MS906C3 (20A)

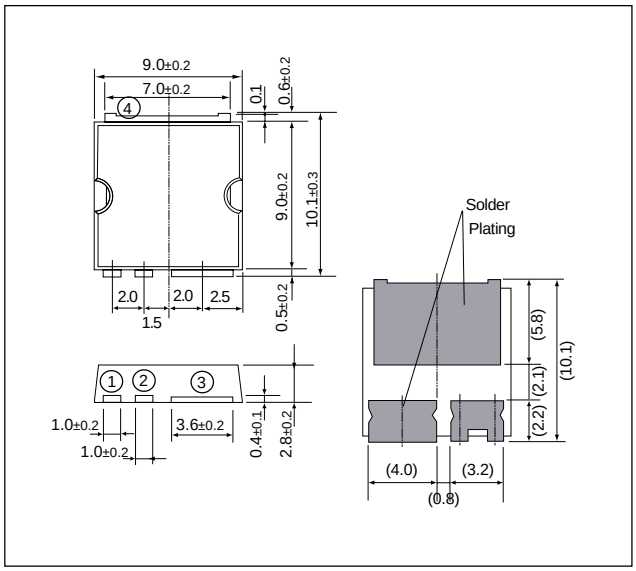
(300V / 20A)

Low loss fast recovery diode

■ Major characteristics

Characteristics	MS906C3	Units	Condition
V_{RRM}	300	V	
V_F	0.89	V	Tj=125°C, typ
Io	20	A	

■ Outline drawings, mm



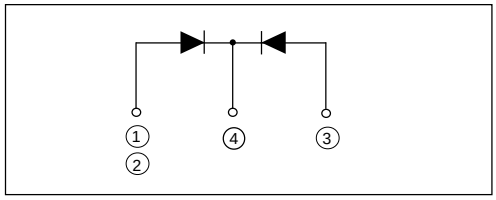
■ Features

- Low V_F
- Low height : 2.8mm
- Small mounting area
- High reverse voltage
- Center tap connection

■ Applications

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

■ Connection diagram



■ Maximum ratings and characteristics

● Absolute maximum ratings

Item	Symbol	Conditions	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}		300	V
Repetitive peak surge reverse voltage	V_{RSM}	tw=500ns, duty=1/40	300	V
Average output current	Io	Square wave, duty=1/2 Tc=95°C	20 *	A
Surge current	I_{FSM}	Sine wave 10ms	80	A
Operating junction temperature	T_j		+150	°C
Storage temperature	T_{stg}		-40 to +150	°C

* Average output current at centertap full wave connection

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

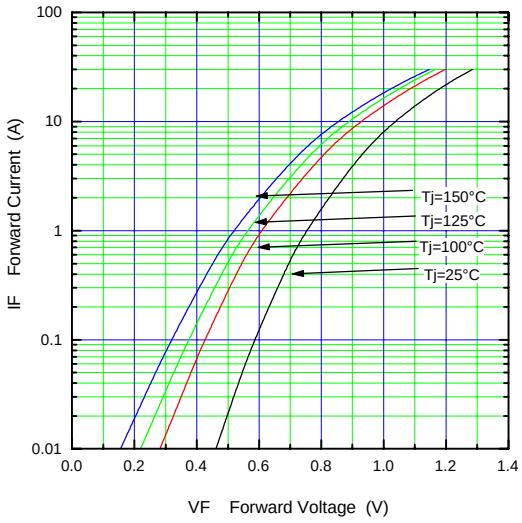
Item	Symbol	Conditions	Max.	Unit
Forward voltage drop	V_{FM}	I_{FM}=10A	1.2	V
Reverse current	I_{RRM}	V_R=V_{RRM}	200	μA
Reverse recovery time	trr	IF=0.1A, IR=0.2A, Irec=0.05A	35	ns

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

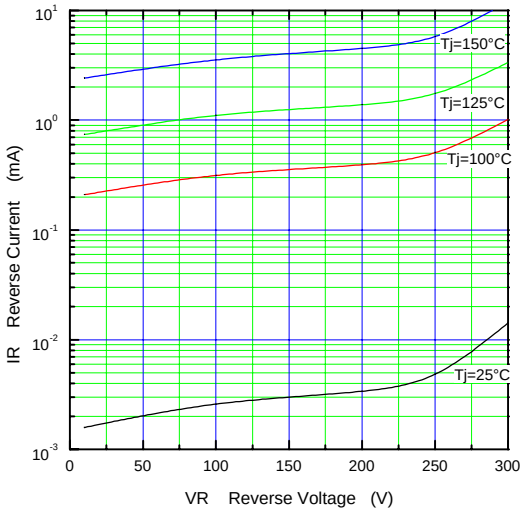
Item	Symbol	Condition	Max.	Unit
Thermal resistance	Rth(j-c)	Junction to case	2	°C/W

