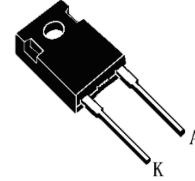


ESTF100SS120SS

Features

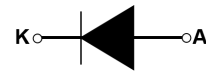
- Repetitive Reverse Voltage: $V_{RRM}=1200V$
- Low Forward Voltage Drop: $V_{F(typ.)}=2.0V$
- Average forward Current: $I_{F(AV.)}=100A@T_C=100^{\circ}C$
- Ultra-Fast Reverse Recovery Time : $t_{rr(typ.)} = 38\text{ ns}$
- Extensive Characterization of Recovery Parameters
- Reduced EMI and RFI
- Non Isolation Type Package



TO-247-2

Applications

- Motor Drives
- Welding



Absolute Maximum Ratings ($T_C=25^{\circ}C$, Unless otherwise specified)

Symbol	Parameter	ratings	Unit
V_{RRM}	Repetitive peak reverse voltage	1200	V
$I_{F(AV)}$	Average forward current @ $T_C=25^{\circ}C$	200	A
	Average forward current @ $T_C=100^{\circ}C$	100	A
I_{FSM}	Surge(non-repetitive) Forward Current @ $t=10ms$	1400	A
I^2t	I^2t for Fusing(value for one cycle current, $t_w=8.3ms$, $T_J=25^{\circ}C$ start)	9.15×10^3	A^2s
P_D	Maximum Power Dissipation	192	W
T_J	Junction Temperature	$-40 \sim +150$	$^{\circ}C$
T_{STG}	Storage temperature range	$-40 \sim +150$	$^{\circ}C$

Electrical Specifications ($T_C=25^{\circ}C$, Unless otherwise specified)

Symbol	Parameter	Conditions	Ratings			Unit
			Min	Typ	Max	
V_R	Reverse Breakdown Voltage	$I_R=100\mu A$	1200			V
V_F	Forward Voltage	$I_F=75A$	-	2.0	2.8	V
		$I_F=75A, T_J=125^{\circ}C$	-	1.8	-	V
I_R	Peak Reverse Current	$V_R=V_{RRM}, T_C=25^{\circ}C$	-	-	80	μA
		$V_R=V_{RRM}, T_J=125^{\circ}C$			800	

t _{rr}	Reverse Recovery Time	I _F =1A, V _R =30V, di _F /dt=-200A/μs	T _J =25℃	-	38	50	ns	
			T _J =125℃	-	51	-	ns	
Q _{rr}	Reverse Recovery Charge		T _J =25℃	-	76	-	nC	
			T _J =125℃	-	253	-	nC	
I _{rr}	Reverse Recovery Current		T _J =25℃	-	2.5	-	A	
			T _J =125℃	-	4.9	-	A	

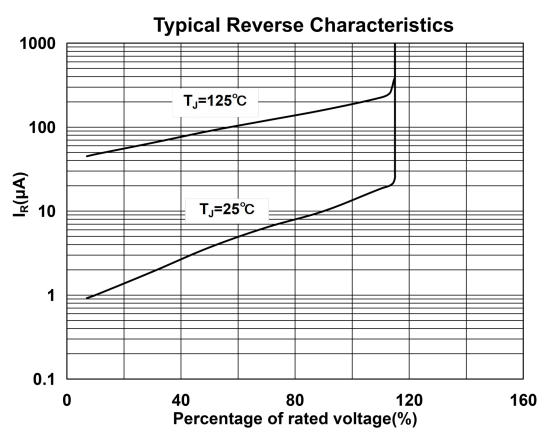
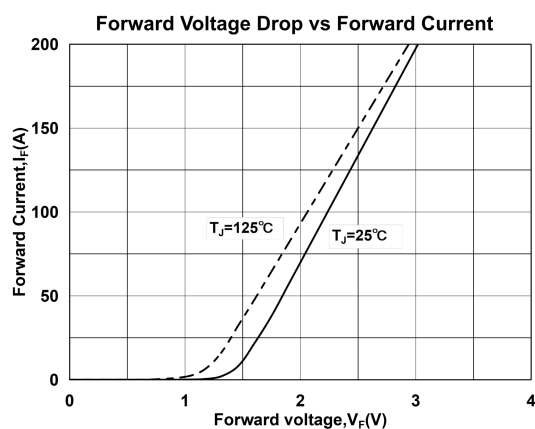
Thermal Characteristics

