

40A Powerpack Superfast Recovery Rectifier

■ Productor Character

- Super fast switching for high efficiency.
- Low reverse leakage.
- High forward surge current capability.
- RoHS Product.
- Compliance with EU REACH.

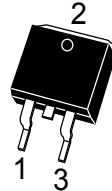
■ Summarize

- SF4002CD Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

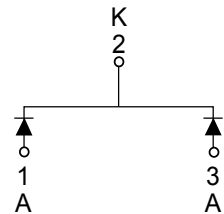
■ Primary Use

- Mainly used in switching power supply, PWM pulse width modulator, inverter as a freewheeling and other electronic circuits, high-frequency rectifier diode, diode or damping diode use

Package:TO-263-2L



■ Equivalent Circuit

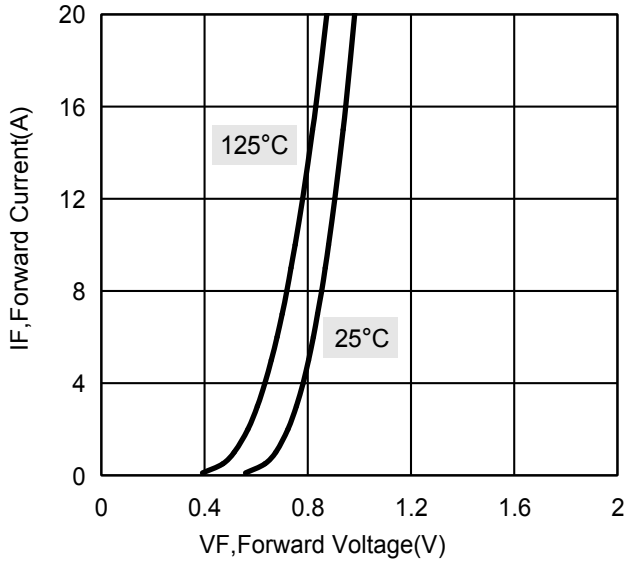
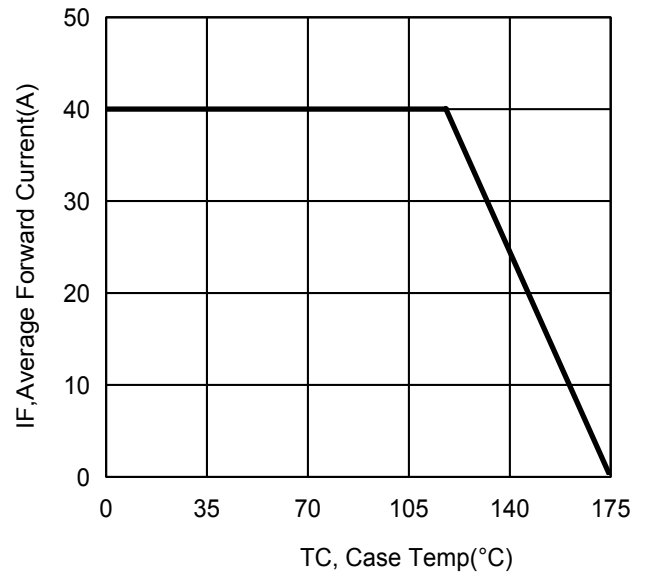
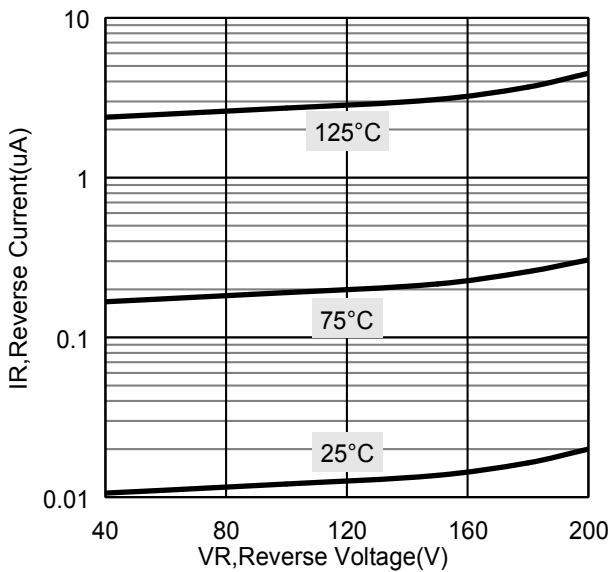
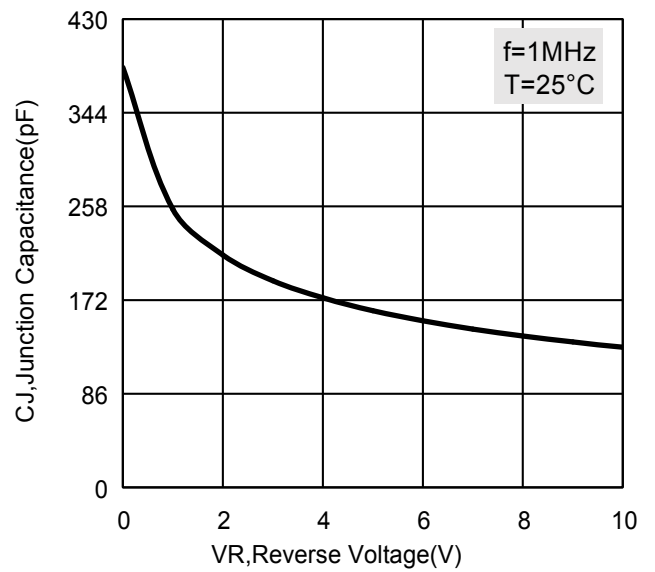


