

DATA SHEET

TYPE: 80A/300V

Package: T0-247

Prepared by	Audit by	Approved by

Product specifications

VRRM = 300V

IFAV = 80A(40A*2)

VF = 1.05V

TRR = 60ns

Product Application:

- Switch mode Power Supply
- Welder
- Free Wheeling Diode
- Motor Controllers
- Converters
- Inverters
- Snubber Diode
- PFC

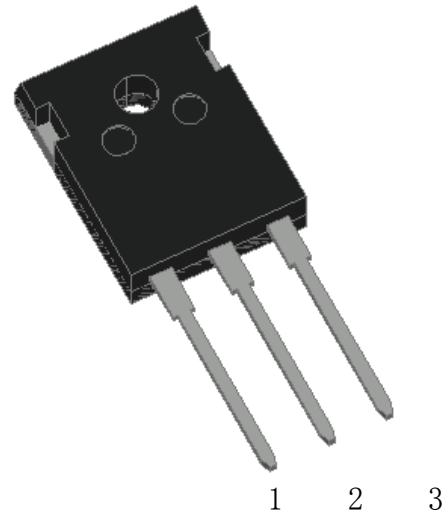
Product Features:

- Ultrafast Recovery Times
- Soft Recovery Characteristics
- Popular TO-247 Package
- Low Forward Voltage
- Low Leakage Current
- Avalanche Energy Rated

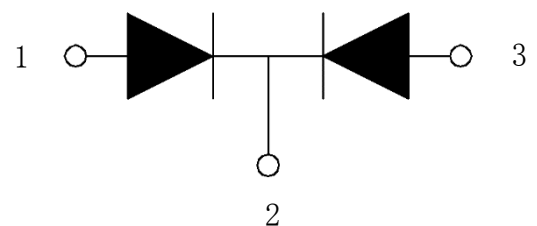
Product Benefits:

- Low Losses
- Low Noise Switching
- Cooler Operation
- Higher Reliability Systems
- Increased System Power Density

Package:



Circuit diagram



1- Anode

3- Anode

2- Cathode

Back of Case - Cathode

MAXIMUM RATINGS

All Ratings: Tc = 25° C unless otherwise specified.

Symbol	Characteristic / Test Conditions	TYP	UNIT
VR	Maximum D.C. Reverse Voltage	300	Volts
VRRM	Maximum Peak Repetitive Reverse Voltage		
VRWM	Maximum Working Peak Reverse Voltage		
IF(AV)	Maximum Average Forward Current (Tc = 100°C, Duty Cycle = 0.5)	80(40*2)	Amps
IFSM	Non-Repetitive Forward Surge Current (TJ = 25°C, 10ms)	400	
TJ , TSTG	Operating and Storage Temperature Range	-55 to 150	° C
TL	Lead Temperature for 10 Sec	260	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	TYP	MAX	UNIT	
VF	Forward Voltage	IF = 40A, TJ = 25°C	1.05	1.2	Volts
		IF = 40A, TJ = 150°C	0.95	1.05	
IRM	Maximum Reverse Leakage Current	VR = 300V, TJ =25°C		10	μ A
		VR = 300V, TJ =150°C		350	
Trr	Reverse Recovery Time	IF=0.5A IRR=0.25A	60	70	ns
CJ	Junction Capacitance, VR =200V	25		pF	

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	S2FD80A30	UNIT
Re JC	Junction-to-Case Thermal Resistance	2	°C/W
WT	Package Weight	6.7	g
Torque	Maximum Mounting Torque	1.1	N.m