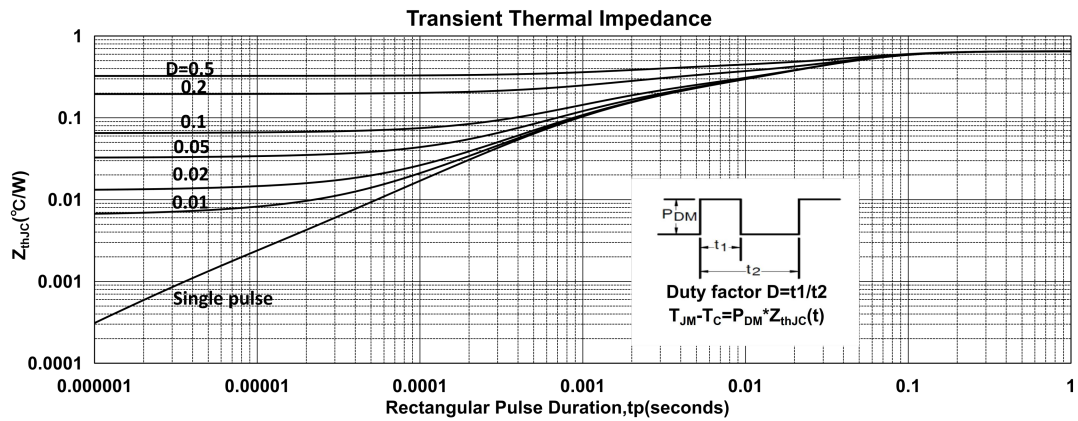
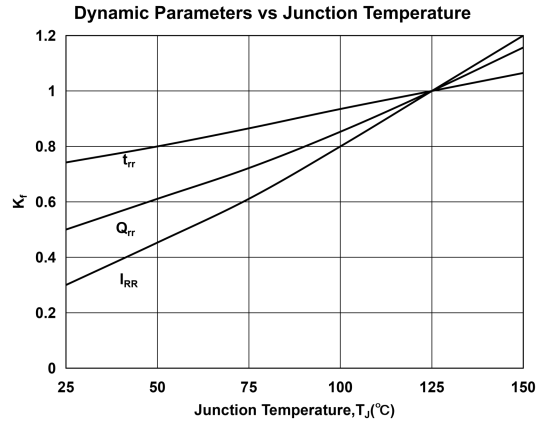
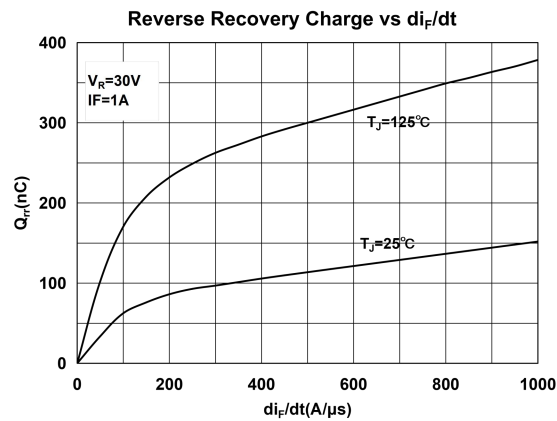
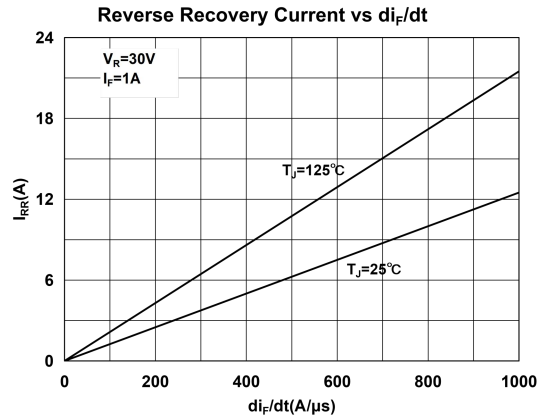
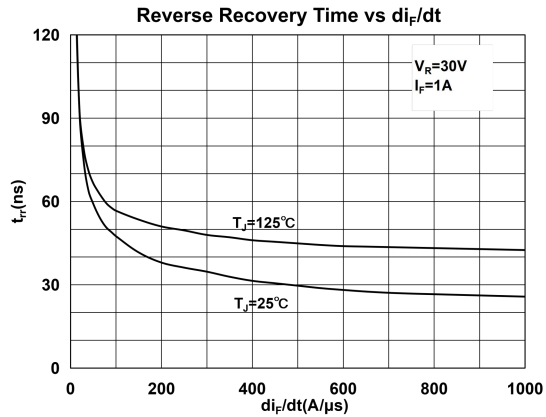
Symbol	Parameter	Conditions	Values			Unit
			Min.	Typ.	Max.	
$R_{th(j-c)}$	Thermal Resistance From Junction to Case		-	-	0.65	$^{\circ}C/W$
$R_{th(j-a)}$	Thermal Resistance From Junction to Ambient		-	-	65	$^{\circ}C/W$

Order Codes

Order codes	Silkscreen	Package	Packaging
ESTF100SS120SS	F100SS120SS	TO-247-2	

Typical Performance Curves





Package

