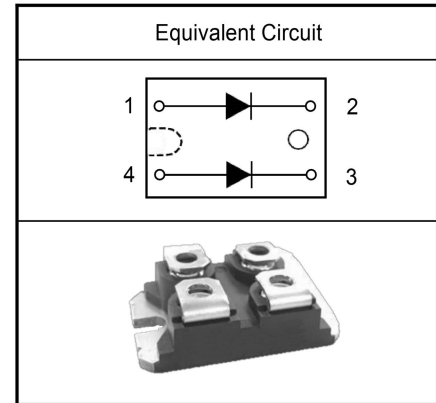


EST100SN120ZN

Standard Recovery Rectifier Diode Module

Featur

- Repetitive Reverse Voltage : $V_{RRM}=1200V$
- Low Forward Voltage : $V_F(\text{typ.}) = 1.17V$
- Average Forward Current :
 $I_F(\text{Av.})=100A @T_C=100^{\circ}C$
- Reverse Recovery Time : $t_{rr}(\text{typ.}) = 9\mu s$
- Extensive Characterization of Recovery Parameters
- Reduced EMI and RFI
- Isolation Type Package



Applications

- High Speed & High Power converters, Welders
- Various Switching and Telecommunication Power Supply

Absolute Maximum Ratings @T_c = 25°C (Per Leg)

Symbol	Parameter		Conditions	Ratings	Unit
V_{RRM}	Repetitive Peak Reverse Voltage			1200	V
$V_{R(DC)}$	Reverse DC Voltage			1200	
$I_{F(AV)}$	Average Forward Current	$T_C = 25^{\circ}C$	Resistive Load	200	A
		$T_C = 100^{\circ}C$		100	
I_{FSM}	Surge(non-repetitive) Forward Current		One Half Cycle at 60Hz, Peak Value	1400	
I^2_t	I^2t for Fusing		ValueforOneCycle Current, $t_w = 8.3ms, T_j = 25^{\circ}C$ Start	8.13×10^3	A^2s
T_j	Junction Temperature			-40~150	$^{\circ}C$
T_{stg}	Storage Temperature			-40~125	
Visol	Isolation Voltage		@ AC 1minute	2500	V
P_d	Maximum Power Dissipation			260	W
-	Mounting Torque		M4	1.45	N.m
-	Terminal Torque		M4	1.45	
-	Weight		Typical Including Screw	26.5	g

