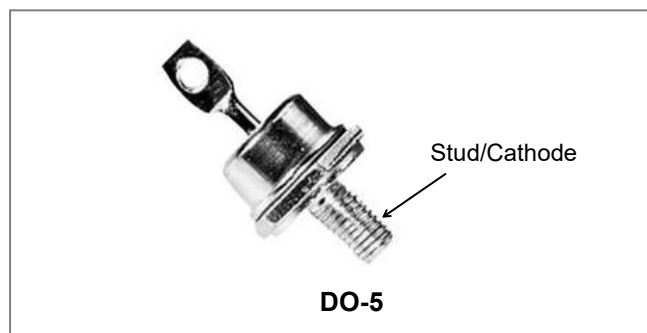


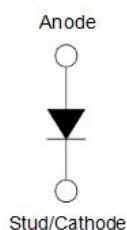
50HQ035/50HQ040/50HQ045 SCHOTTKY RECTIFIER



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
- Terminals: Nickel plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Maximum Ratings(At 25°C unless otherwise specified)

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	$I_F (AV)$	Tc=120°C, In DC	60	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	10 ms, Half Sine pulse	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%

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

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	23	Kg-cm
Min. Max.			46	
Approximate Weight	wt	-	15	g

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

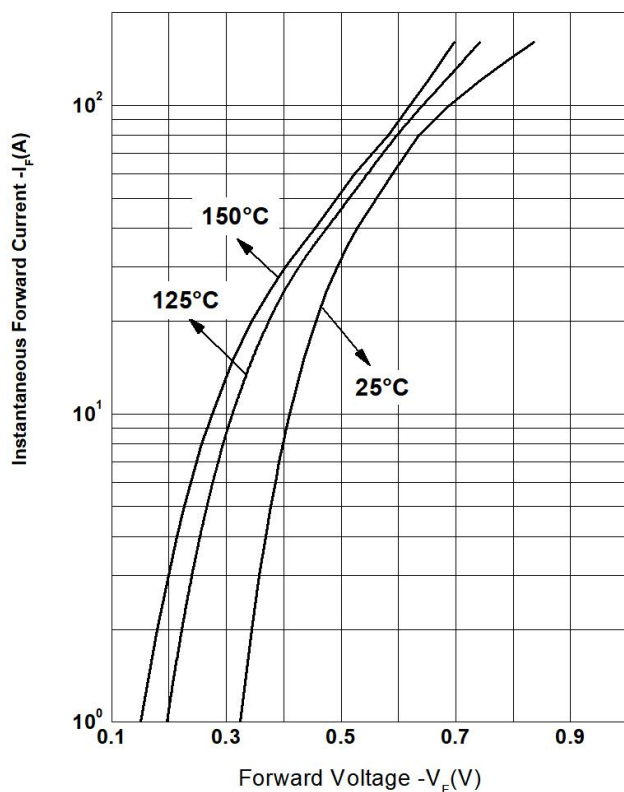


Figure 2 Typical Reverse Characteristics

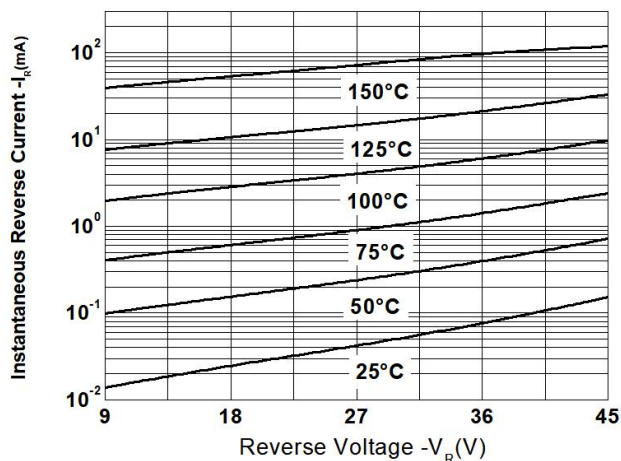
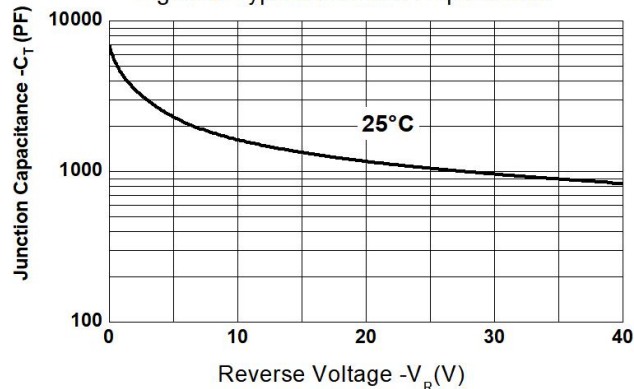
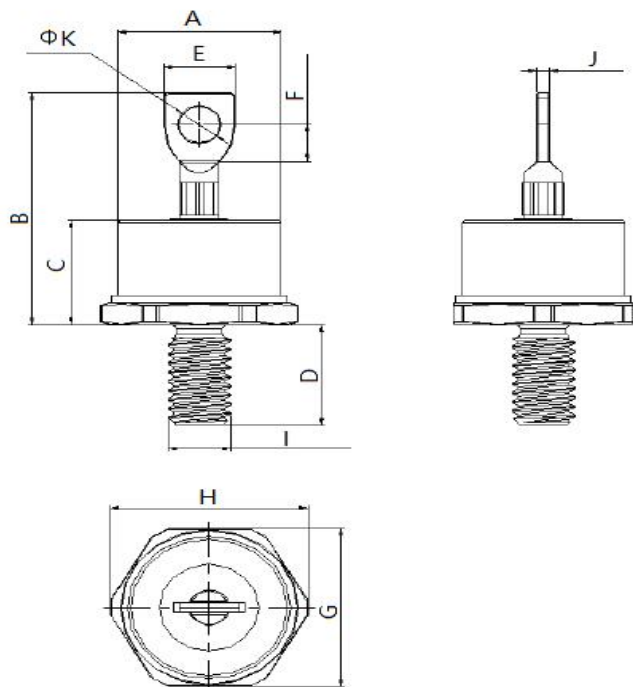


Figure 3 Typical Junction Capacitance



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

Marking Diagram



Stud/Cathode

Where XXXXX is YYWWL

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

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