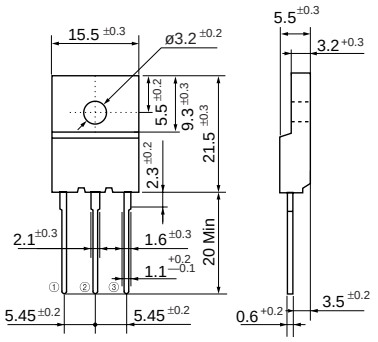
ESAD39M(C,N,D) (10A) (400V to 600V / 10A)

FAST RECOVERY DIODE

■ Outline drawings, mm



JEDEC	——
EIAJ	——

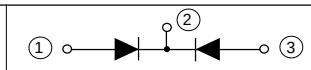
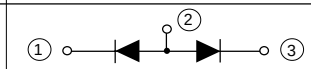
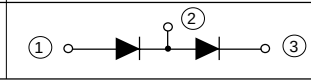
■ Features

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

■ Applications

- High speed power switching

■ Connection diagram

ESAD39M-□□C	
ESAD39M-□□N	
ESAD39M-□□D	

■ Maximum ratings and characteristics

● Absolute maximum ratings

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
Isolating voltage	Viso	Terminals-to-case, AC. 1min.	1500		V
Average output current	I_O	Square wave, duty=1/2, Tc=85°C	10*		A
Surge current	I_{FSM}	Sine wave 10ms	50		A
Operating junction temperature	T_j		-40 to +150		°C
Storage temperature	T_{stg}		-40 to +150		°C

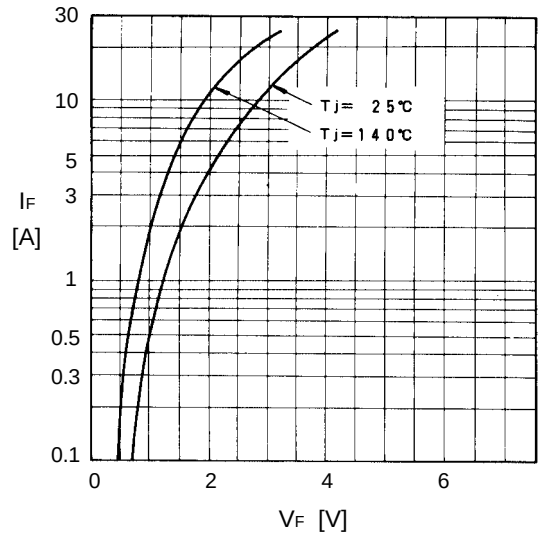
*Average forward current of centertap full wave connection

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

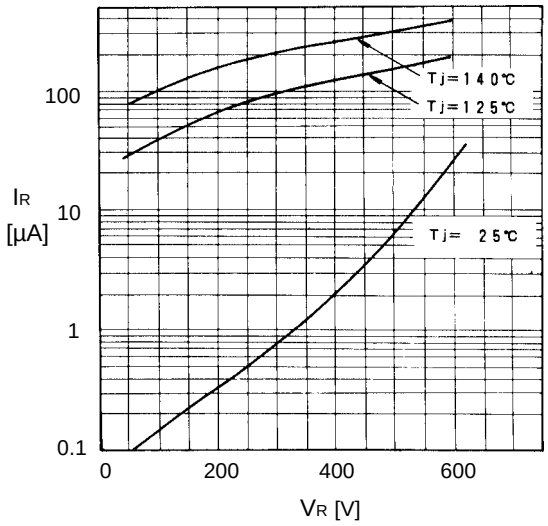
Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V_{FM}	I_{FM}=4A	2.5	V
Reverse current	I_{RRM}	V_R=V_{RRM}	100	μA
Reverse recovery time	t rr	I_F=0.1A, I_R=0.2A, Irec=0.05A	50	ns
Thermal resistance	$R_{th(j-c)}$	Junction to case	2.5	°C/W

