YG962S6R (Ip10A)   (Ip10A / 600V)

Super LLD (For PFC circut)

LOW LOSS SUPER HIGH SPEED RECTIFIER

■ Outline drawings, mm

■ Features
- Insulated package by fully molding
- Super high speed switching
- High reliability by planer design

■ Applications
- PFC circuit (current continuous node)

■ Connection diagram

■ Maximum ratings and characteristics

● Absolute maximum ratings

Item	Symbol	Conditions	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}		600	V
Non-Repetitive peak reverse voltage	V_{RSM}		600	V
Isolatin voltage	V_{iSO}	Terminals-to-Case, AC.1min	1500	V
Surge peak forward current	I_{PS}	tw≦200ns	15	A
Peak forward current	I_P		10	A
Average output current	I_O	duty=1/2, Tc=102°C Square wave	3.5	A
Non-Repetitive surge current	I_{FSM}	Sine wave10ms,1shot	25	A
Operating junction temperature	T_j		150	°C
Storage temperature	T_{stg}		-40 to +150	°C
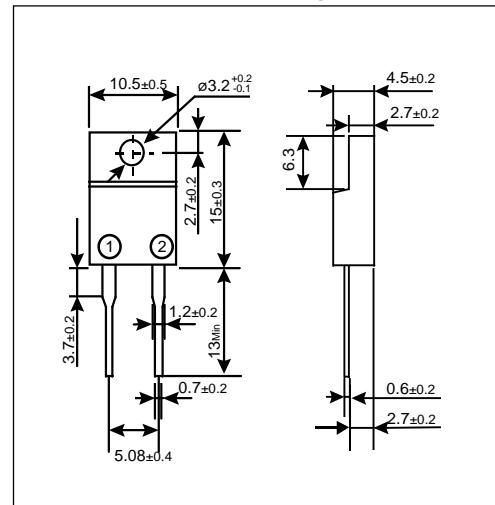
● Electrical characteristics (Ta=25°C Unless otherwise specified)

Item	Symbol	Conditions	Characteristics		Unit
Reverse recovery peak current	I_{RP}	IF=5A,-di/dt=200A/μs,VR=380V Tj=100°C	Typ.	2.0	A
Reverse recovery time	t rr	IF=0.1A, IR=0.2A, Irec=0.05A	Max.	25.0	ns
Forward voltage	V_F	IF=10A	Max.	5.0	V
Reverse current	I_R	VR=VRRM	Max.	50.0	μA
Thermal resistance	Rth(j-c)	Junction to case	Max.	5.0	°C/W
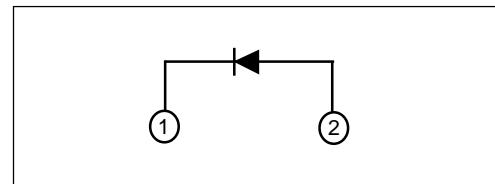
● Mechanical characteristics

