

# ESAG01(2x50A)

**100V,200V / 50A**  
**2 in one-package**  
**POWER DIODE MODULE**

## ■ Features

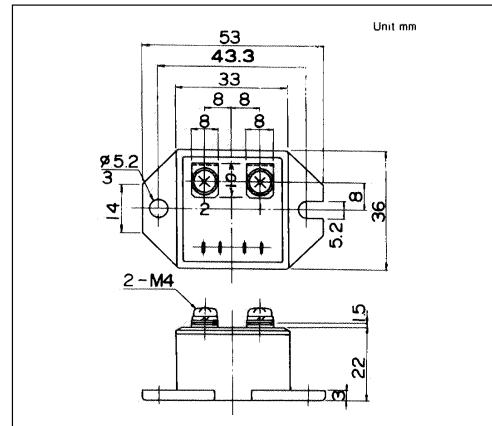
- Glass Passivation Chip
- Variety Connection Menu
- Non-Insulated Type

## ■ Applications

- Battery Chargers
- Free-Wheeling Diode
- General Purpose Rectifiers

## POWER DIODE MODULE

### ■ Outline Drawings, mm



### ■ Inner Circuit Schematic

Symbol	Inner Circuit
C	
N	
D	

## ■ Maximum ratings and characteristics

### ● Absolute maximum ratings

Item	Symbol	Conditions	Rating		Unit
			-01	-02	
Repetitive peak reverse voltage	$V_{RRM}$		100	200	V
Non-repetitive peak reverse voltage	$V_{RSM}$		150	250	V
Average output current	$I_{F(AV)}$	50/60Hz Sine wave, $T_c=125^\circ\text{C}$	2 x 50		A
Surge current	$I_{FSM}$	From rated load, Sine wave 10ms	1200		A
$I^2t$	$I^2t$	From rated load	5760		$\text{A}^2\text{s}$
Operating junction temperature	$T_j$		-40 to +150		$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +150		$^\circ\text{C}$
Screw torque		(M5)	1.7 *1		N·m

\*1: Recommendable value : 1.3 to 1.7 N·m(M5)

### ● Electrical characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage drop	$V_{FM}$	$T_j=25^\circ\text{C}$ , $I_{FM}=150\text{A}$			1.40	V
Reverse current	$I_{RRM}$	$T_j=150^\circ\text{C}$ , $V_R=V_{RRM}$			10	mA

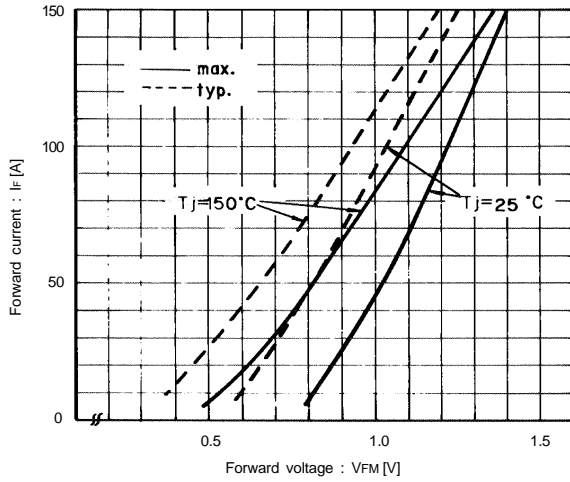
### ● Thermal Characteristics

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Thermal resistance	$R_{th(j-c)}$	Junction to case			0.20	$^\circ\text{C}/\text{W}$
	$R_{th(c-f)}$	the base to cooling fin *		0.05		$^\circ\text{C}/\text{W}$

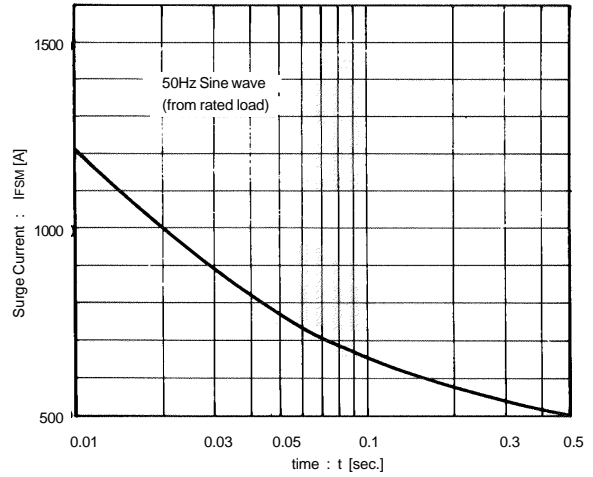
\* : With Thermal Compound

■ Characteristics

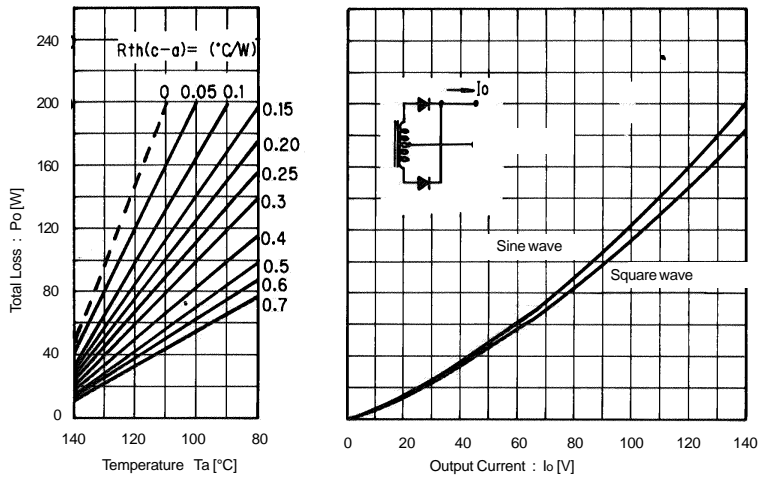
Forward Characteristics



Surge Current



Output Current - Total Loss - Ambient Temperature



Transient Thermal Impedance

