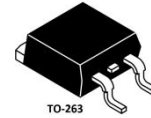


ESTF15SS120S/C/E

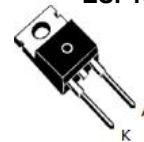
Fast Recovery Diode

Features

- Repetitive Reverse Voltage : $V_{RRM} = 1200V$
- Forward Voltage Drop : $V_F(\text{typ.}) = 3.2V$
- Average Forward Current : $I_{F(AV)} = 15A @ T_c = 100^\circ C$
- Fast Reverse Recovery Time : $t_{rr}(\text{typ.}) = 75ns$
- RoHS product



ESF15SS120E



TO-220C



TO-247

ESF15SS120C

ESF15SS120S

Applications

- Switching Power Supplies
- Power Switching Circuits
- General Purpose
- UPS



Absolute Maximum Ratings @ $T_c=25^\circ C$

Symbol	Parameter	ratings	Unit
V_{RRM}	Repetitive peak reverse voltage @50 μA	1200	V
V_{RWM}	Working Peak Reverse Voltage	1200	V
V_R	DC Blocking Voltage	1200	V
$I_{F(AV)}$	Average forward current @ $T_c=100^\circ C$	15	A
I_{FRM}	Repetitive Peak Surge Current	30	A
I_{FSM}	Peak one Cycle Surge Forward @ $t=10ms$	200	A
P_D	Maximum Power Dissipation	100	W
E_{AVL}	Avalanche Energy(See Figures 10 and 11)	20	mJ
T_j	Junction Temperature	-65~+175	$^\circ C$
T_{STG}	Storage temperature range	-65~+175	$^\circ C$

Electrical Specifications @ $T_c=25^\circ C$

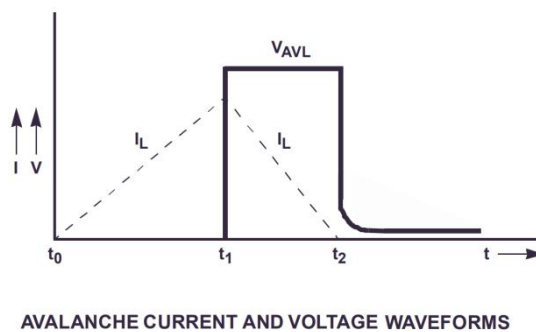
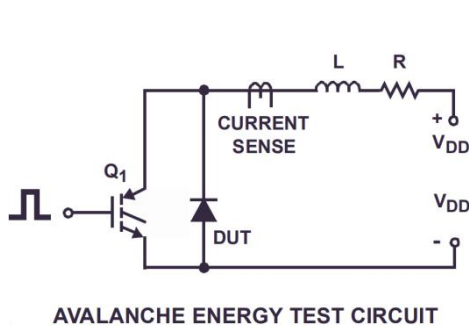
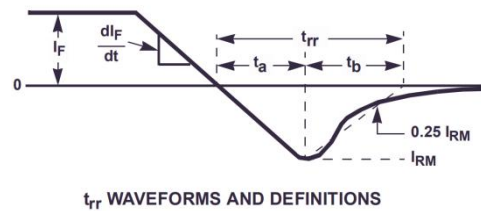
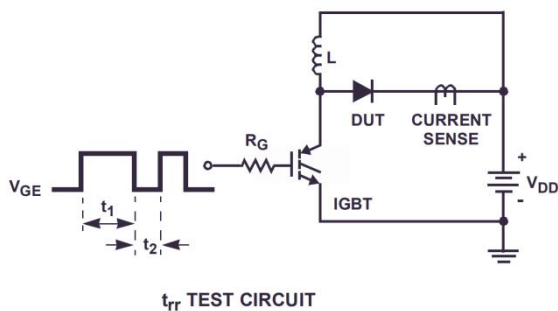
Symbol	Parameter		Ratings			Unit
			Min	Typ	Max	
I_R	$T_j=25^\circ C$	$V_R=V_{RRM}$			100	μA
	$T_j=125^\circ C$				500	μA
V_F	$T_j=25^\circ C$	$I_F=15A$		2.2	3.2	V
	$T_j=125^\circ C$				2.6	V
T_{rr}	$I_F=1A, diF/dt=100A/\mu s$				65	ns
	$I_F=15A, diF/dt=100A/\mu s$				75	ns

t_a	$I_F=15A, di_F/dt=100A/\mu s$		36		ns
t_b	$I_F=15A, di_F/dt=100A/\mu s$		28		ns
Q_{rr}	$I_F=15A, di_F/dt=100A/\mu s$		150		nC
C_J	$V_R=10V, I_F=0A$		55		pF
$R_{th(j-c)}$	Thermal resistance from junction to case	TO-247-2L		0.9	$^{\circ}C/W$
$R_{th(j-c)}$		TO-220C-2L		1.5	$^{\circ}C/W$
$R_{th(j-c)}$		TO-263		0.8	$^{\circ}C/W$

