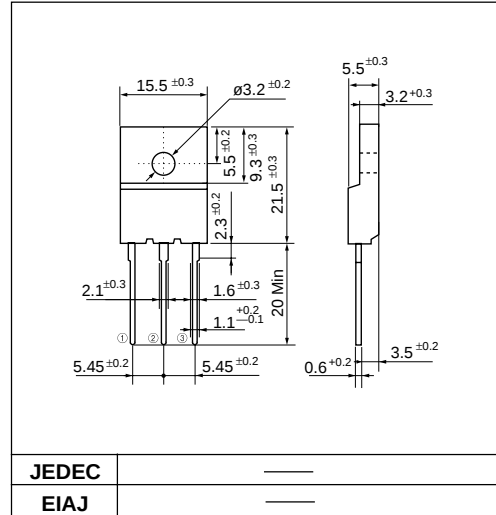


ESAC93M-03R (12A)

(300V / 12A)

LOW LOSS SUPER HIGH SPEED RECTIFIER

■ Outline drawings, mm



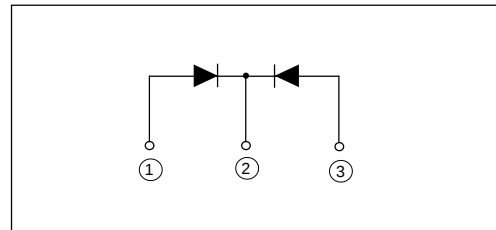
■ Features

- Insulated package by fully molding
- Low V_F
- Super high speed switching
- High reliability by planer design

■ Applications

- High speed power switching

■ Connection diagram



■ Maximum ratings and characteristics

- Absolute maximum ratings

Item	Symbol	Conditions	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}		300	V
Non-repetitive peak reverse voltage	V_{RSM}		300	V
Isolating voltage	liso	Terminals-to-case, AC. 1 min.	1500	V
Average output current	I_o	Square wave, duty=1/2, $T_c=104^{\circ}\text{C}$	12*	A
Surge current	I_{FSM}	Sine wave 10ms	50	A
Operating junction temperature	T_j		-40 to +150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^{\circ}\text{C}$

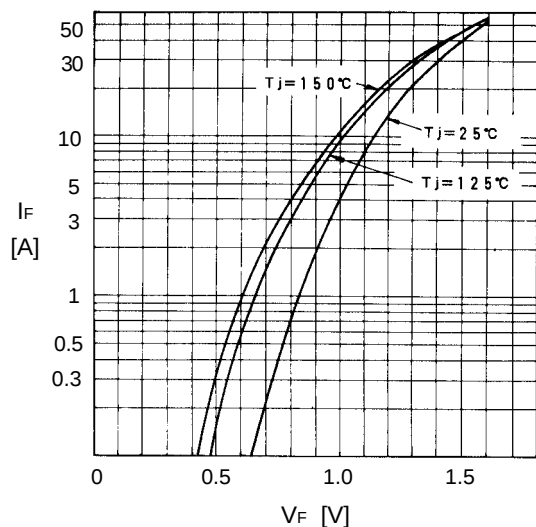
*Average forward current of centertap full wave connection

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

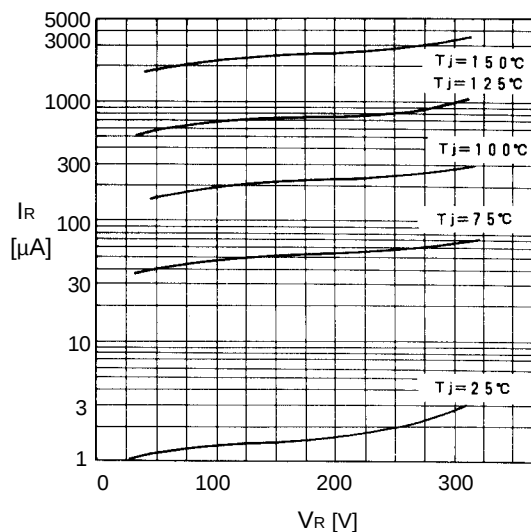
Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V_{FM}	$I_{FM}=6.0\text{A}$	1.2	V
Reverse current	I_{RRM}	$V_R=V_{RRM}$	100	μA
Reverse recovery time	t_{rr}	$I_F=0.1\text{A}$, $I_R=0.2\text{A}$, $I_{rec}=0.05\text{A}$	35	ns
Thermal resistance	$R_{th(j-c)}$	Junction to case	2.7*	$^{\circ}\text{C/W}$

