

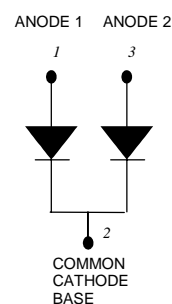
40CPQ050/40CPQ060 SCHOTTKY RECTIFIER

Applications:

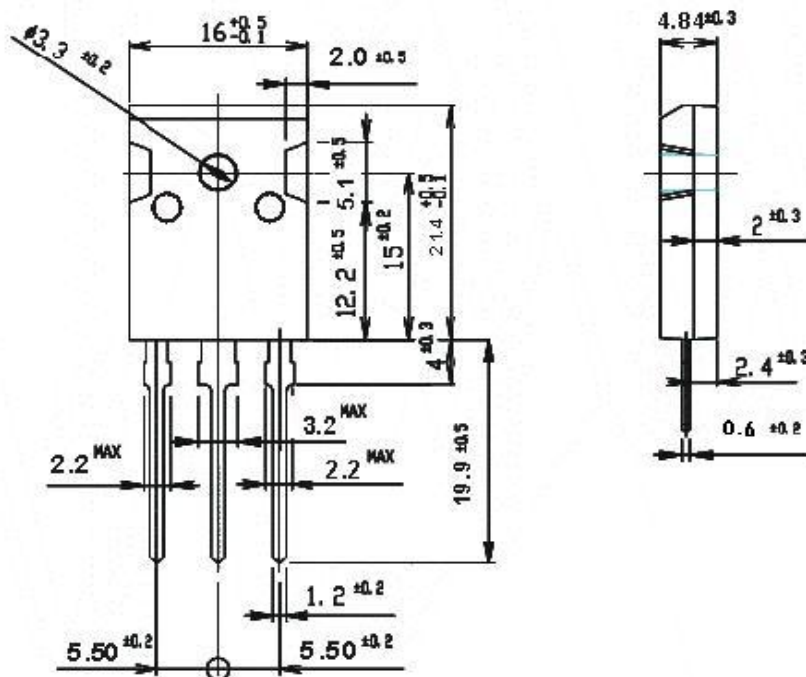
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 150 °C T_J operation
- Center tap TO-247AD package
- 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
- Green Products in Compliance with the RoHS Directive
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Dimensions: In mm

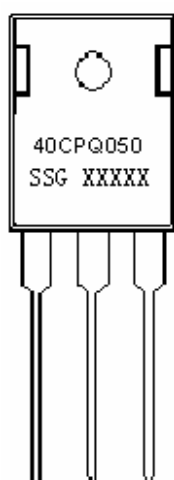


TO-247AD

Technical Data
Data Sheet N0696, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

40 = Forward Current (40A)
C = Configuration
PQ = Device Type
050 = Reverse Voltage (50V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

Device	Package	Shipping
40CPQ050	TO-247AD (Pb-Free)	30pcs/ tube

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	V_{RWM}	-	50	V
			60	
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_C = 145^\circ\text{C}$, rectangular wave form	40	A
Max. Peak One Cycle Non-Repetitive Surge Current (per leg)	I_{FSM}	8.3 ms, half Sine pulse	380	A
Non-Repetitive Avalanche Energy(per leg)	E_{AS}	$T_J = 25^\circ\text{C}$, $I_{AS} = 2\text{A}$, $L = 90\text{ mH}$	18	mJ
Repetitive Avalanche Current(per leg)	I_{AR}	Current decaying linearly to zero in 1 μ sec Frequency limited by T_J max. $V_A = 1.5 \times V_R$ typical	2	A

Electrical Characteristics:

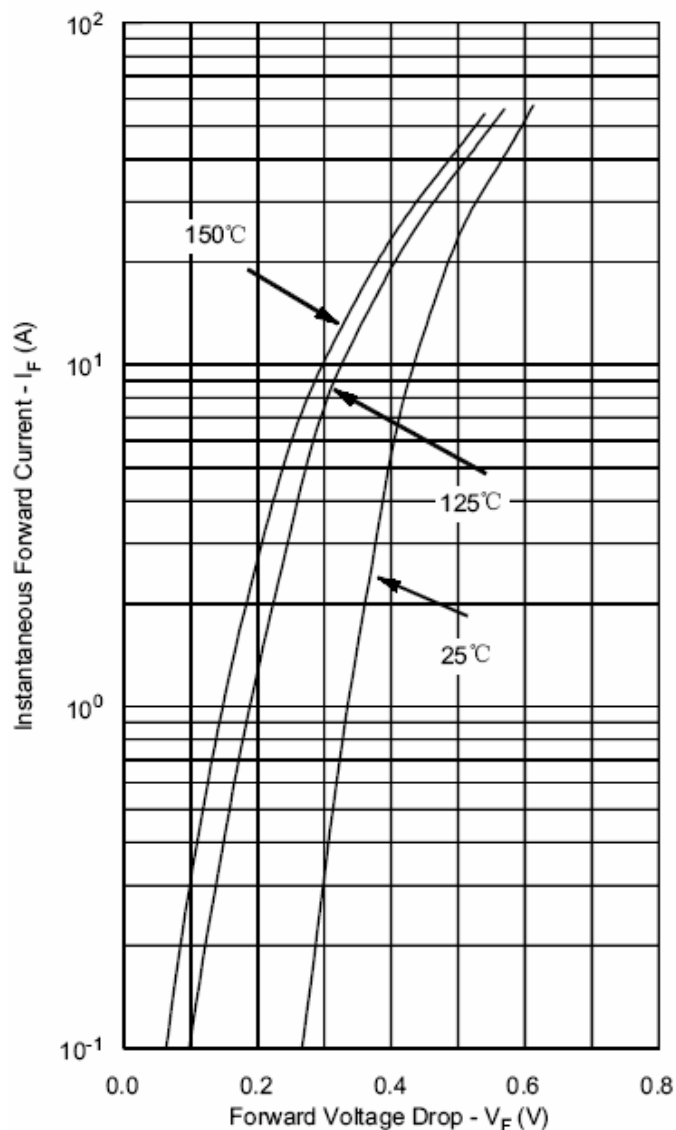
Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V _{F1}	@ 20A, Pulse, T _J = 25 °C	0.53	V
		@ 40A, Pulse, T _J = 25 °C	0.68	
	V _{F2}	@ 20A, Pulse, T _J = 125 °C	0.49	V
		@ 20A, Pulse, T _J = 125 °C	0.64	
Max. Reverse Current (per leg) *	I _{R1}	@ V _R = rated V _R T _J = 25 °C	1.0	mA
	I _{R2}	@ V _R = rated V _R T _J = 125 °C	96	mA
Max. Junction Capacitance (per leg)	C _T	@ V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	1600	pF

* Pulse Width < 300µs, Duty Cycle <2%

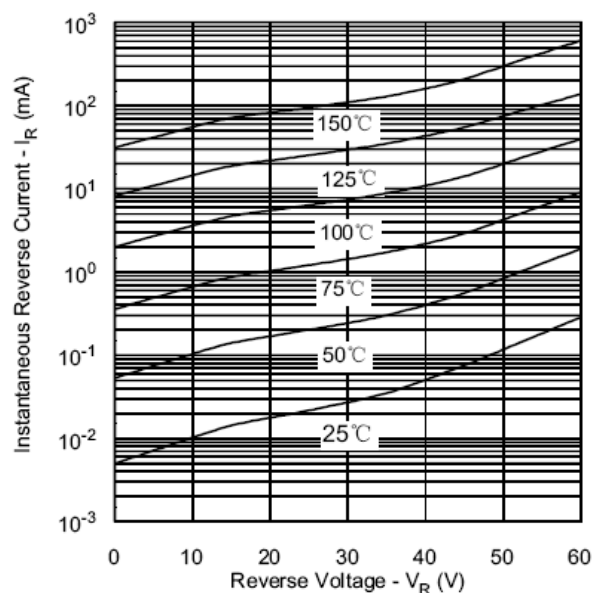
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T _J	-	-55 to +150	°C
Max. Storage Temperature	T _{stg}	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Case (per leg)	R _{θJC}	DC operation	1.25(per leg)	°C/W
			0.63(per device)	
Maximum Thermal Resistance, Case to Heat Sink	R _{θCS}	Mounting surface, smooth and greased	0.24	°C/W
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

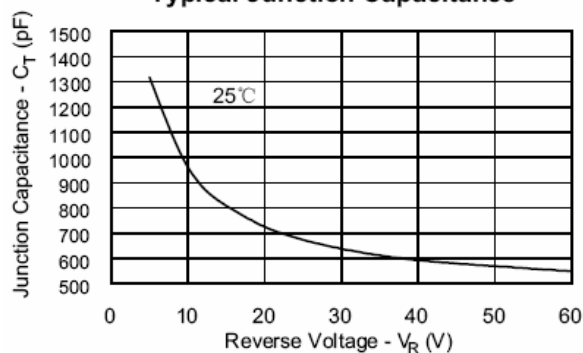
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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