

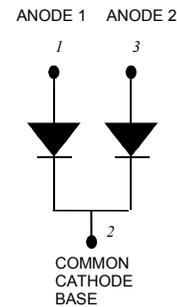
30CPQ080/30CPQ100 SCHOTTKY RECTIFIER

Applications:

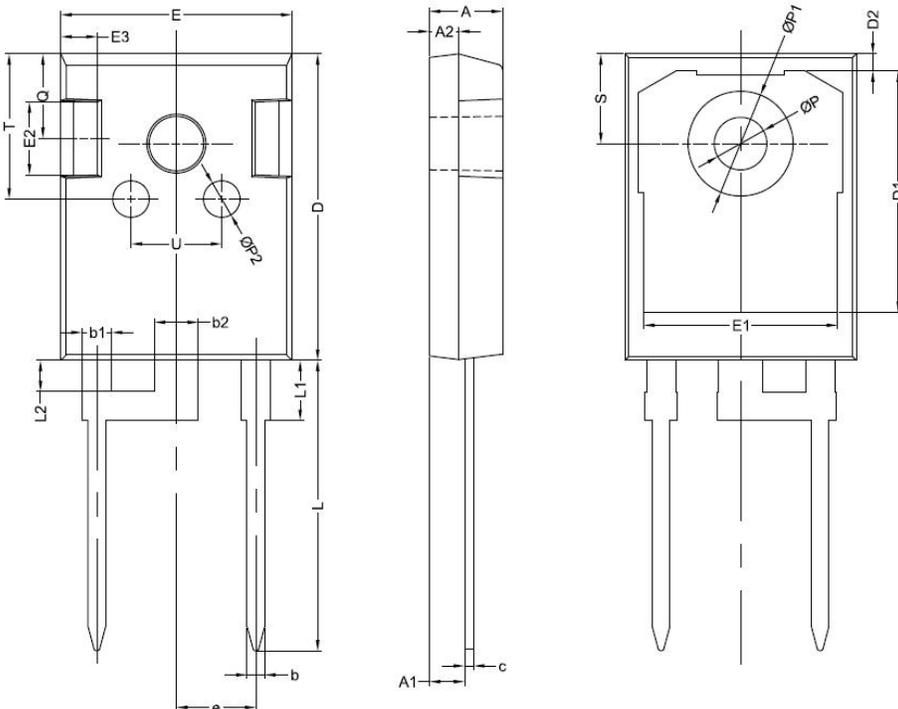
- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

Features:

- 175 °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



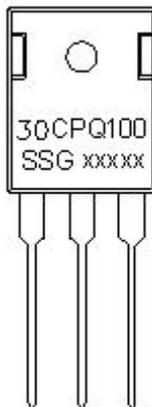
Mechanical Dimensions: In mm



SYMBOL	MIN.	TYP.	MAX.
A	4.80	5.00	5.20
A1	2.21	2.41	2.61
A2	1.90	2.00	2.10
b	1.10	1.20	1.35
b1		2.00	
b2		3.00	
c	0.55	0.60	0.75
D	20.80	21.00	21.20
D1		16.55	
D2		1.20	
E	15.6	15.8	16.0
E1		13.30	
E2		5.00	
E3		2.50	
e		5.44	
L	19.42	19.92	20.42
L1		4.13	
L2		2.15	
P	3.50	3.60	3.70
P1	-	-	7.40
P2		2.50	
Q		5.80	
S	6.05	6.15	6.25
T		10.00	
U		6.20	

TO-247AC (HD)

Marking Diagram:



Where XXXXX is YYWWL

30 = Forward Current (30A)
 C = Configuration
 PQ = Device Type
 100 = Reverse Voltage (100V)
 SSG = SSG
 YY = Year
 WW = Week
 L = Lot Number

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

Ordering Information:

Device	Package	Shipping
30CPQ080 30CPQ100	TO-247AD (Pb-Free)	25pcs/ 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 Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	80(30CPQ080) 100(30CPQ100)	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 140^\circ\text{C}$, rectangular wave form	30	A
Peak One Cycle Non-Repetitive Surge Current (peg leg)	I_{FSM}	8.3 ms, half Sine pulse	280	A

Electrical Characteristics:

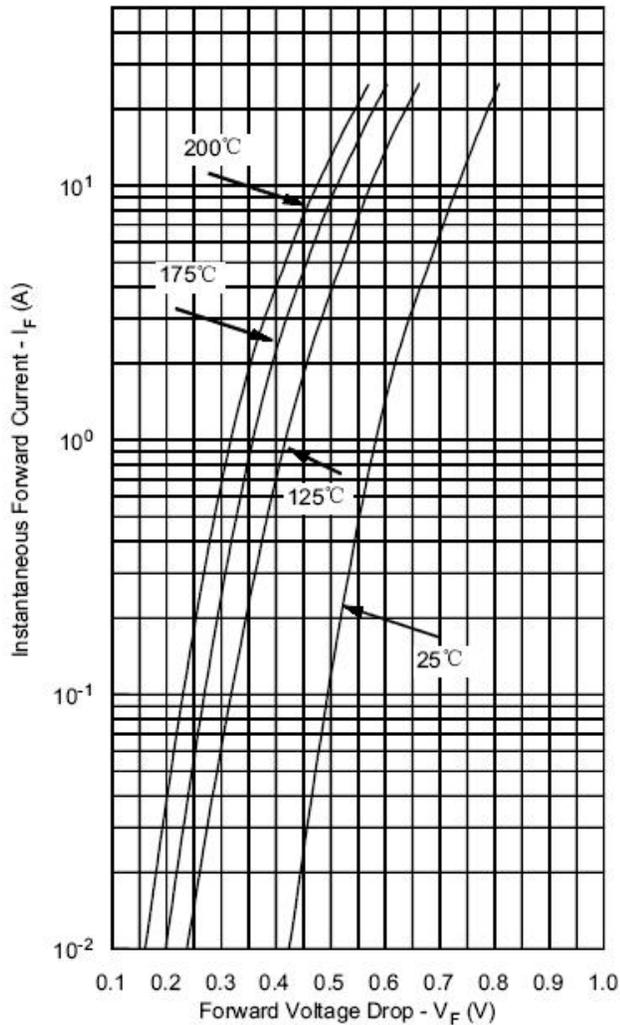
Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 15A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.86	V
		@ 30A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	1.05	
	V_{F2}	@ 15A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.67	V
		@ 30A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.81	
Reverse Current (per leg) *	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25\text{ }^\circ\text{C}$	0.55	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 125\text{ }^\circ\text{C}$	7.0	mA
Junction Capacitance (per leg)	C_T	@ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	500	pF
Typical Series Inductance (per leg)	L_S	Measured lead to lead 5 mm from package body	7.5	nH
Voltage Rate of Change	dv/dt	-	10,000	V/ μs

* Pulse Width < 300 μs , Duty Cycle <2%

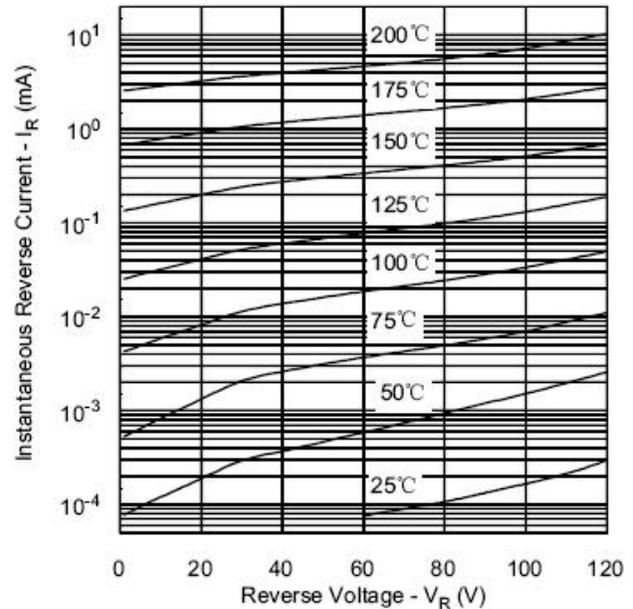
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +175	$^\circ\text{C}$
Storage Temperature	T_{stg}	-	-55 to +175	$^\circ\text{C}$
Typical Thermal Resistance Junction to Case (per leg)	$R_{\theta JC}$	DC operation	2.2(peg leg)	$^\circ\text{C/W}$
			1.10(peg device)	
Typical Thermal Resistance, case to Heat Sink	$R_{\theta cs}$	Mounting surface, smooth and greased	0.24	$^\circ\text{C/W}$
Approximate Weight	wt	-	6.7	g
Case Style	TO-247AD			

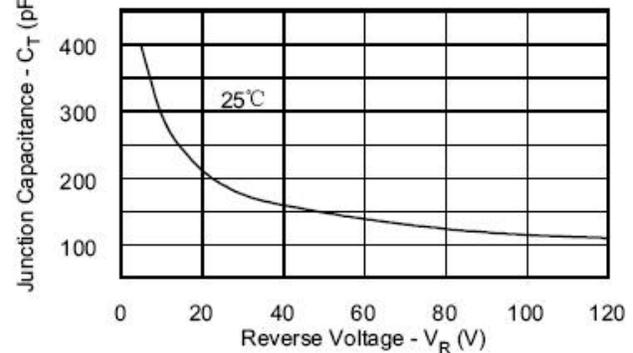
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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