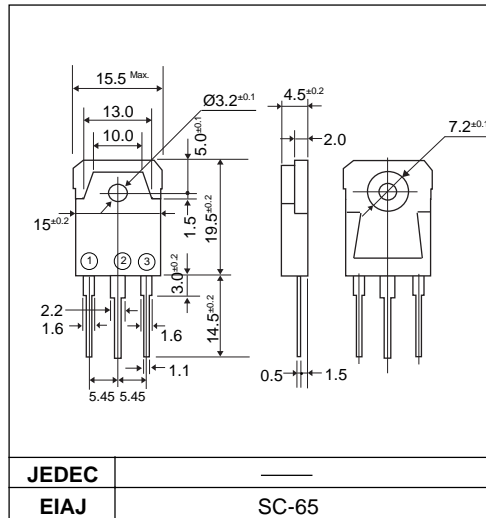


# ESAD39(C,N,D) (10A)

**(400V to 600V / 10A)**

## FAST RECOVERY DIODE

■ Outline drawings, mm



## ■ Features

- Super high speed switching
- Low  $V_F$  in turn on
- High reliability

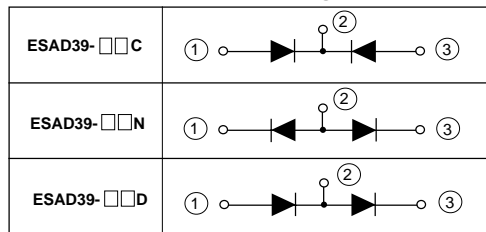
## ■ Applications

- High speed power switching

## Maximum ratings and characteristics

- Absolute maximum ratings

■ Connection diagram



Item	Symbol	Conditions	Rating		Unit
			-04	-06	
Repetitive peak reverse voltage	$V_{RRM}$		400	600	V
Non-repetitive peak reverse voltage	$V_{RSM}$		400	600	V
Average output current	$I_o$	Square wave, duty=1/2, $T_c=98^{\circ}C$	10*		A
Surge current	$I_{FSM}$	Sine wave 10ms	50		A
Operating junction temperature	$T_j$		-40 to +150		$^{\circ}C$
Storage temperature	$T_{stg}$		-40 to +150		$^{\circ}C$

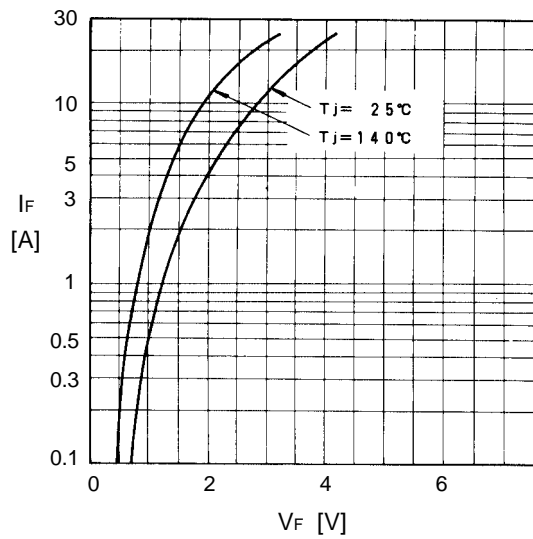
\*Average forward current of centertap full wave connection

- Electrical characteristics (Ta=25°C Unless otherwise specified)

