

TP865C12R (20A)

(120V / 20A)

[0401]

High Voltage Schottky barrier diode

Major characteristics

Characteristics	TP865C12R	Units	Condition
V_{RRM}	120	V	
V_F	0.88	V	$T_c=25^{\circ}\text{C MAX.}$
I_o	20	A	

Features

- Low V_F
- High Voltage
- Center tap connection

Applications

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

Maximum ratings and characteristics

- Absolute maximum ratings (at $T_c=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Conditions	Rating	Unit
Repetitive peak surge reverse voltage	V_{RSM}	$t_w=500\text{ns}$, duty=1/40	120	V
Repetitive peak reverse voltage	V_{RRM}		120	V
Average output current	I_o	Square wave, duty=1/2 $T_c=126^{\circ}\text{C}$	20 *	A
Non-repetitive surge current **	I_{FSM}	Sine wave 10ms 1shot	150	A
Operating junction temperature	T_j		+150	$^{\circ}\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^{\circ}\text{C}$

* Out put current of center tap full wave connection

**Rating per element

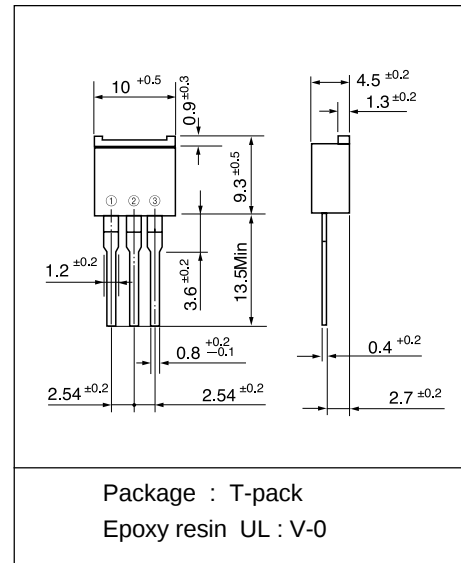
- Electrical characteristics (at $T_c=25^{\circ}\text{C}$ Unless otherwise specified)

Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V_F	$I_{FM}=10\text{A}$	0.88	V
Reverse current	I_R	$V_R=V_{RRM}$	150	μA
Thermal resistance	$R_{th(j-c)}$	Junction to case	1.25	$^{\circ}\text{C/W}$

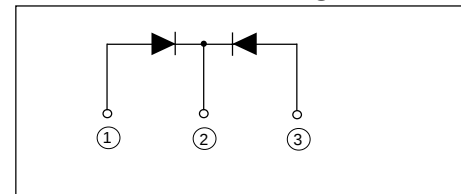
- Mechanical characteristics

Mounting torque	Recommended torque	0.3 to 0.5	N·m
Approximate mass		2	g

Outline drawings, mm

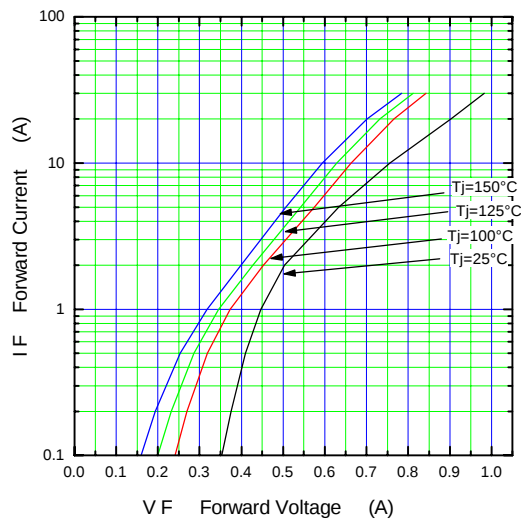


Connection diagram

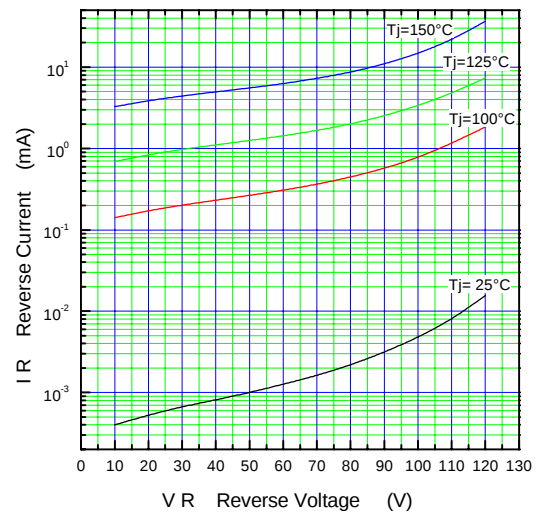


■ Characteristics

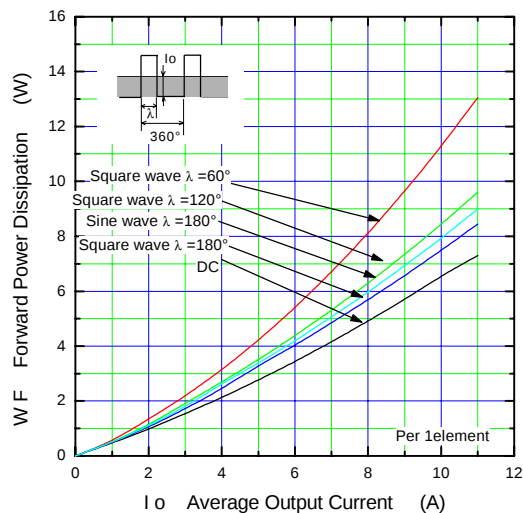
Forward Characteristic (typ.)