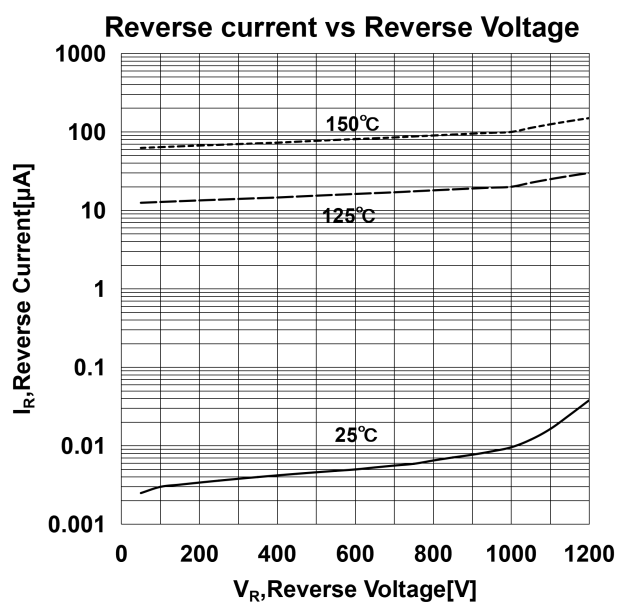
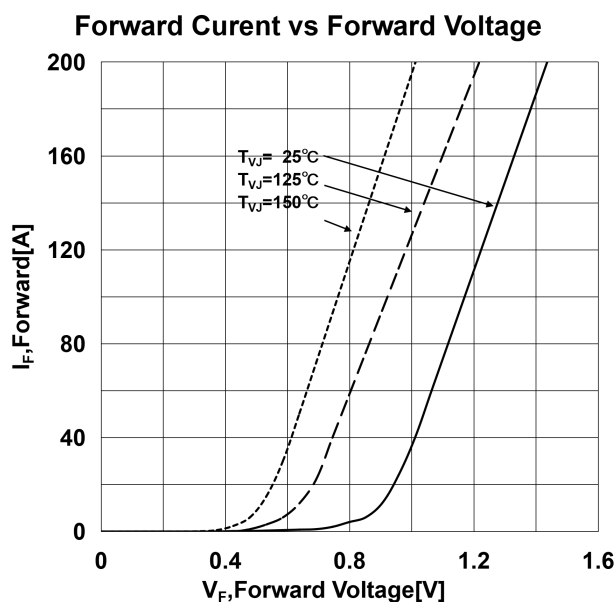
Electrical Characteristics @T_c = 25°C (unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
V_R	Cathode Anode Breakdown Voltage	$I_R=100\mu A$	1200	-	-	V
V_{FM}	Diode Maximum Forward Voltage	$I_F=100A$	$T_C=25^\circ C$	-	1.17	1.25
			$T_C=100^\circ C$	-	1.00	-
I_{RRM}	Diode Peak Reverse Recovery Current	$V_R=V_{RRM}, V_{applied} T_C=100^\circ C$	-	-	1	mA
t_{rr}	Diode Reverse Recovery Time	$I_F=1A, V_R=30V, di/dt = 200A/\mu s$ $T_C=25^\circ C$	-	1.35	1.55	μs
t_{rr}	Diode Reverse Recovery Time	$I_F=100A, V_R=600V$ $di/dt = 200A/\mu s$	$T_C=25^\circ C$	-	9	-
			$T_C=100^\circ C$	-	20	-

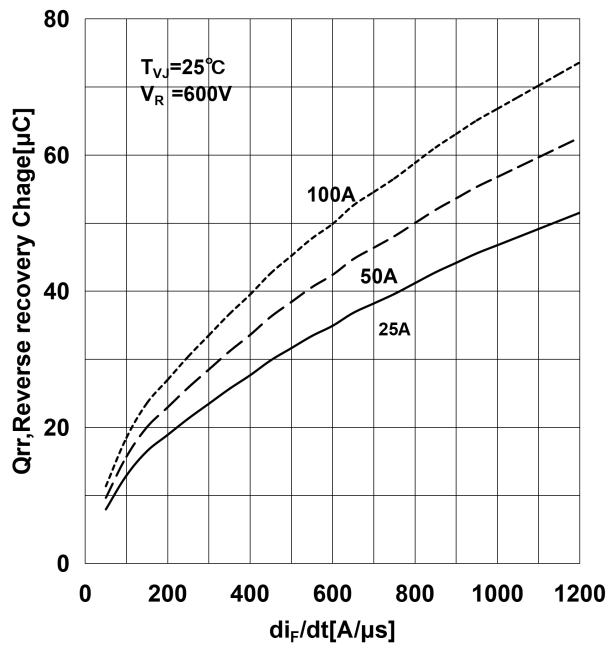
Thermal Characteristics

Symbol	Parameter	Conditions	Value			Unit
			Min	Type	Max	
$R_{th(j-c)}$	Thermal Resistance	Junction to Case	-	-	0.48	$^\circ C/W$