■ Characteristics

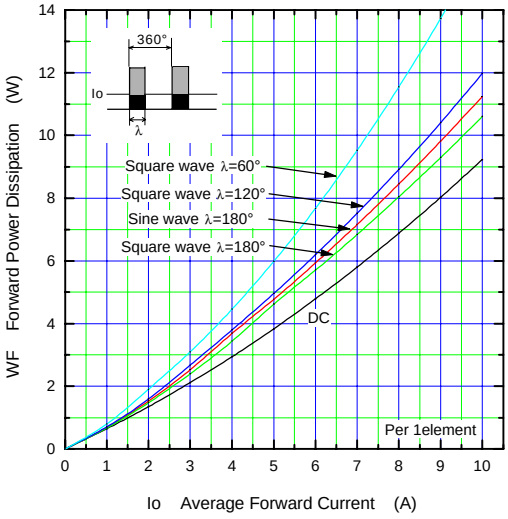
Forward Characteristic (typ.)



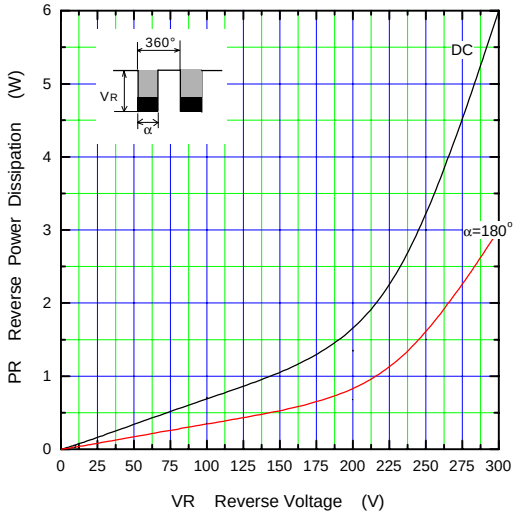
Reverse Characteristic (typ.)



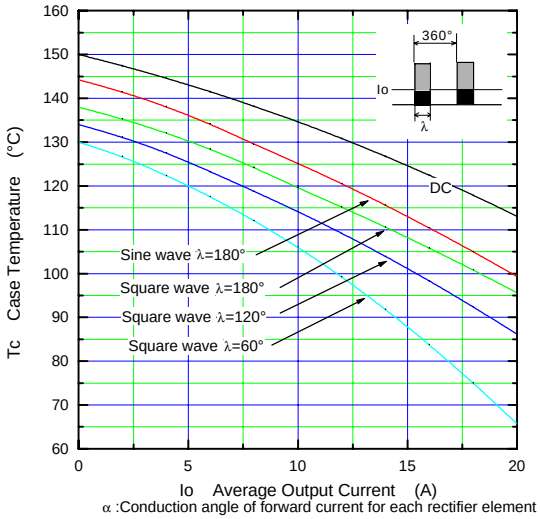
Forward Power Dissipation



Reverse Power Dissipation

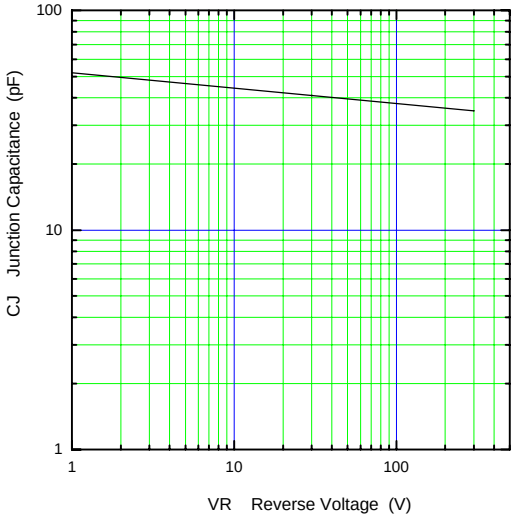


Current Derating (Io-Tc)

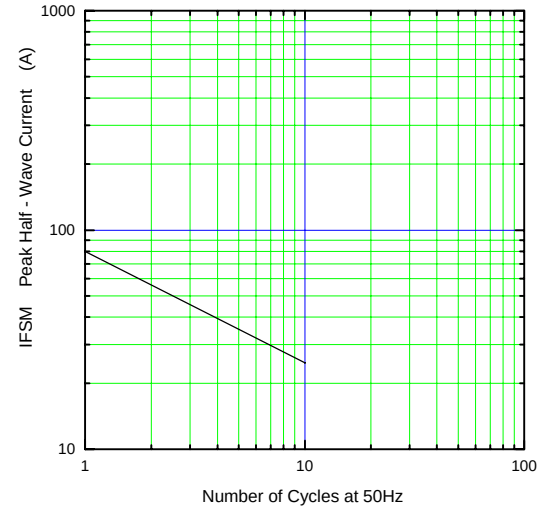


α :Conduction angle of forward current for each rectifier element
Io:Output current of center-tap full wave connection

Junction Capacitance Characteristic (typ.)



Surge Capability



Transient Thermal Impedance