

Features

- Easy paralleling due to a small forward voltage spread
- Soft recovery behavior
- Small switching losses
- High ruggedness
- Industrial standard package with isolated copper base plate
- High thermal performance (Al₂O₃ substrate is used)

Applications

- Welder
- Power Supply
- Motor Drives
- Freewheeling diode for IGBT

Preliminary data



SUSPM1

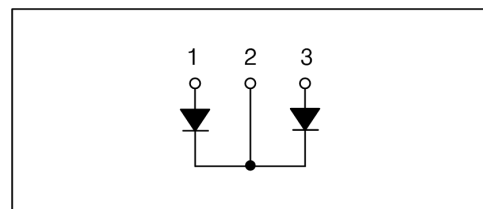
94.5 x 34.5 x 31.1 mm

Absolute Maximum Ratings $T_C = 25^\circ\text{C}$ unless otherwise noted

Item	Symbol	Conditions	Value	Units
Diode	V_{RRM}		600	V
	I_{FAV}		200	A
	I_{FSM}	10 ms sin 180	2160	A
	I^2t	10 ms sin 180	23328	A ² s
	T_j	Operating Junction Temperature ⁽¹⁾	-40~125	°C
Module	T_{stg}	Storage Junction Temperature	-40~125	°C
	V_{iso}	@ AC 1minute	2500	V
	M_t	Main Terminal Mounting torque (M5)	2.5~5	Nm
	M_S	Heat sink Mounting torque (M6)	3.0~5	Nm
	W	Weight	180	g

Internal Circuit & Pin Description

Pin Number	Pin Name	Pin Description
1	A1	Anode 1
2	C	Common Cathode
3	A2	Anode 2



(Note *1) The Maximum junction temperature of chip is 175 °C.

* This specifications may not be considered as an assurance of characteristics and may not have same characteristics in case of using different test systems from @LSIS. We therefore strongly recommend prior consultation of our engineers.

Electrical Characteristics of Diode $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units	
V_F	Diode Forward Voltage	$I_F = 200\text{ A}$	$T_C = 25^\circ\text{C}$	-	1.30	-	V
			$T_C = 125^\circ\text{C}$	-	1.25	-	
t_{rr}	Diode Reverse Recovery Time	$I_F = 200\text{ A}$ $V_R = 300\text{ V}$ $di/dt = -500\text{ A/us}$	$T_C = 25^\circ\text{C}$	-	390	-	ns
			$T_C = 125^\circ\text{C}$	-	650	-	
I_{RRM}	Diode Peak Reverse Recovery Current		$T_C = 25^\circ\text{C}$	-	42	-	A
			$T_C = 125^\circ\text{C}$	-	60	-	
Q_{rr}	Diode Reverse Recovery Charge		$T_C = 25^\circ\text{C}$	-	6	-	μC
			$T_C = 125^\circ\text{C}$	-	15	-	
E_{rr}	Diode Reverse Recovery Energy		$T_C = 25^\circ\text{C}$	-	0.2	-	mJ
			$T_C = 125^\circ\text{C}$	-	0.5	-	

Thermal Characteristics

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$R_{th(J-C)}$	Thermal Resistance	Junction-to-Case	-	0.2	-	$^\circ\text{C/W}$
$R_{th(C-H)}$	Thermal Resistance	Case-to-Heat sink	-	-	-	$^\circ\text{C/W}$

