Technical Data
Data Sheet N0678, Rev. -

Green Products

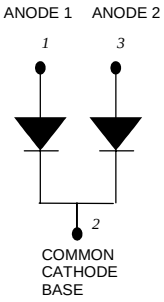
30CPQ050/30CPQ060
SCHOTTKY RECTIFIER

Applications:

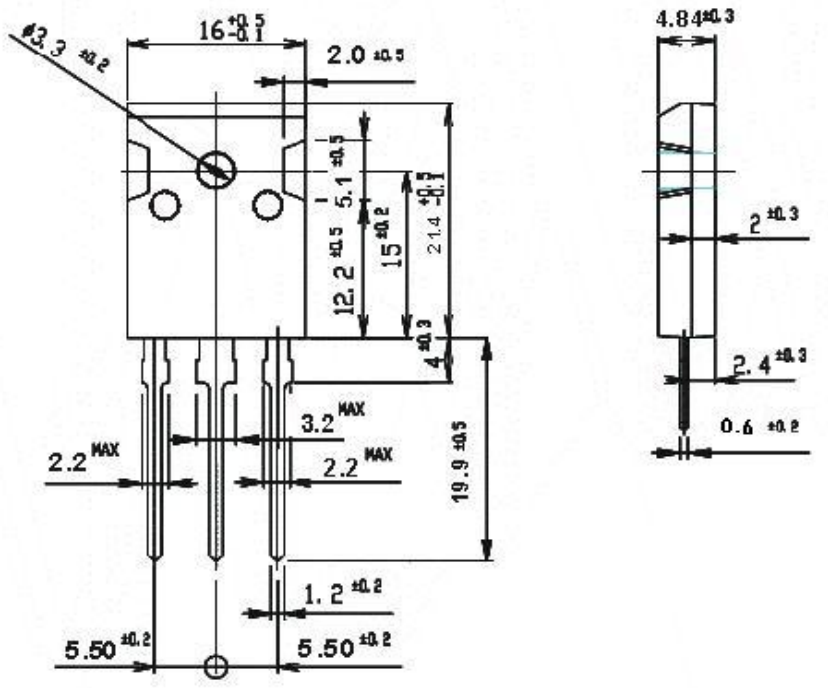
- **Switching power supply**
- **Converters**
- **Free-Wheeling diodes**
- **Reverse battery protection**

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

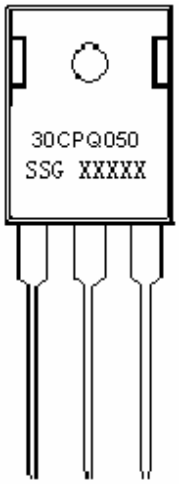


TO-247AD

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Marking Diagram:



Where XXXXX is YYWWL

30 = Forward Current (30A)
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
30CPQ050	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(30CPQ050) 60(30CPQ060)	V
Max. Average Forward*	$I_{F(AV)}$	50% duty cycle @T_C = 112°C, rectangular wave form	30	A
Max. Peak One Cycle Non-Repetitive Surge Current (peg leg)	I_{FSM}	8.3 ms, half Sine pulse	315	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	V_{F1}	@ 15A, Pulse, T_J = 25 °C @ 30A, Pulse, T_J = 25 °C	0.60 0.80	V
	V_{F2}	@ 15A, Pulse, T_J = 125 °C @ 30A, Pulse, T_J = 125 °C	0.56 0.70	V
Max. Reverse Current (per leg) *	I_{R1}	@V_R = rated V_R T_J = 25 °C	0.8	mA
	I_{R2}	@V_R = rated V_R T_J = 125 °C	45	mA
Max. Junction Capacitance (per leg)	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	720	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	7.5	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

