

ESTF60SS160US

High Voltage Rectifier Diode

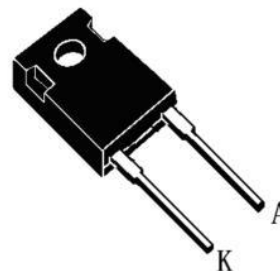
Feature

- Low power loss, high efficiency
- High reliability
- RoHS product

Applications

- Snubber diode
- Switch power supply
- Antiparallel Diode for high frequency switching devices

TO-2472L



Absolute Maximum Ratings (@T_c = 25°C unless otherwise specified)

Symbol	Parameter	Conditions	Ratings	Unit
V _R	D.C Reverse Voltage		1600	V
V _{RRM}	Repetitive Peak Reverse Voltage		1600	V
I _{F(AV)}	Average Forward Current		60	A
I _{FSM}	Surge(non-repetitive) Forward Current	T _J =45°C, t=8.3ms,60Hz,Sine	950	A
PD	power dissipation		357	W
T _J	Junction Temperature		-40~150	°C
T _{stg}	Storage Temperature		-40~125	
Visol	Isolation Voltage	@ AC 1minute	3000	V

Thermal Characteristics

Symbol	Parameter	Conditions	Value			Unit
			Min.	Type	Max.	
R _{th(j-c)}	Thermal Resistance	Junction to Case	-	-	0.35	°C/W

Electrical Characteristics @T_c = 25°C(unless otherwise specified)

Symbol	Parameter	Conditions	Min.	Type	Max.	Unit
V _{RRM}	Repetitive Peak Reverse Voltage	I _R =100μA	1600	-	-	V
I _{RM}	Reverse Leakage Current	V _R =1600V	-	-	20	mA
		V _R =1600V, T _J =125°C	-	-	80	mA
V _F	Forward Voltage	I _F =60A	-	1.10	1.30	V
		I _F =60A, T _J =125°C	-	1.03	1.25	

t_{rr}	Reverse Recover Time	$I_F=30A, V_R=1200V \text{ di}_F/\text{dt}=800A/\mu s, T_J=25^\circ C$	-	860	-	ns
Q_{rr}	Reverse Recover Charge		-	3.3	-	μC
I_{rr}	Reverse Recover Current		-	5	-	A

Electrical Characteristics(Curves)

FIG.1 Typical forward characteristics

FIG.2 Typical reverse characteristics

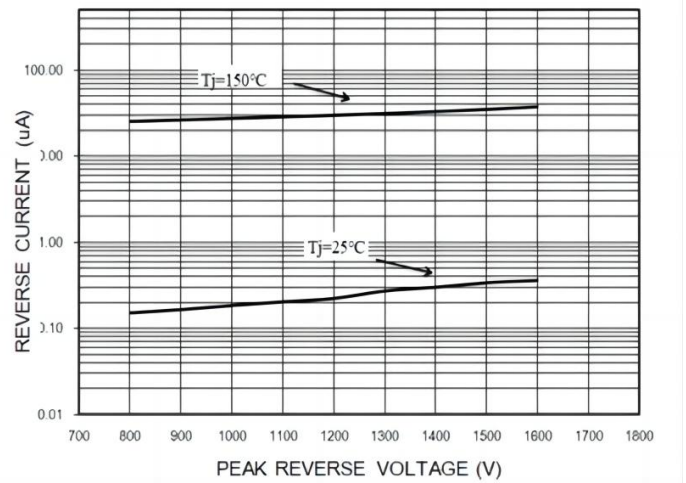
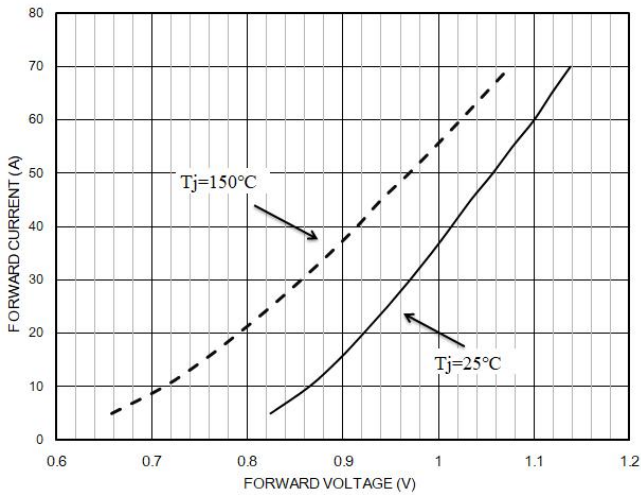