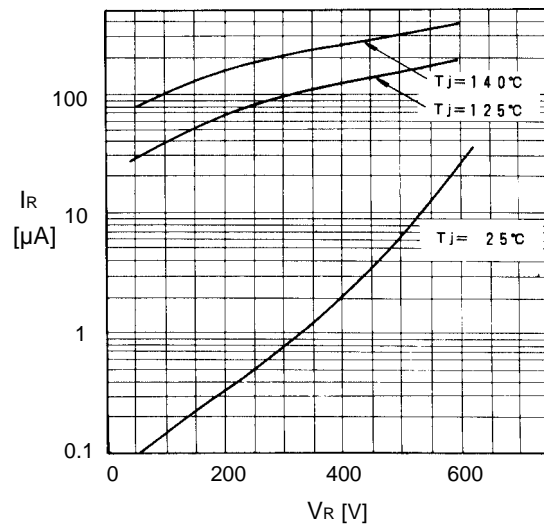
Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	$V_{FM}$	$I_{FM}=4A$	2.5	V
Reverse current	$I_{RRM}$	$V_R=V_{RRM}$	100	$\mu A$
Reverse recovery time	$t_{rr}$	$I_F=0.1A$ , $I_R=0.2A$ , $I_{rec}=0.05A$	50	ns
Thermal resistance	$R_{th(j-c)}$	Junction to case	2.0	$^{\circ}C/W$

## Characteristics

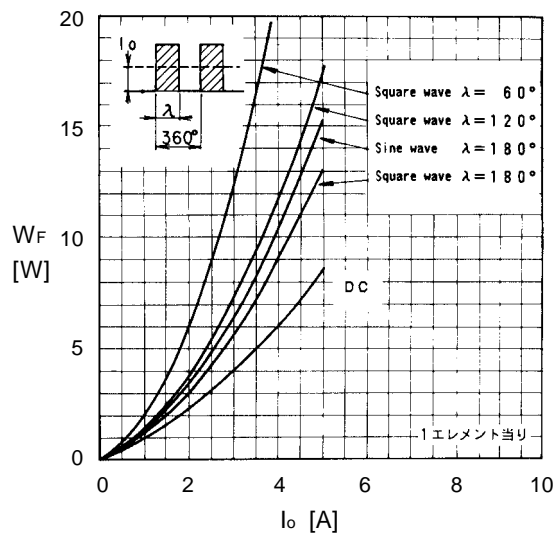
Forward characteristics



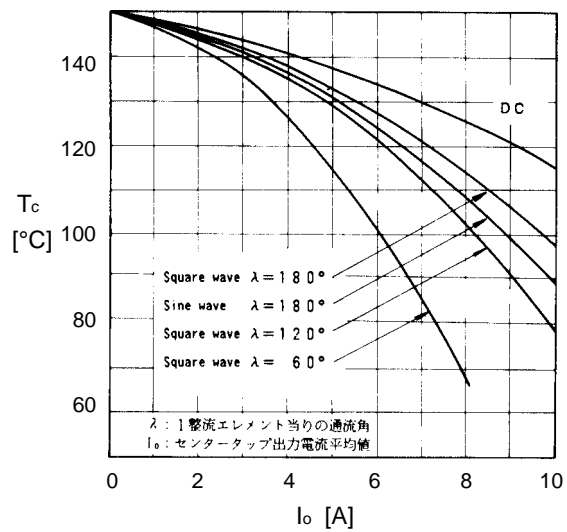
Reverse characteristics



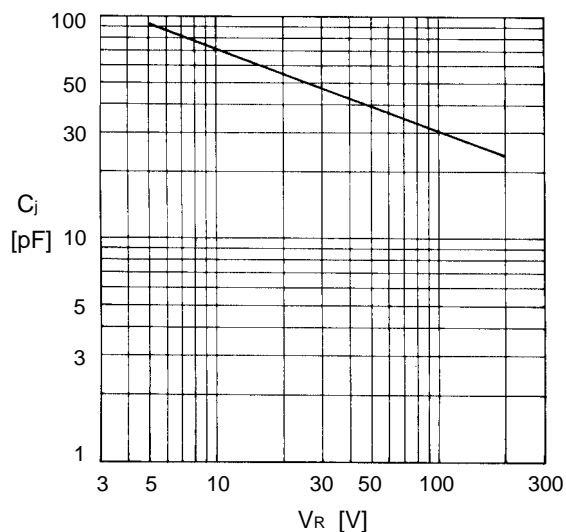
Forward power dissipation



Output current-case temperature



Junction capacitance characteristics



Surge capability