TYPICAL PERFORMANCE CURVES

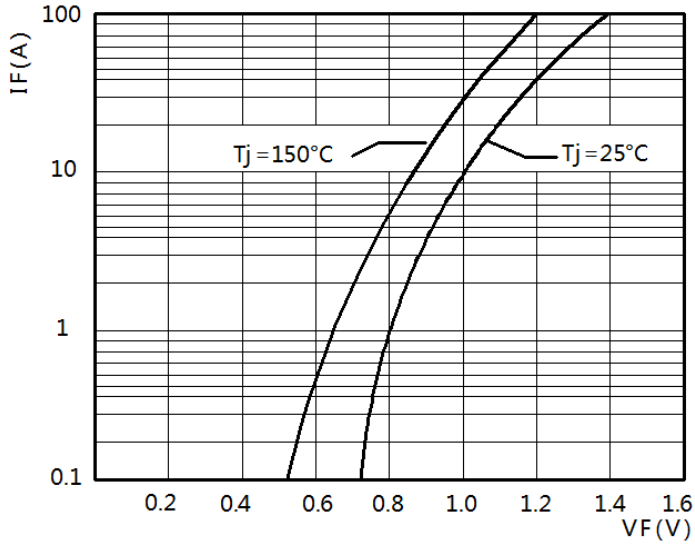


FIGURE 1. FORWARD CURRENT vs FORWARD VOLTAGE

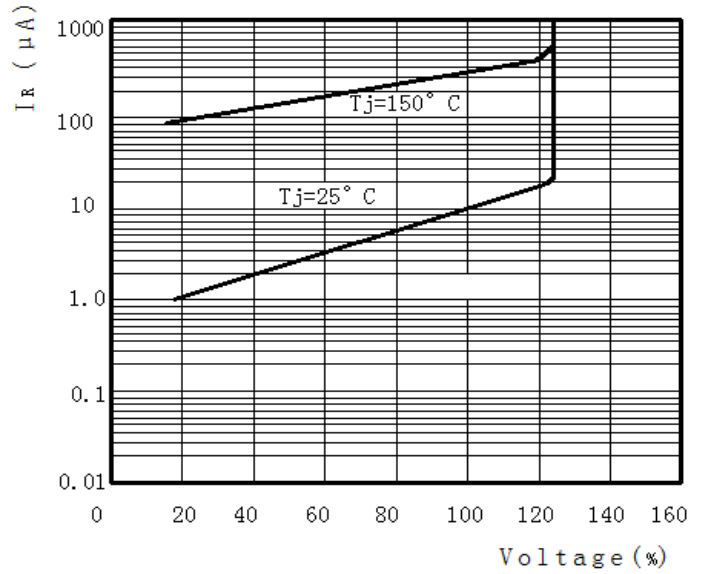


FIGURE 2. REVERSE CURRENT vs REVERSE VOLTAGE

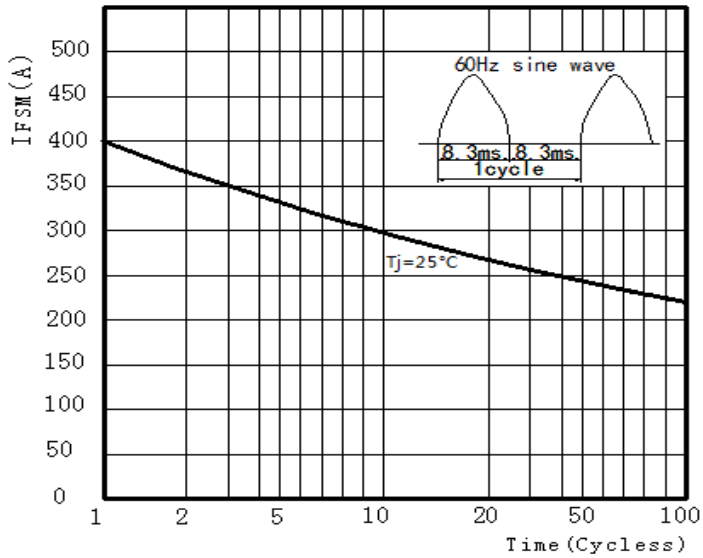


FIGURE 3. Peak Surge Forward Capability

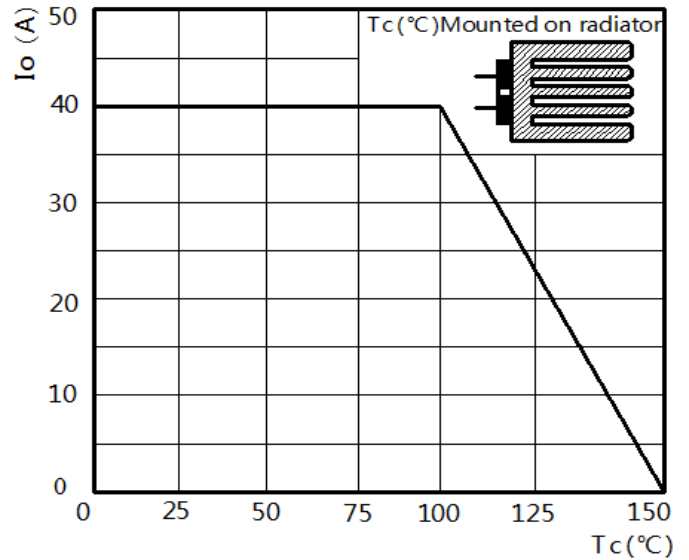


FIGURE 4. CURRENT DERATING CURVE

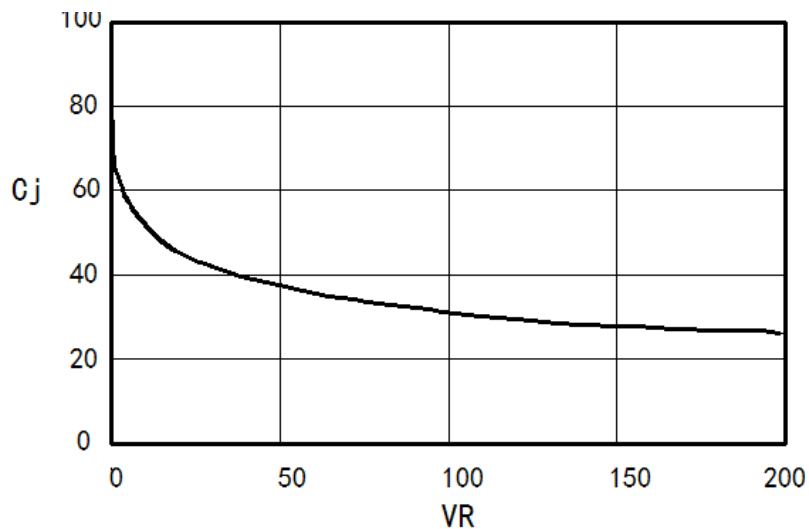
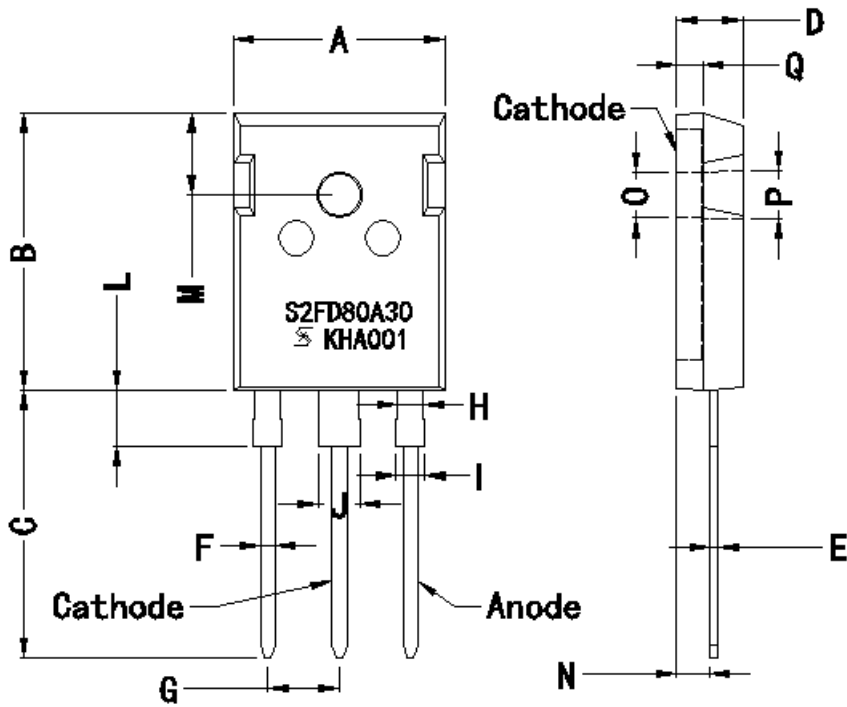


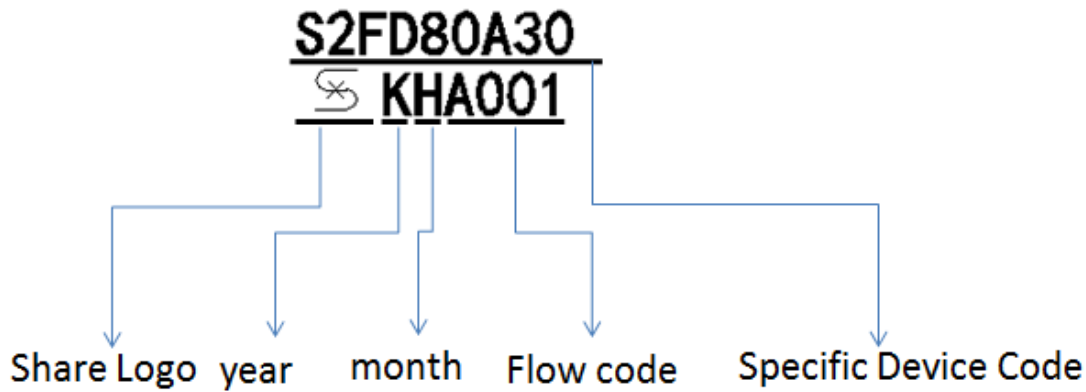
FIGURE 5. JUNCTION CAPACITANCE vs REVERSE VOLTAGE

Dimensioned drawing (TO-247)



Dim.	Millimeter		Inches	
	min	max	min	max
A	15.8	16.2	0.622	0.638
B	20.7	21.3	0.815	0.839
C	19.5	20.5	0.768	0.807
D	4.7	5.3	0.185	0.209
E	0.4	0.8	0.016	0.031
F	0.9	1.1	0.035	0.043
G	10.7	11.1	0.421	0.437
H	1.8	2.2	0.071	0.087
L	3.9	4.5	0.154	0.177
M	6	6.4	0.236	0.252
N	2.2	2.8	0.087	0.110
O	3.5	3.8	0.138	0.149
P	3.4	3.8	0.134	0.150
Q	1.7	2.3	0.067	0.091

Marking



变更履历

序号	变更内容	更改原因	版本	变更人	更改时间
1	新增	新增	0	崔伟	2018.04.09
2	中心孔的直径公差	避免不必要的尺寸不合格	1	黄晓艳	2020.4.23