Absolute Maximum Ratings(Ta=25°C unless otherwise noted)

Item	Symbol	Data	Unit
Maximal Inverted Repetitive Peak Voltage	V_{RRM}	200	V
Average Rectified Forward Current(Rated VR-20Khz Square Wave)-50% duty cycle	Per Device	40	A
	Per Diode	20	
Forward Peak Surge Current(Rated Load 8.3 Half Mssine Wave-According to JEDEC Method)	Per Diode	I_{FSM}	200
Operating Junction Temperature	T_J	-40~175	°C
Storage Temperature	T_{STG}	-40~175	°C
Typical Thermal Resistance(per leg)	Package=TO-263-2L	$R_{\theta JC}$	2
			°C/W

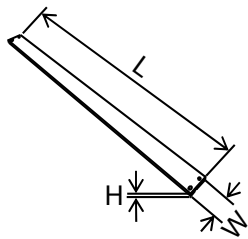
Electricity Character Per Diode(Ta=25°C unless otherwise noted)

Item	Test Condition	Value(min)	Value(typ)	Value(max)	Unit
V_B	$T_j=25^\circ\text{C}, I_R=100\mu\text{A}$	200	—	—	V
I_R	$T_j=25^\circ\text{C}, V_R=200\text{V}$	—	—	10	μA
	$T_j=125^\circ\text{C}, V_R=200\text{V}$	—	—	0.1	mA
V_F	$T_j=25^\circ\text{C}, I_F=20\text{A}$	—	0.98	1.05	V
	$T_j=125^\circ\text{C}, I_F=20\text{A}$	—	0.88	0.95	V
C_J	$T_j=25^\circ\text{C}, V_R=0\text{V}, f=1\text{MHz}$	—	395	—	pF
T_{RR}	$T_j=25^\circ\text{C}, I_F=0.5\text{A}, I_R=1.0\text{A}, I_{REC}=0.25\text{A}$	—	—	30	nS

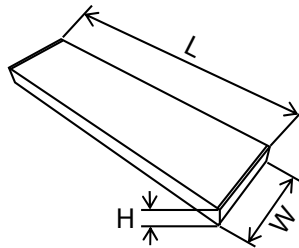
Typical Characteristics Curves
Fig1. Typical Forward Current and Forward Voltage

Fig2. Typical Current Derating Curve, Per Element

Fig3. Typical Reverse Current and Reverse Voltage

Fig4. Typical Junction Capacitance and Reverse Voltage


Packing Information

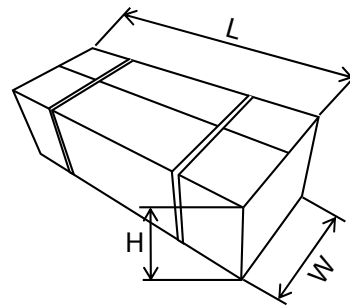
Packaging	Part Number	Quantity(pcs)	Size(mm)
Tube	Tube	50	L534×W33×H7
	Inner Box	1000	L560×W150×H40
	Outer Box	5000	L565×W235×H175
Reel	Reel	800	Φ330×THK25
	Inner Box	800	L355×W335×H35
	Outer Box	8000	L385×W365×H365

Packaging:Tube


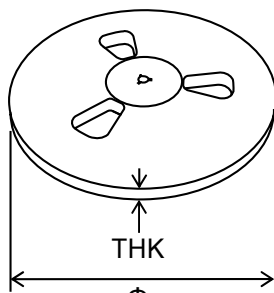
Tube



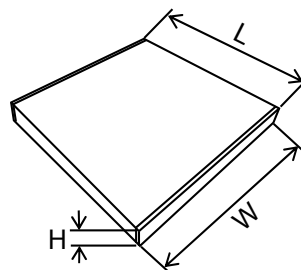
Tube Inner Box



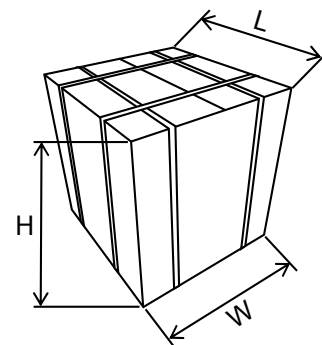
Tube Outer Box

Packaging:Reel


Reel



Reel Inner Box



Reel Outer Box

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