■ Characteristics

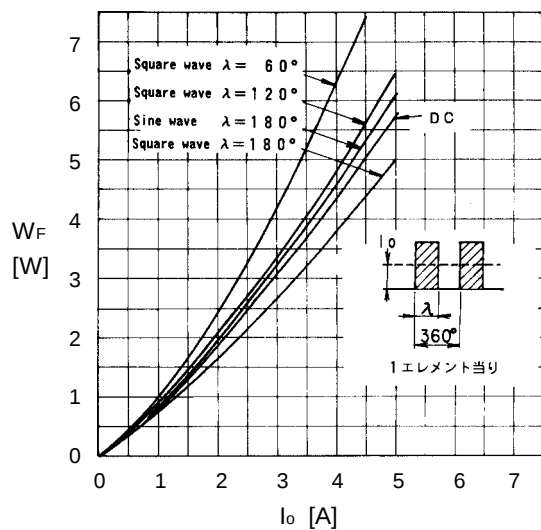
Forward characteristics



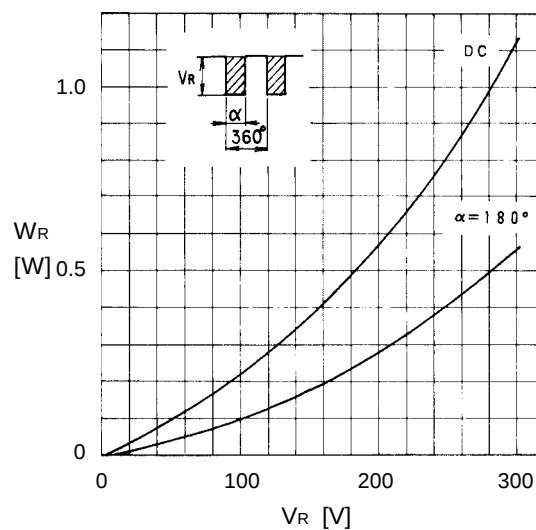
Reverse characteristics



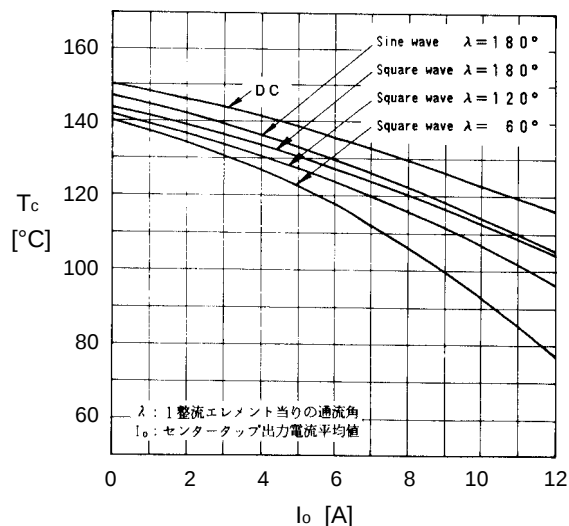
Forward power dissipation



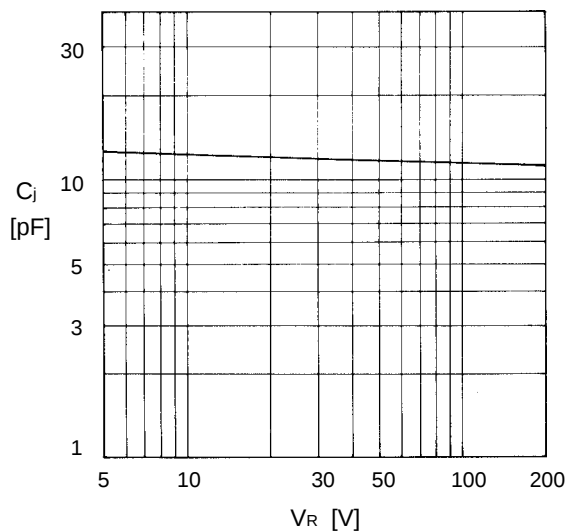
Forward power dissipation



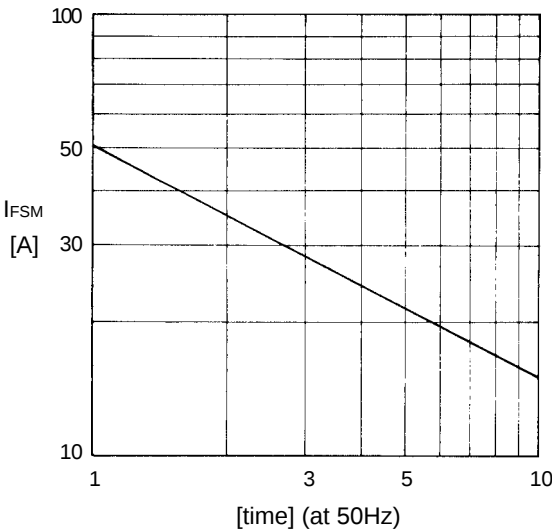
Output current-case temperature



Junction capacitance characteristics



Surge capability



Transient thermal impedance