* Pulse Width < 300μs, Duty Cycle <2%

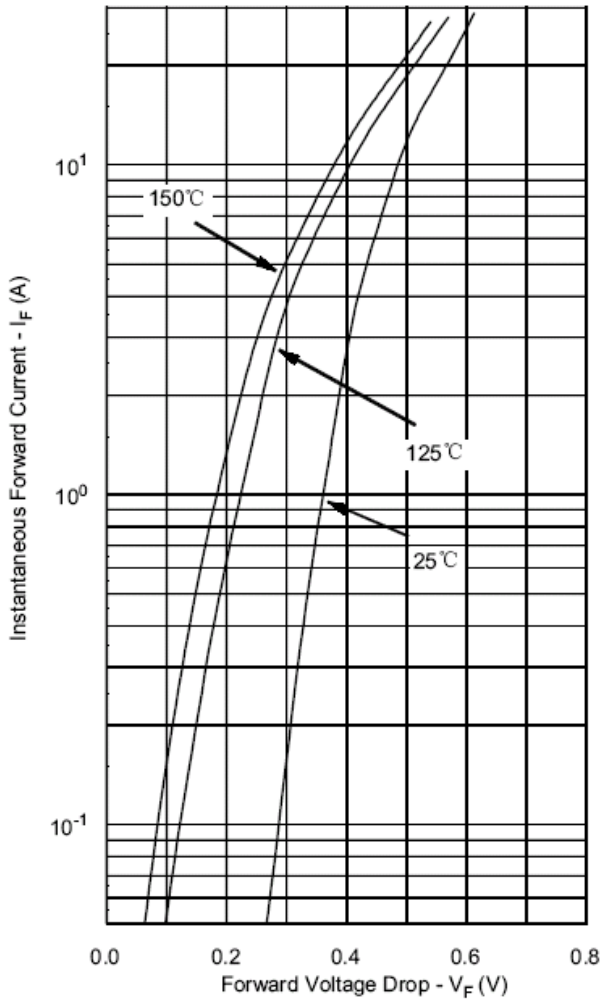
Thermal-Mechanical Specifications:

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)	$R_{\theta JC}$	DC operation	2.2(peg leg) 1.10(peg device)	°C/W
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.24	°C/W
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

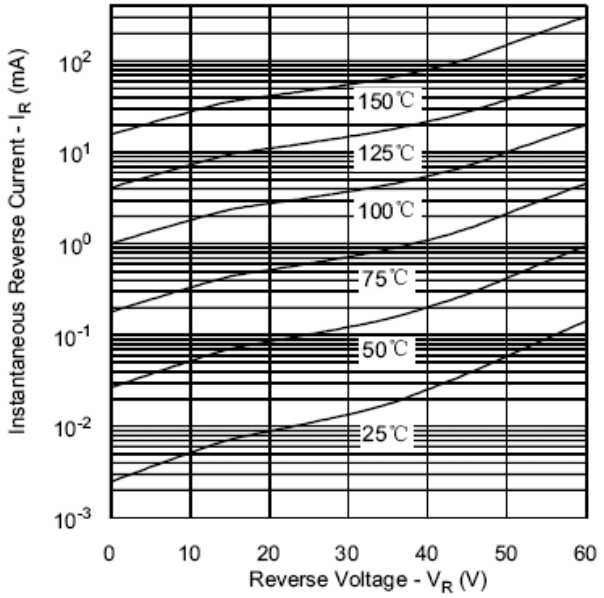
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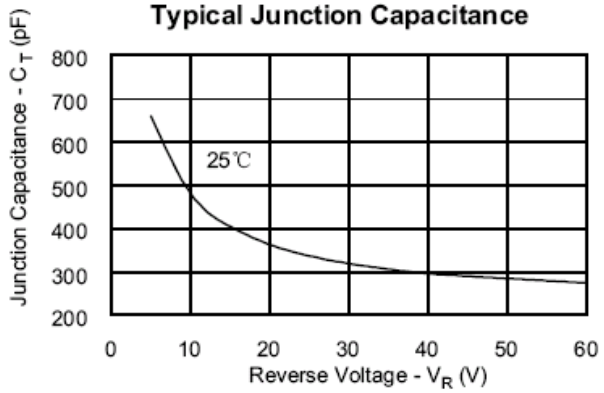
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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