

YA846C04 (30A)

(45V / 30A)

Schottky barrier diode

Major characteristics

Characteristics	YA846C04	Units	Condition
V_{RRM}	45	V	
V_F	0.4	V	$T_j=125^{\circ}\text{C}$, typ
I_o	30	A	

Features

- Low V_F
- Optimized for 3.3V
- 5V output application
- Center tap connection

Applications

- High frequency operation
- DC-DC converters
- AC adapter

Maximum ratings and characteristics

- Absolute maximum ratings

Item	Symbol	Conditions	Rating	Unit
Repetitive peak surge reverse voltage	V_{RSM}	$t_w=500\text{ns}$, $\text{duty}=1/40$	45	V
Repetitive peak reverse voltage	V_{RRM}		45	V
Average output current	I_o	Square wave, $\text{duty}=1/2$ $T_c=98^{\circ}\text{C}$	30 *	A
Non-repetitive surge current	I_{FSM}	Sine wave 10ms, 1shot	200	A
Operating junction temperature	T_j		+150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^{\circ}\text{C}$

* Average output current at centertap full wave connection

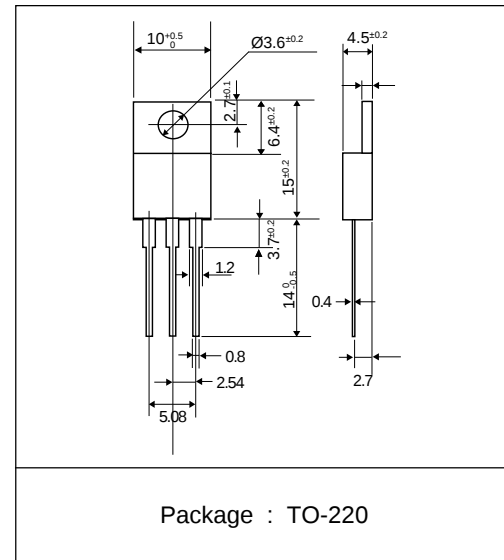
- Electrical characteristics ($T_c=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V_F	$I_{FM}=12.5\text{A}$	0.55	V
Reverse current	I_R	$V_R=V_{RRM}$	5.0	mA

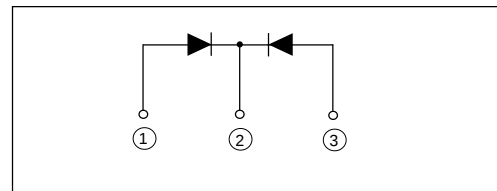
- Electrical characteristics ($T_c=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Condition	Max.	Unit
Thermal resistance	$R_{th(j-c)}$	Junction to case	2.0	$^{\circ}\text{C/W}$