Item		Conditions	Characteristics	Unit
Mouunting torque		Recommended torque	0.3 to 0.5	N·m
Approximate mass			2.0	g
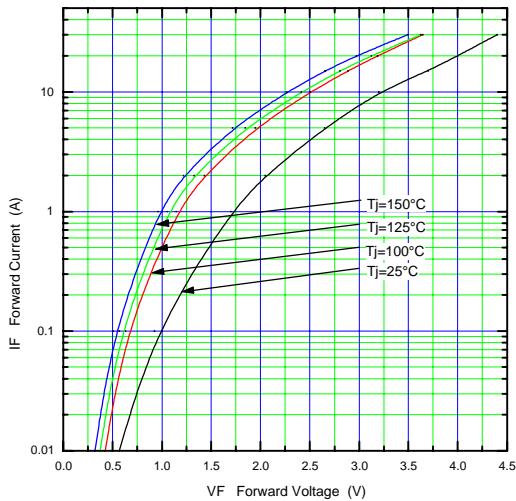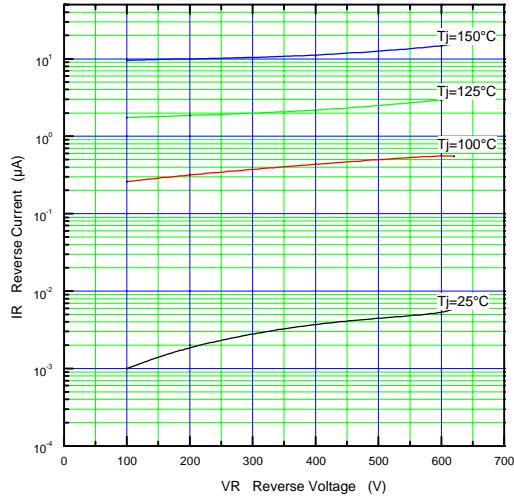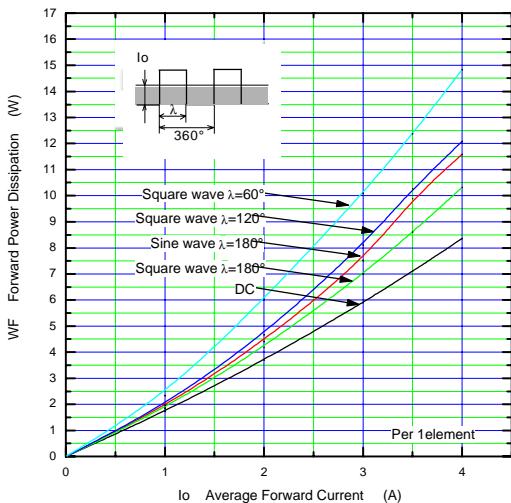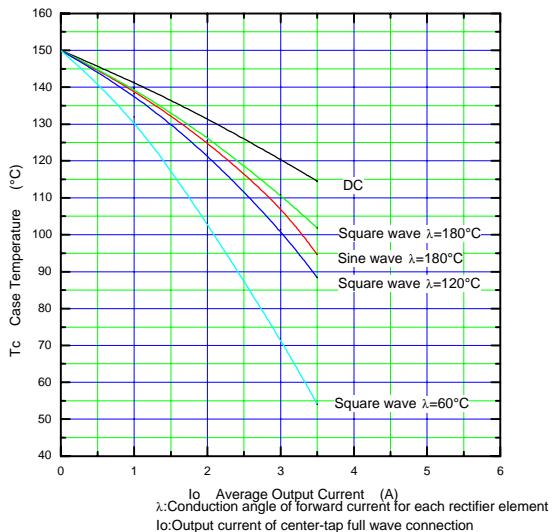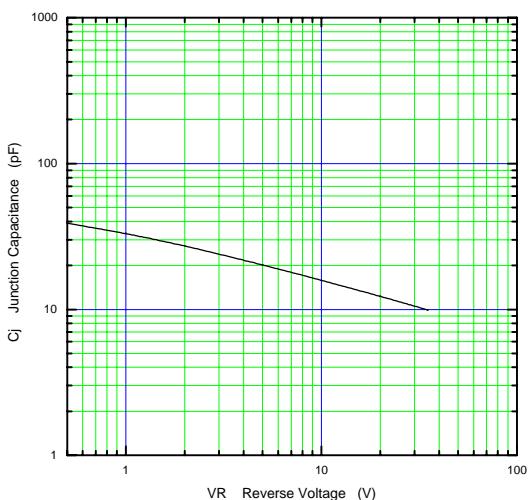
■ Characteristics

Forward Characteristic   (typ.)

I_F Forward Current (A) vs V_F Forward Voltage (V)

- $T_j=150°C$
- $T_j=125°C$
- $T_j=100°C$
- $T_j=25°C$

Reverse Characteristic   (typ.)

I_R Reverse Current (μA) vs V_R Reverse Voltage (V)
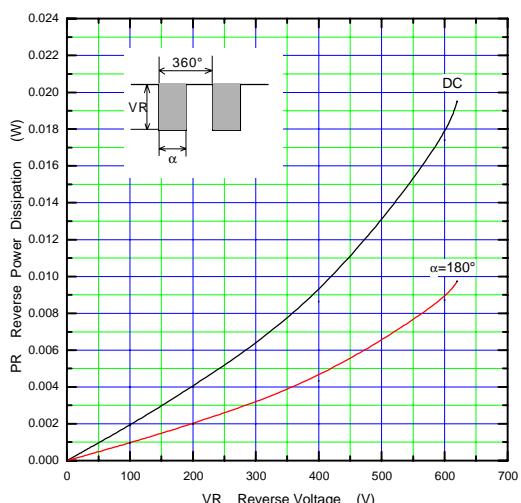
- $T_j=150°C$
- $T_j=125°C$
- $T_j=100°C$
- $T_j=25°C$

Forward Power Dissipation

W_F Forward Power Dissipation (W) vs I_o Average Forward Current (A)

- Square wave λ=60°
- Square wave λ=120°
- Sine wave λ=180°
- Square wave λ=180°
- DC

Per 1 element

Reverse Power Dissipation

P_R Reverse Power Dissipation (W) vs V_R Reverse Voltage (V)

- DC
- α=180°

Current Derating (Io-Tc)

T_c Case Temperature (°C) vs I_o Average Output Current (A)

- DC
- Square wave λ=180°C
- Sine wave λ=180°C
- Square wave λ=120°C
- Square wave λ=60°C

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

Junction Capacitance Characteristic   (typ.)

C_j Junction Capacitance (pF) vs V_R Reverse Voltage (V)

Surge Capability

IFSM   Peak Half - Wave Current   (A)

Number of Cycles at 50Hz

Transient Thermal Impedance

Transient Thermal Impedance   (°C/W)

t   Time   (sec)