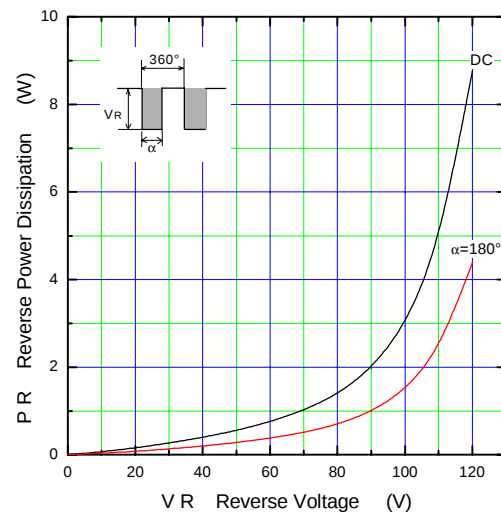
Reverse Characteristic (typ.)



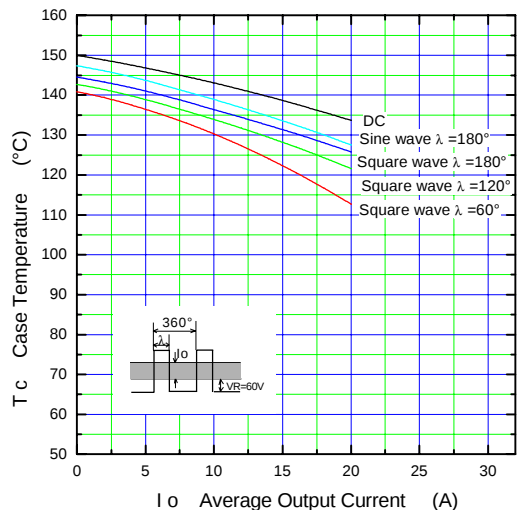
Forward Power Dissipation (max.)



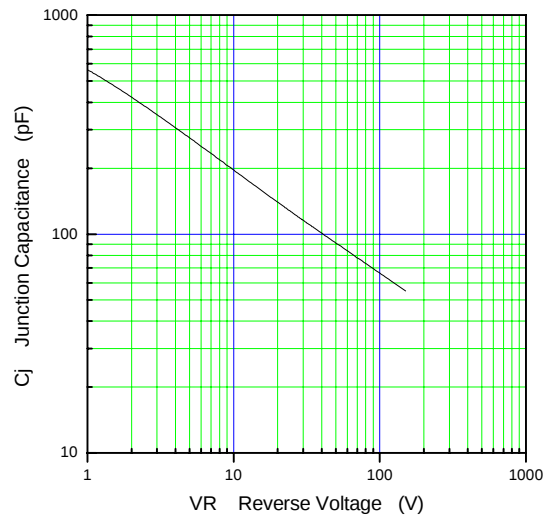
Reverse Power Dissipation (max.)



Current Derating (I_o - T_c) (max.)



Junction Capacitance Characteristic (max.)

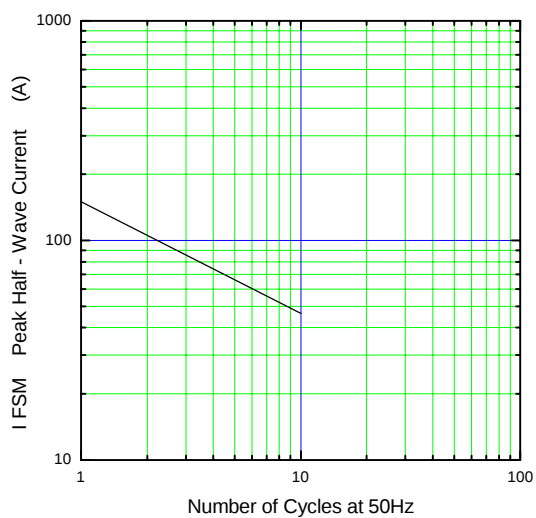


λ : Conduction angle of forward current for each rectifier element
 I_o : Output current of center-tap full wave connection

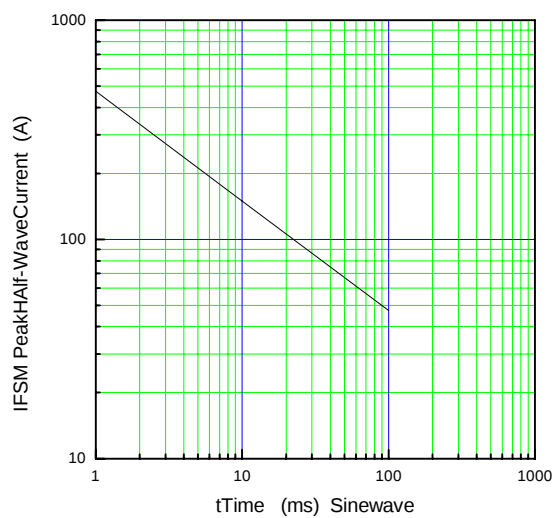
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Surge Capability (max.)



Surge Current Ratings (max.)



Transient Thermal Impedance (max.)

