

# ESAD39M(C,N,D) (10A) (400V to 600V / 10A)

## FAST RECOVERY DIODE

### Features

- Insulated package by fully molding
- Super high speed switching
- Low VF in turn on
- High reliability

### Applications

- High speed power switching

### Maximum ratings and characteristics

- Absolute maximum ratings

Item	Symbol	Conditions	Rating		Unit
			-04	-06	
Repetitive peak reverse voltage	V <sub>RRM</sub>		400	600	V
Non-repetitive peak reverse voltage	V <sub>RSM</sub>		400	600	V
Isolating voltage	V <sub>iso</sub>	Terminals-to-case, AC. 1min.	1500		V
Average output current	I <sub>o</sub>	Square wave, duty=1/2, T <sub>c</sub> =85°C	10*		A
Surge current	I <sub>FSM</sub>	Sine wave 10ms	50		A
Operating junction temperature	T <sub>j</sub>		-40 to +150		°C
Storage temperature	T <sub>stg</sub>		-40 to +150		°C

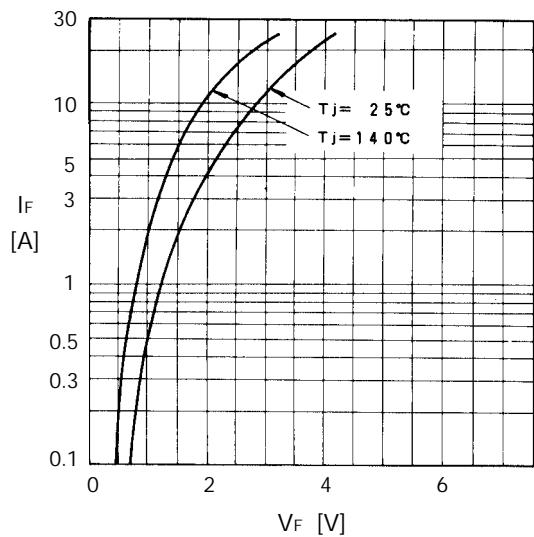
\* Average forward current of centertap full wave connection

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

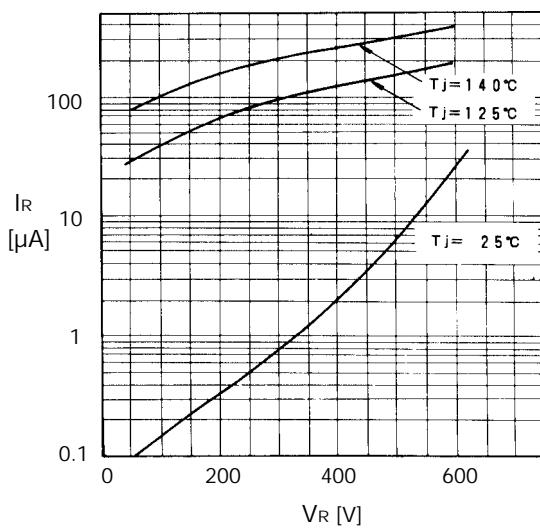
Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V <sub>FM</sub>	I <sub>FM</sub> =4A	2.5	V
Reverse current	I <sub>RRM</sub>	V <sub>R</sub> =V <sub>RRM</sub>	100	µA
Reverse recovery time	t <sub>rr</sub>	I <sub>f</sub> =0.1A, I <sub>r</sub> =0.2A, I <sub>rec</sub> =0.05A	50	ns
Thermal resistance	R <sub>th(j-c)</sub>	Junction to case	2.5	°C/W

