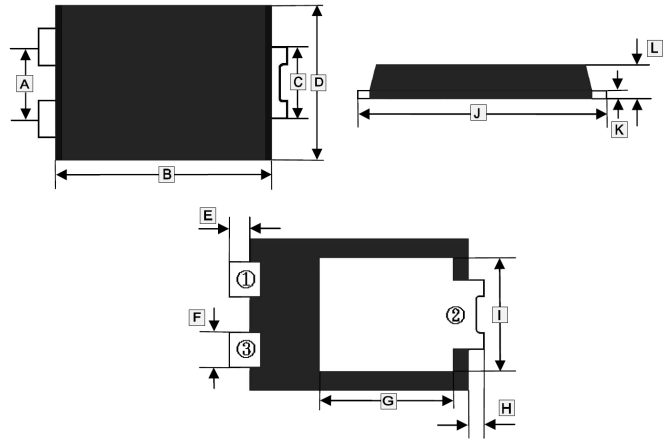


RoHS Compliant Product  
A suffix of "-C" specifies halogen free

**FEATURES**

- Fast switching for high efficiency
- 150°C Operating Junction Temperature
- Low Power Loss, High Efficiency
- High-Switching Speed 30 Nanosecond Recovery Time
- Low Forward Voltage, High Current Capability
- Plastic Material Used Carries Underwriters Laboratory Flammability Classification 94V-0

**TO-277D**

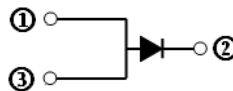


**PACKAGE INFORMATION**

Package	MPQ	Leader Size
TO-277D	5K	13 inch

**ORDER INFORMATION**

Part Number	Type
SFPD10U40-C	Lead (Pb)-free and Halogen-free



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.65	1.95	G	3.25	3.85
B	5.3	5.5	H	0.45	0.65
C	1.7	1.9	I	2.9	3.2
D	3.8	4.2	J	6.4	6.6
E	0.45	0.65	K	0.3	0.45
F	0.8	1.0	L	1.0	1.2

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

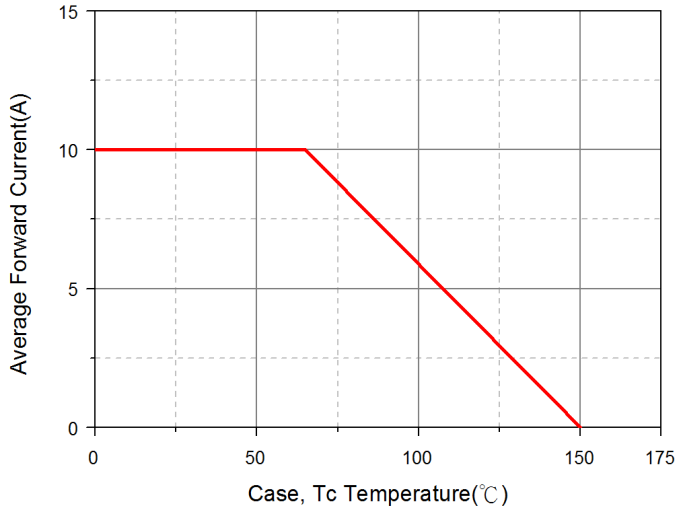
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	400	V
Working Peak Reverse Voltage	$V_{RWM}$	400	V
DC Blocking Voltage	$V_R$	400	V
Average Rectifier Forward Current	$I_{F(AV)}$	10	A
Non-Repetitive Peak Surge Current @ Surge applied at rate load conditions half-wave, single phase, 60Hz	$I_{FSM}$	90	A
Max. Instantaneous Forward Voltage @ $I_F=10A$	$V_F$	1.3	V
Max. Instantaneous Reverse Current <sup>2</sup>	$I_R$	$T_J=25^\circ C$	5
		$T_J=100^\circ C$	20
Reverse Recovery Time <sup>3</sup>	$T_{RR}$	30	nS
Typical Junction Capacitance <sup>1</sup>	$C_J$	45	pF
Typical Thermal Resistance from Junction-Case <sup>4</sup>	$R_{\theta JC}$	7	°C / W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	150, -55~150	°C

Notes:

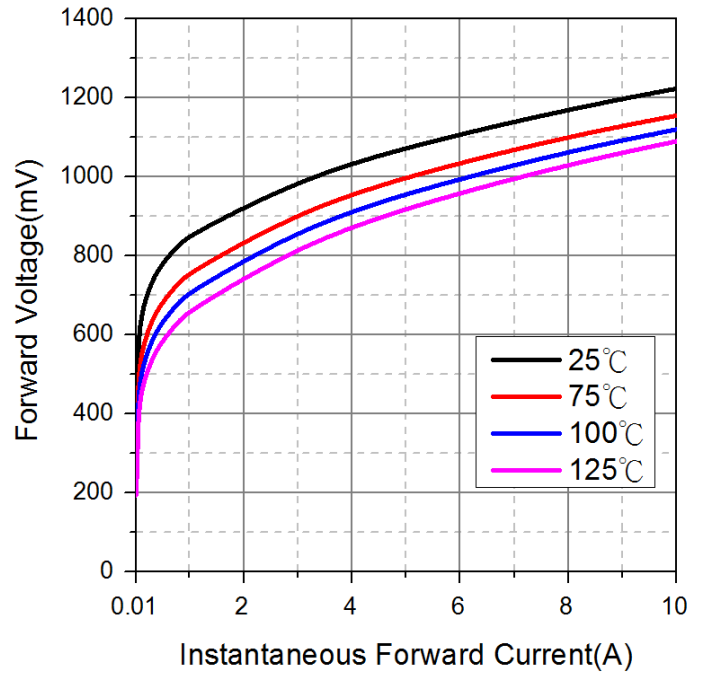
1. Measured at 1MHz and applied reverse voltage of 5V D.C.
2. Pulse Test: Pulse Width=300µs, Duty Cycle ≤2%.
3.  $I_F=0.5A, I_R=1A, I_{RR}=0.25A$ .
4. FR4 Board Heat sink size: 10\*10\*0.2mm.

**RATINGS AND CHARACTERISTIC CURVES**

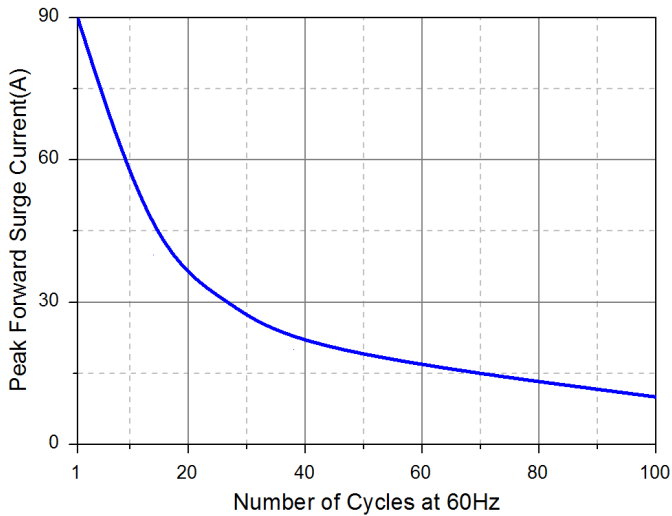
Typical Forward Current Derating Curve



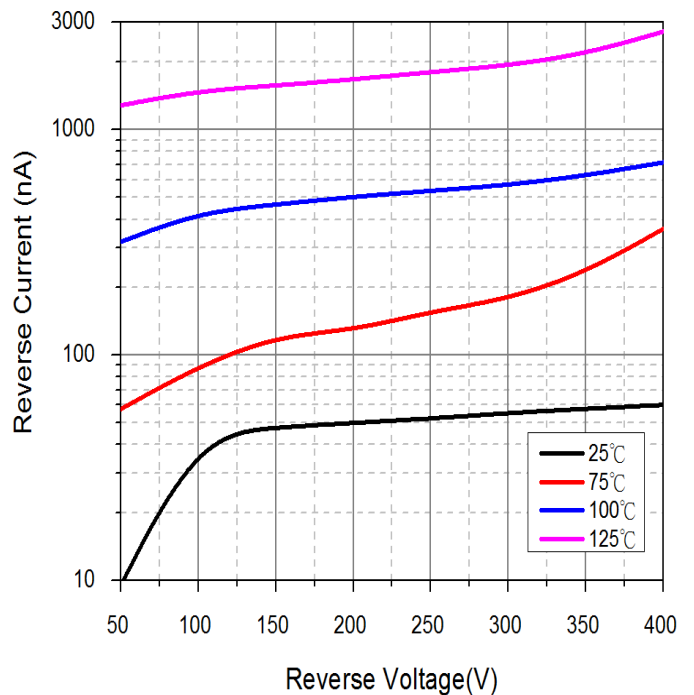
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