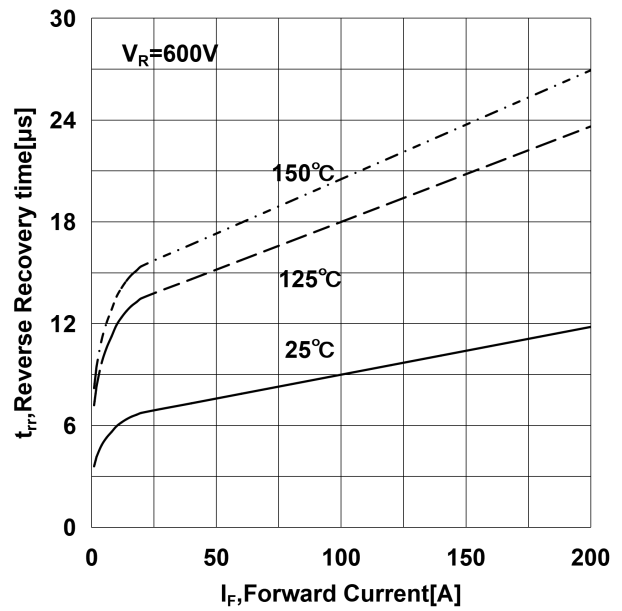
Type Characteristic Curve



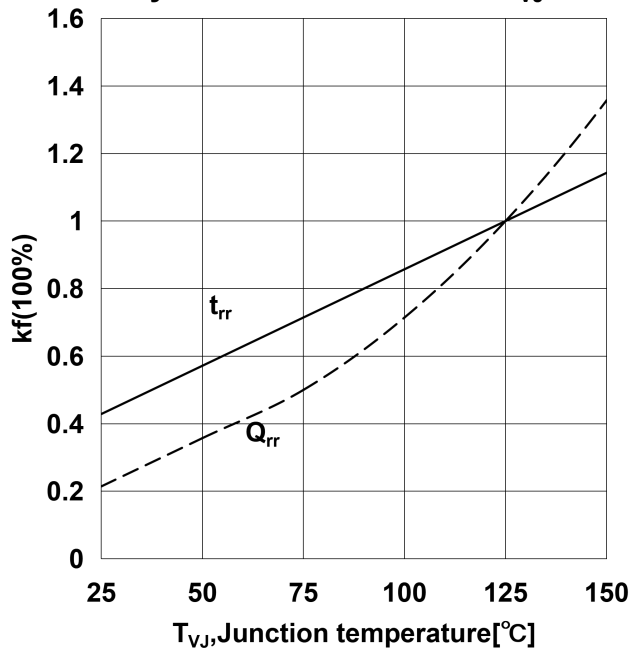
Reverse Recovery Charge vs di_F/dt



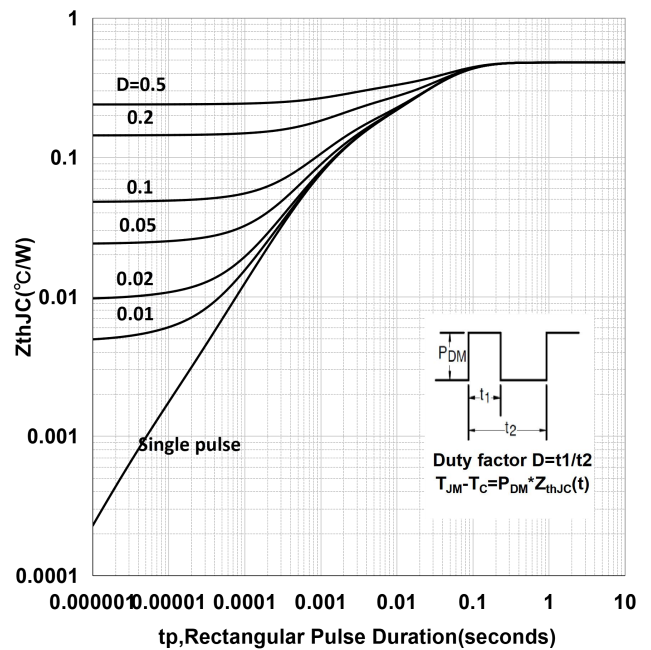
Reverse Recovery Time vs V_F



Dynamic Parameters vs T_{VJ}



Transient Thermal Impedance



Package Outline(mm)