FIG.3 Reverse Recovery Charge vs -di/dt

FIG.4 Reverse Recovery Time vs V_F

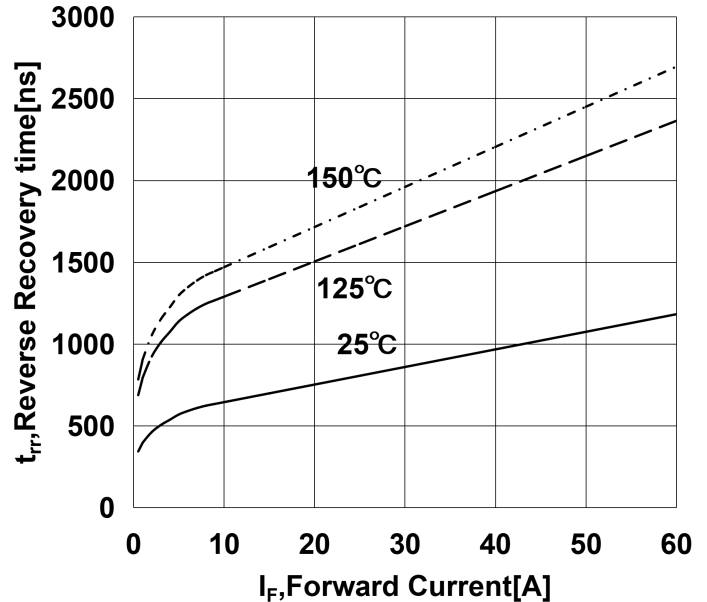
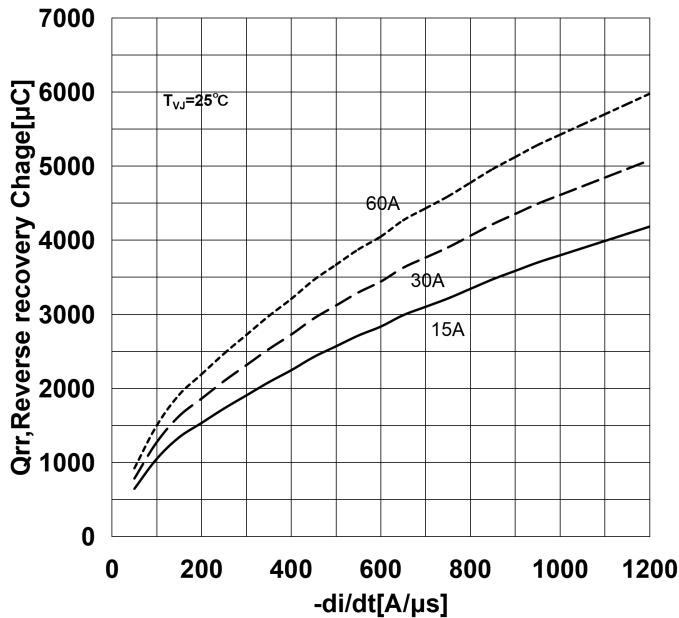


FIG.5 Dynamical parameter vs T_{VJ}

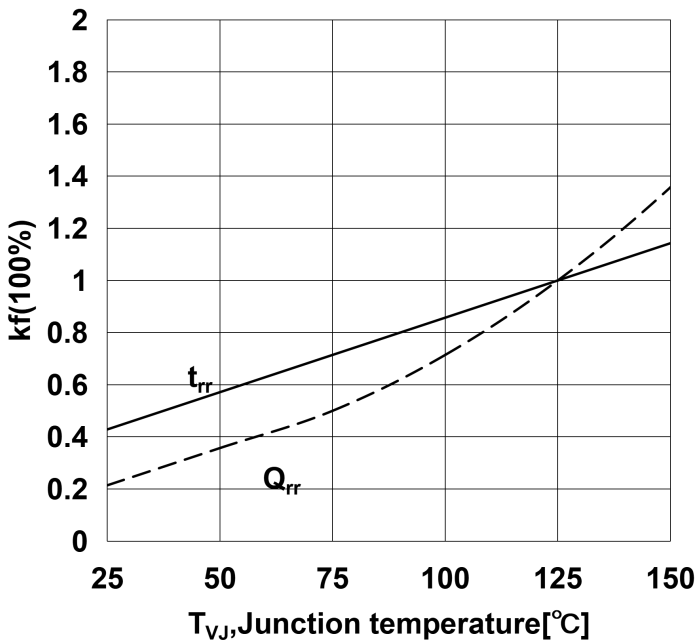
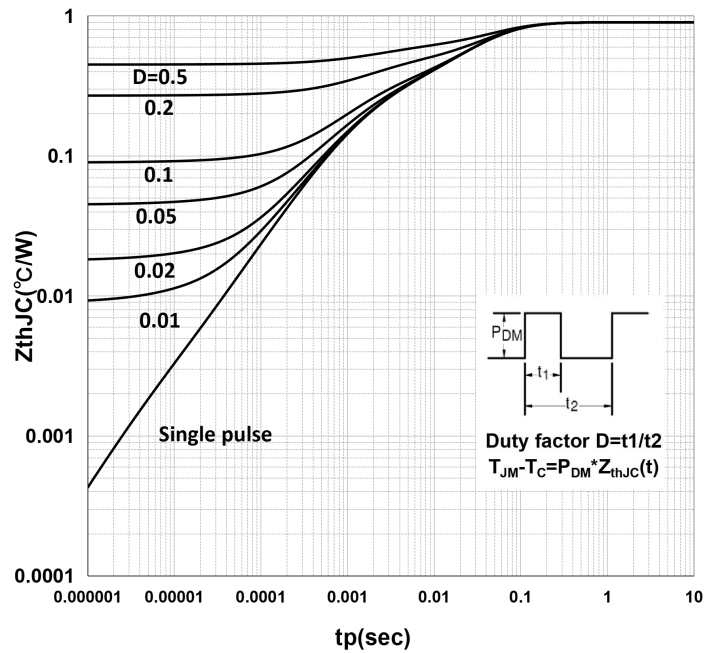


FIG.6 Transient Thermal Response Curve



Package Dimension

