GR30U60SA2

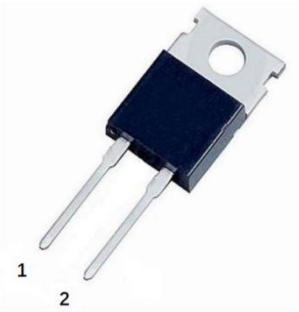
GL Silicon Fast Recovery Epitaxial Diode

General Description:

These diodes are optimized to less losses and EMI/RFI in high frequency power conditioning system. The soft recovery character of the diodes offers buffer in most applications. These devices are suited for power converters and other applications where the switching losses are not significant portion of the total losses.

V_{RRM}	600	V
I_{FAVM}	30	A
$P_D(T_C=25℃)$	125	W
t_{rr}	29	nS

TO-220-2



Features:

- Ultrafast Recovery
- 175°C operating junction temperature
- High frequency operation
- Low IR value
- High surge capacity
- Epitaxial chip construction

Applications:

- Inversion Welder
- Switched mode power supply
- UPS

Absolute (Tc=25℃ unless otherwise specified):

Symbol	Parameter	Values	Unit
V_R	Maximum D.C. Reverse Voltage	600	V
V_{RRM}	Maximum Repetitive Reverse Voltage		
$I_{F(AV)}$	Average Forward Current(T_C=110℃)	30	A
I_{FRM}	Maximum repetitive forward current (Square wave, 20kHZ)	60	
I_{FSM}	Single pulse forward current	260	
P_D	Power Dissipation	125	W
T_J	Junction Temperature	175	℃
T_{STG}	Storage Temperature Range	-55to +175	
R_{thJC}	Junction to Case Thermal Resistance	1.2	℃ /W

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Electrical Characteristics (Tc= 25℃ unless otherwise specified) :

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V_{BR} V_R	Breakdown voltage Blocking voltage	I_R=100μA	600	-	-	V
I_R	Maximum Reverse Leakage Current	V_R =600V	-	-	30	μA
		V_R =600V, T_J = 150℃	-	-	300	
V_F	Forward Voltage	I_F=30A	-	1.3	1.7	V
		I_F=30A,T_J=125℃	-	1.2	1.6	
t_{rr}	Reverse Recovery Time	IF=0.5A, IR=1A, IRR=0.25A	-	-	45	ns
		IF=1A,VR=30V, di/dt =200A/us	-	29	40	

Characteristics Curve:

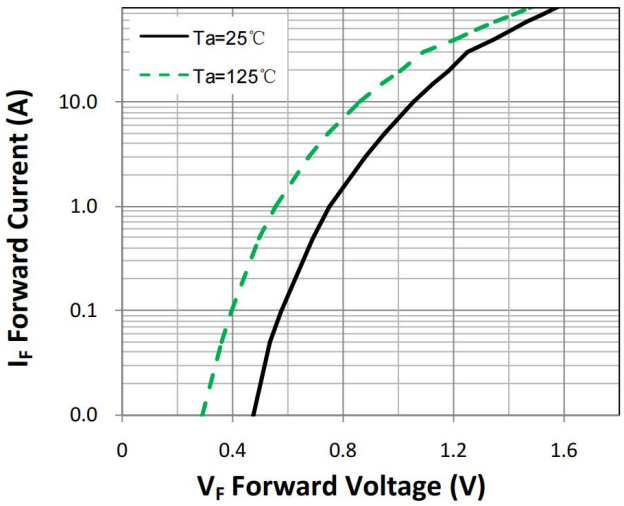

Figure 1. Forward Characteristic(typ.)

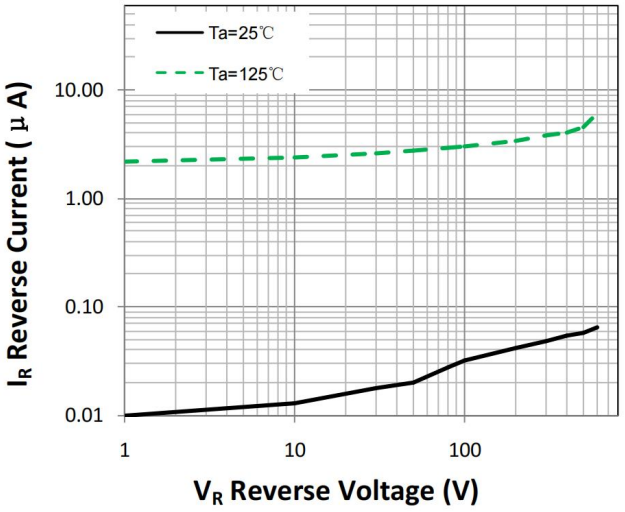

Figure 2. Reverse Characteristic (typ.)