

Snubber Module for IGBT

MS0650D225N1, MS0650D225N2

● **Features**

- Special diodes which are low VF and short reverse recovery time are used.
- Low loss by use of metalized polypropylene film condenser.
- Low inductance by connection of shortest distance.
- Compact size and light weight of equipments are possible.

● **Applications**

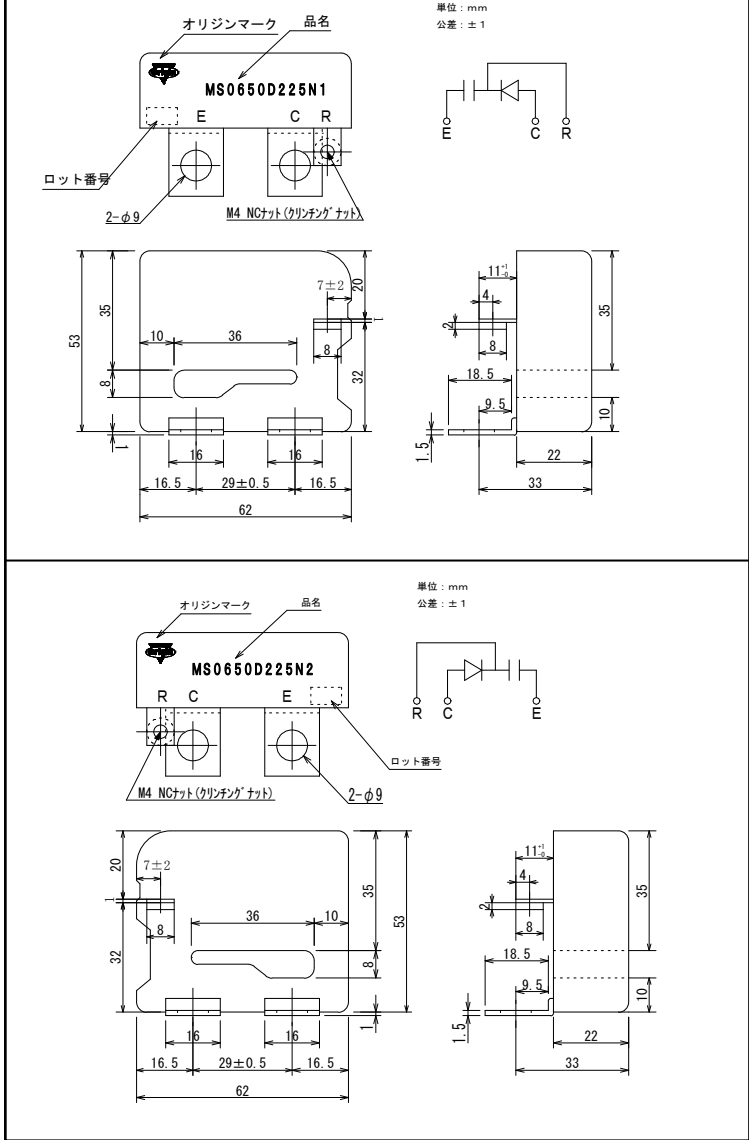
- For snubber circuits of IGBT such as inverters and stabilized power supplies.

● **Structures**

- Diode : Silicon epitaxial planar diode.
- Condenser : Metalized film condenser.
- Conforms to RoHS regulations

● **Outline Drawing**

Unit : mm , Tolerance : ±0.1



● **Absolute Maximum Ratings of Snubber module**

Items	Symbol	Conditions	Ratings	Unit
Operating Temperature	Temp.		-40~+85	°C
Voltage	V_{RM}		600	V
RMS Voltage	V_{ISO}	50-60Hz Sinusoidal Waveform from Terminals to case for 1 Min.	2500	V
		50-60Hz Sinusoidal Waveform from Terminals to case for 1 Sec.	3000	V
RMS Resistance	R_{ISO}	DC 500V	100	MΩ

● Absolute Maximum Ratings of Diode

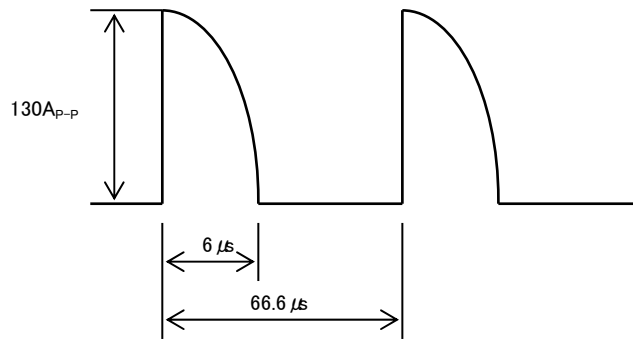
Items	Symbol	Conditions	Ratings	Unit
Peak Reverse Voltage	V_{RM}		600	V
Average Rectified Forward Current	I_O	$T_T = 50^\circ\text{C}$ (Terminal temperature), Resistance Load	50	A
Peak Forward Surge Current	I_{FSM}	$T_a = 25^\circ\text{C}$, 50Hz, Single-phase, Half sin wave, Non-Repetitive	500	A
Operating Junction Temperature	T_j		-40~+150	$^\circ\text{C}$
Storage Temperature	T_{srg}		-40~+150	$^\circ\text{C}$

● Electrical Characteristics of Diode

Items	Symbol	Conditions	MAX.	Unit
Forward Voltage Drop	V_F	$T_a = 25^\circ\text{C}$, $I_F = 50\text{A}$	2.7	V
Reverse Current	I_R	$T_a = 25^\circ\text{C}$, $V_R = 600\text{V}$	100	μA
Reverse Recovery Time	t_{rr}	$T_a = 25^\circ\text{C}$, $I_F = 30\text{A}$, $-di/dt = 5000\text{A}/\mu\text{s}$	200	ns

● Characteristics of Condenser

Items	Performance Specifications
Capacitance	2.2 $\mu\text{F} \pm 10\%$
$\tan \delta$	0.001
Current (*1)	130 A p-p



(*1) Current Waveform