LUF200D60C2

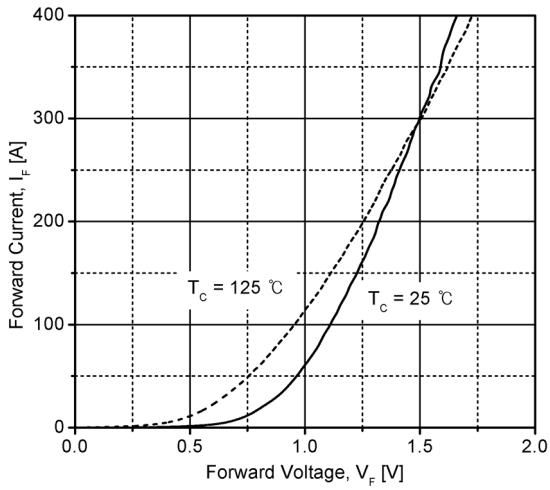


Fig 1. Typical Forward Voltage Characteristics

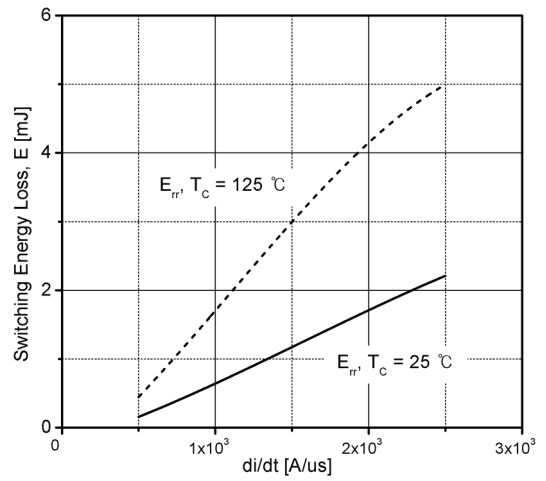


Fig 2. Typical Switching Loss Characteristics

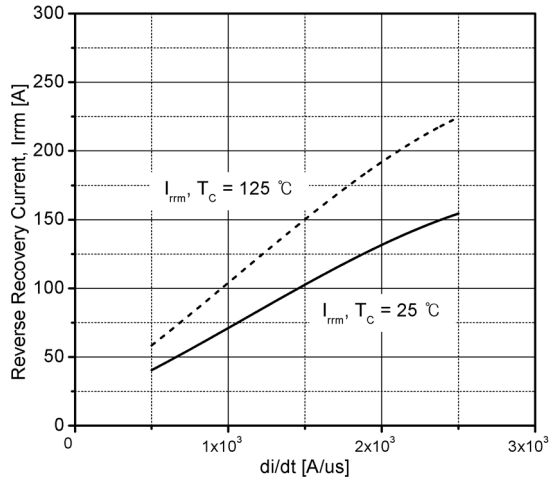


Fig 3. Typical Recovery Current Characteristics

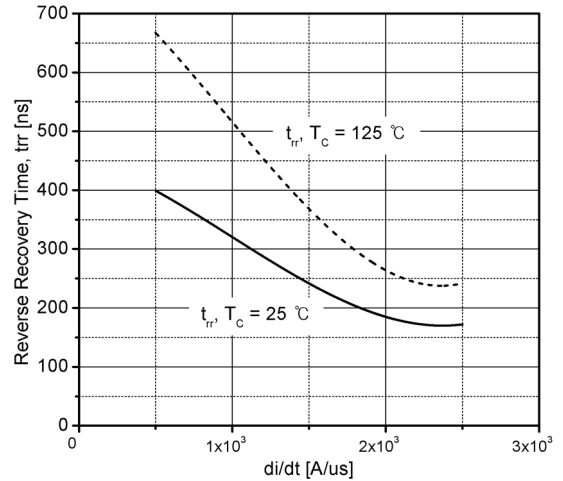


Fig 4. Typical Recovery Time Characteristics

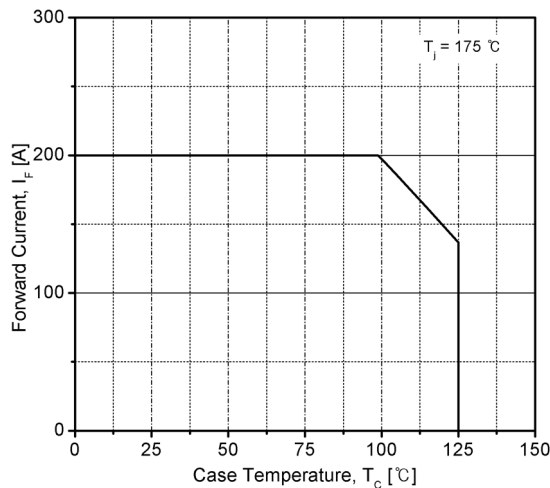


Fig 5. Typical Case Temperature vs. Current

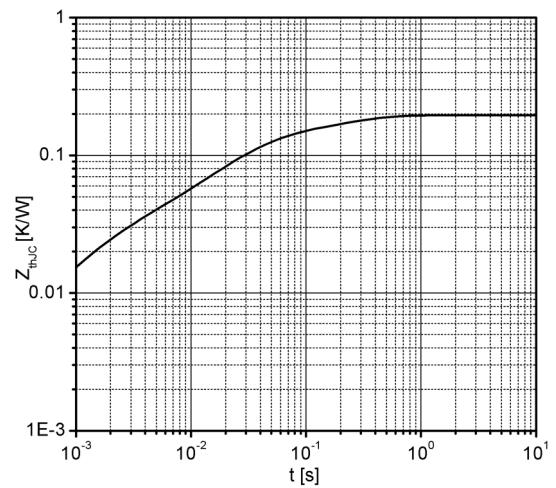


Fig 6. Typical Transient Thermal Impedance

Package Dimension(Dimension in mm)

