

ESAG01(2x50A)

POWER DIODE MODULE

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

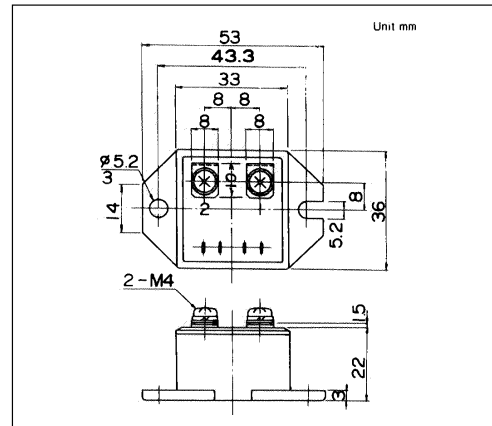
■ Features

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

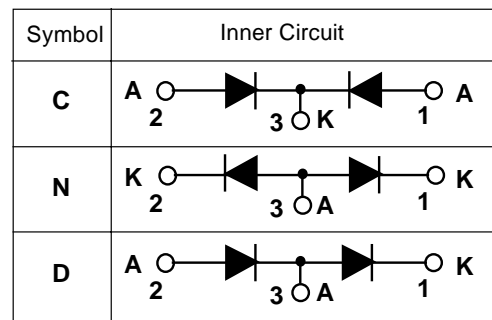
■ Applications

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

■ Outline Drawings, mm



■ Inner Circuit Schematic



■ 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		A^2s
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

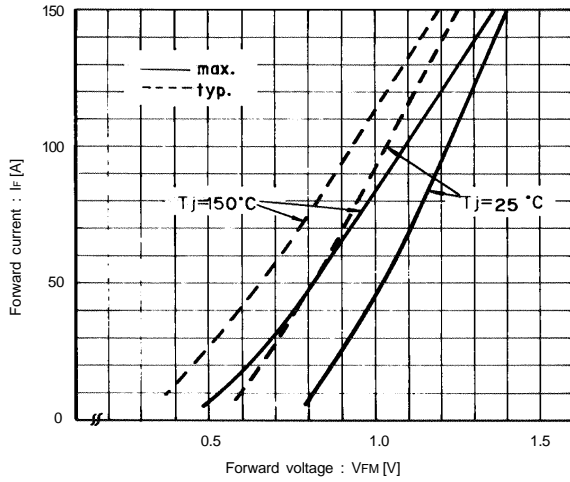
● Thermal Characteristics

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

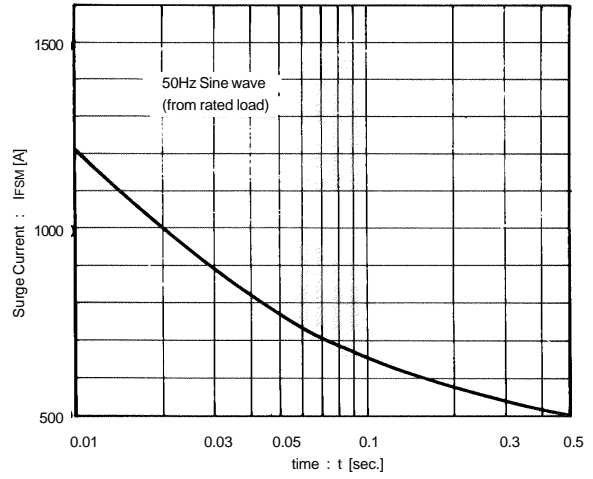
* : With Thermal Compound

■ Characteristics

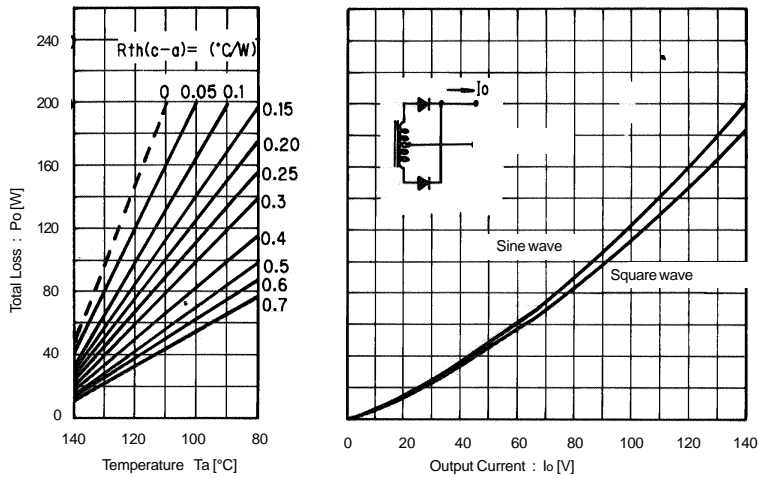
Forward Characteristics



Surge Current



Output Current - Total Loss - Ambient Temperature



Transient Thermal Impedance