■ Characteristics

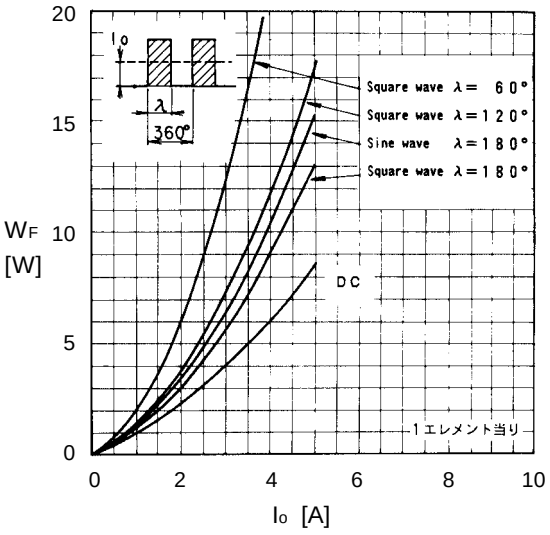
Forward characteristics



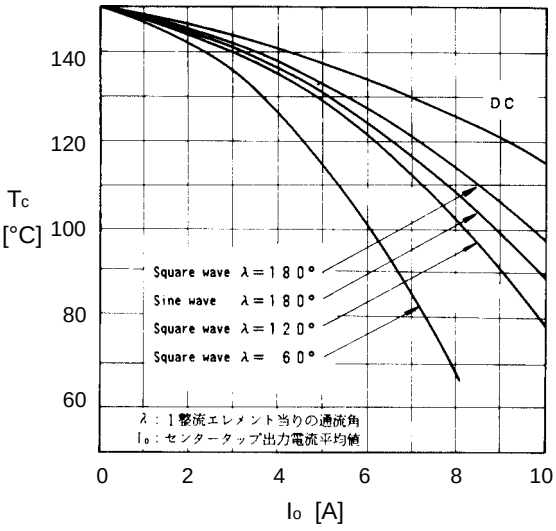
Reverse characteristics



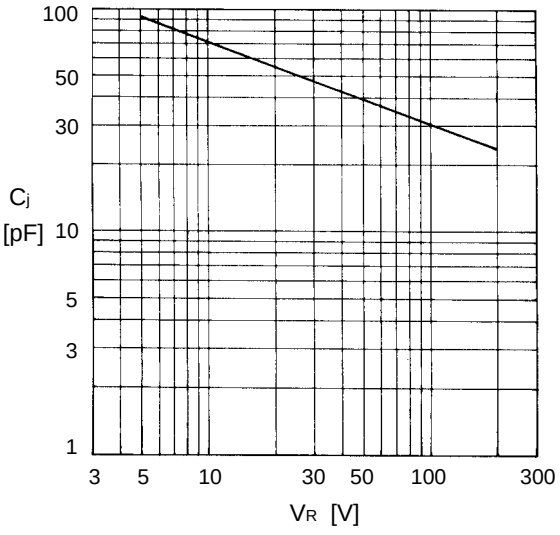
Forward power dissipation



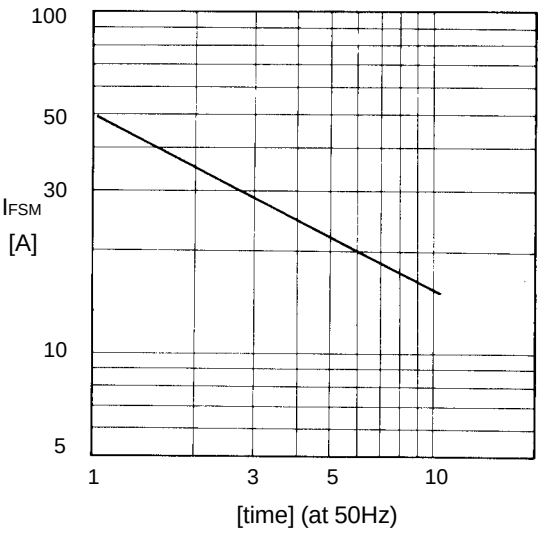
Output current-case temperature



Junction capacitance characteristics



Surge capability



Transient thermal impedance