## ■ Characteristics

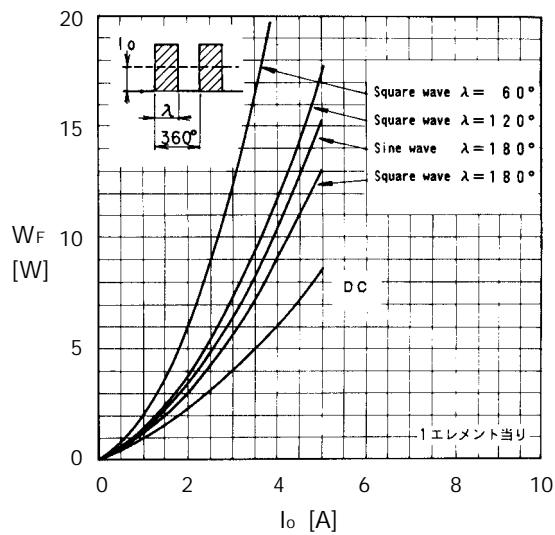
Forward characteristics



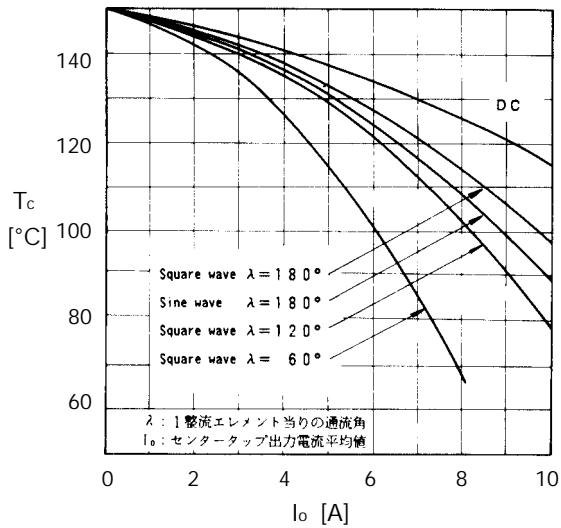
Reverse characteristics



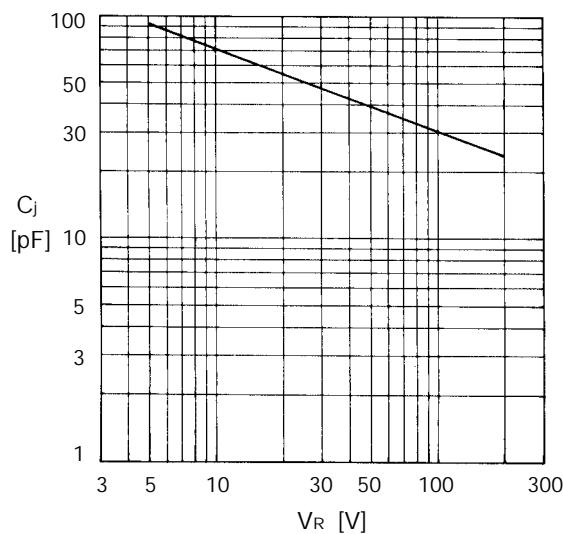
Forward power dissipation



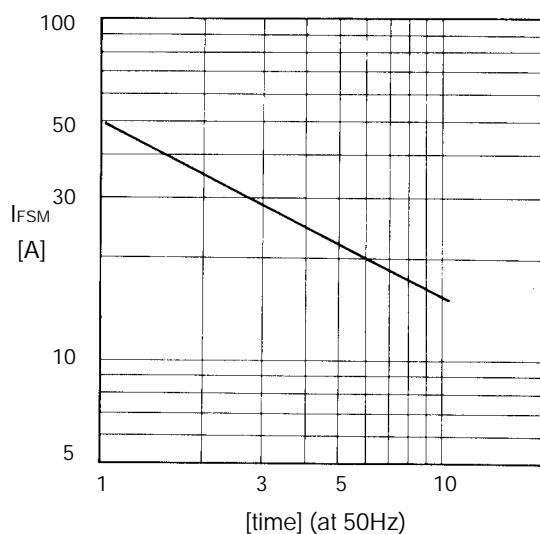
Output current-case temperature



Junction capacitance characteristics



Surge capability



Transient thermal impedance