Outline drawings, mm

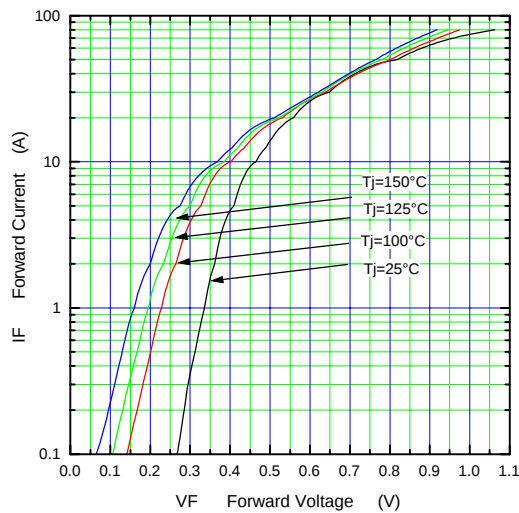


Connection diagram

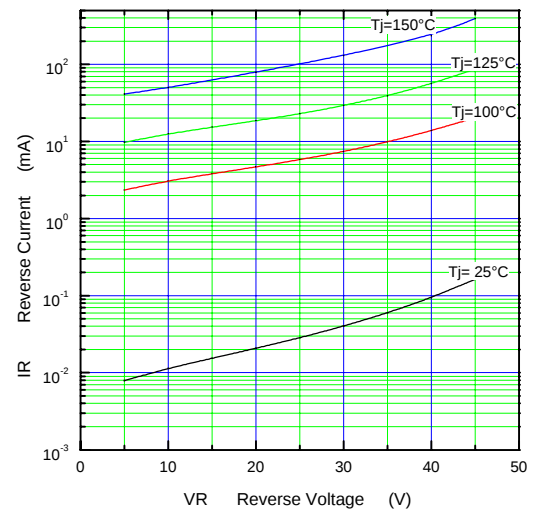


Characteristics

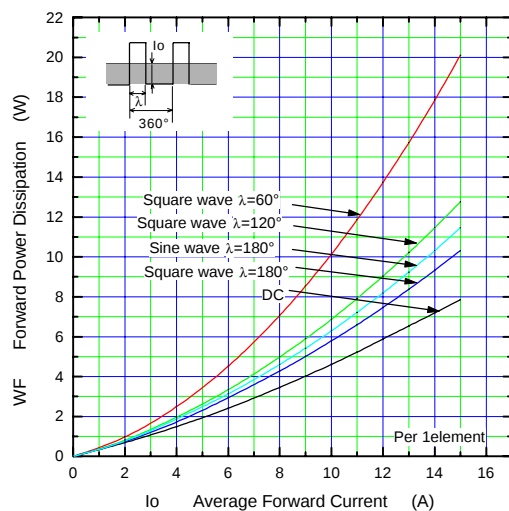
Forward Characteristic (typ.)



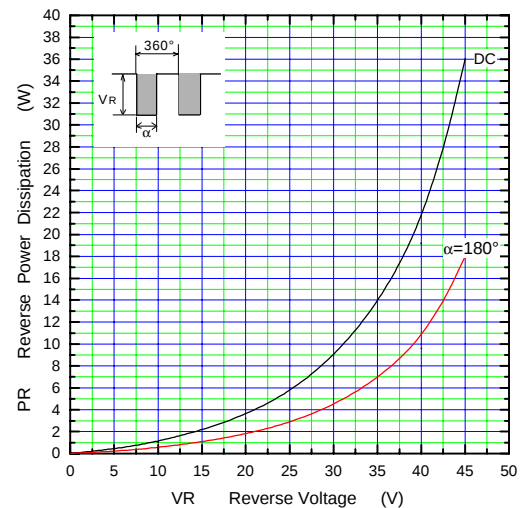
Reverse Characteristic (typ.)



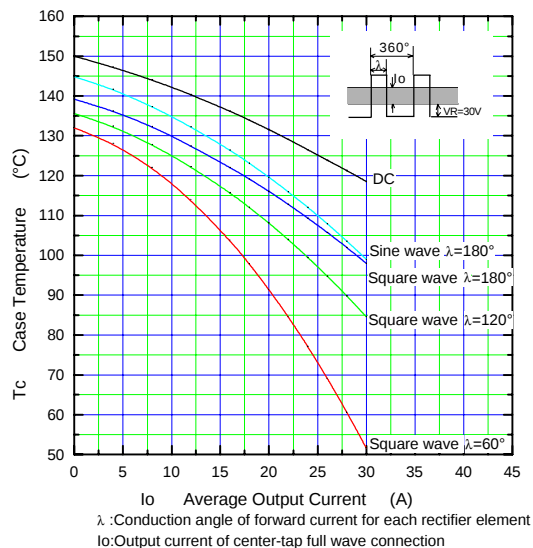
Forward Power Dissipation



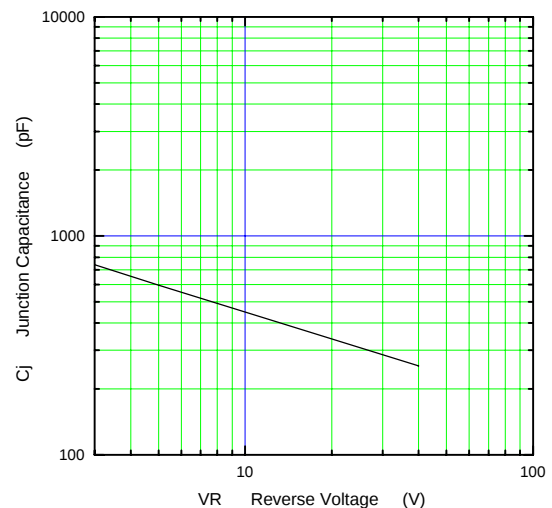
Reverse Power Dissipation



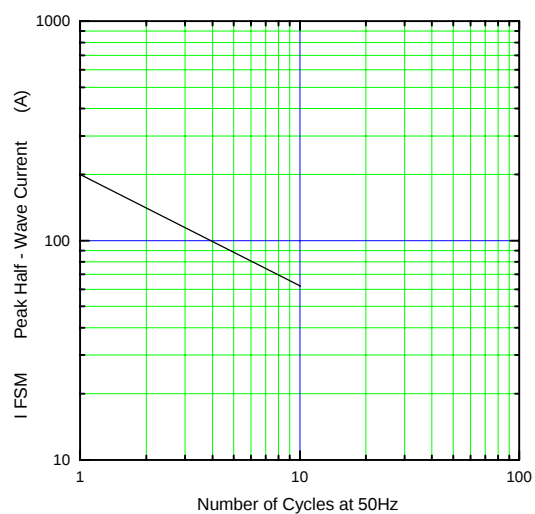
Current Derating (I_o - T_c)



Junction Capacitance Characteristic (typ.)



Surge Capability



Transient Thermal Impedance

