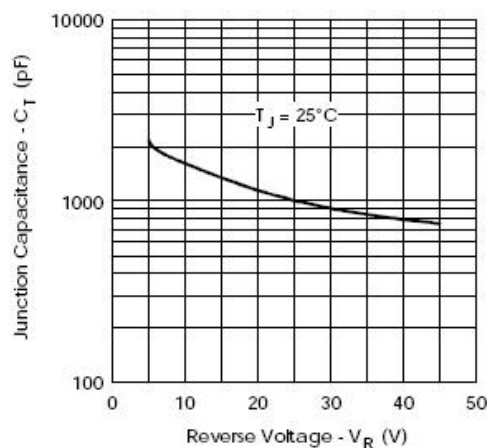
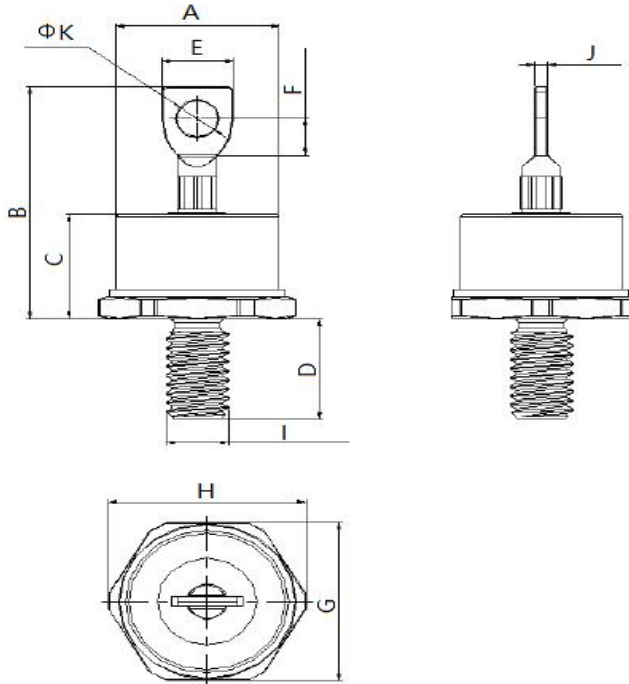


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

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



Where XXXXX is YYWWL

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

Cautions: Molding resin
Epoxy resin UL:94V-0



50HQ035
50HQ040
50HQ045

Technical Data
Data Sheet N2259, Rev. -



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