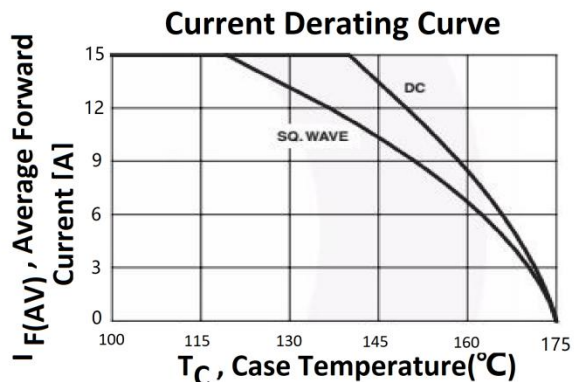
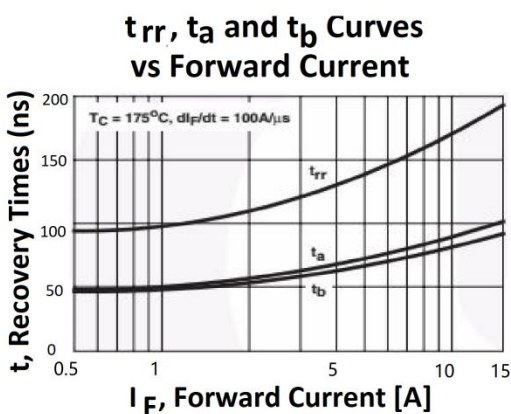
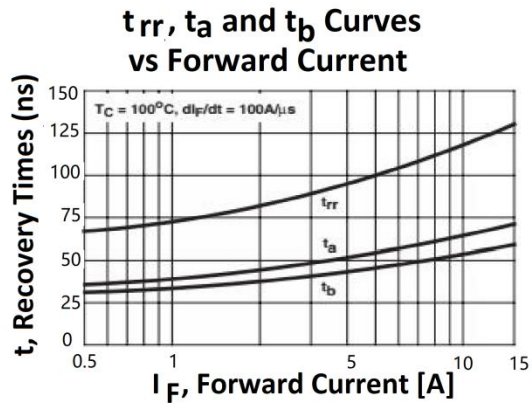
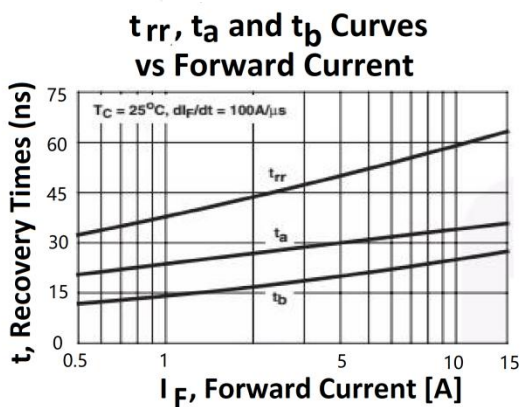
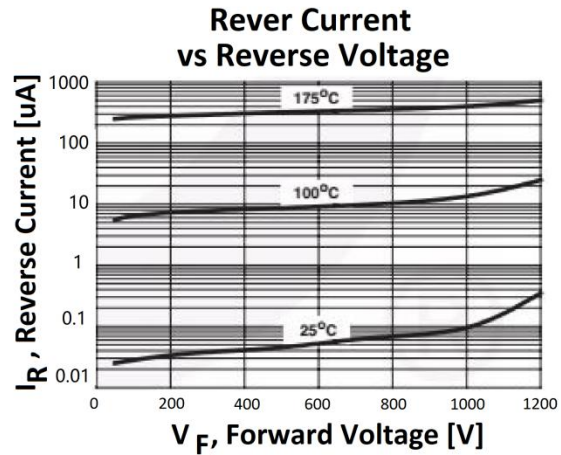
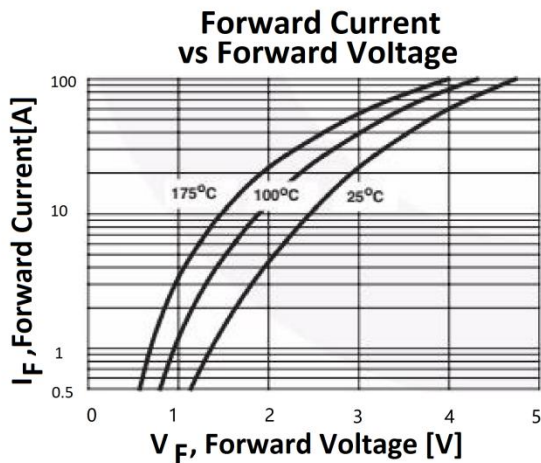
Order Information

Order codes	Silkscreen	Package	Packaging
ESTF15SS120C	F15S120C	TO-220C-2L	
ESTF15SS120S	F15S120S	TO-247-2L	
ESTF15SS120E	F15S120E	TO-263	

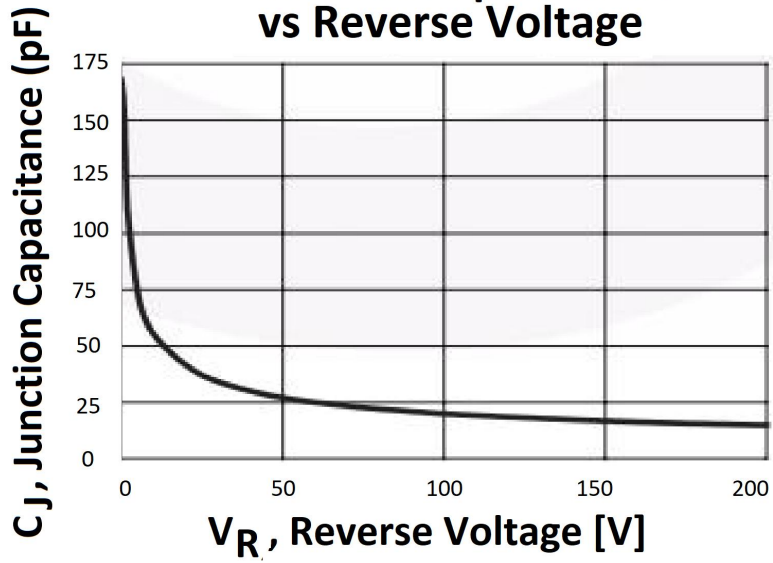
Test Circuits and Waveform



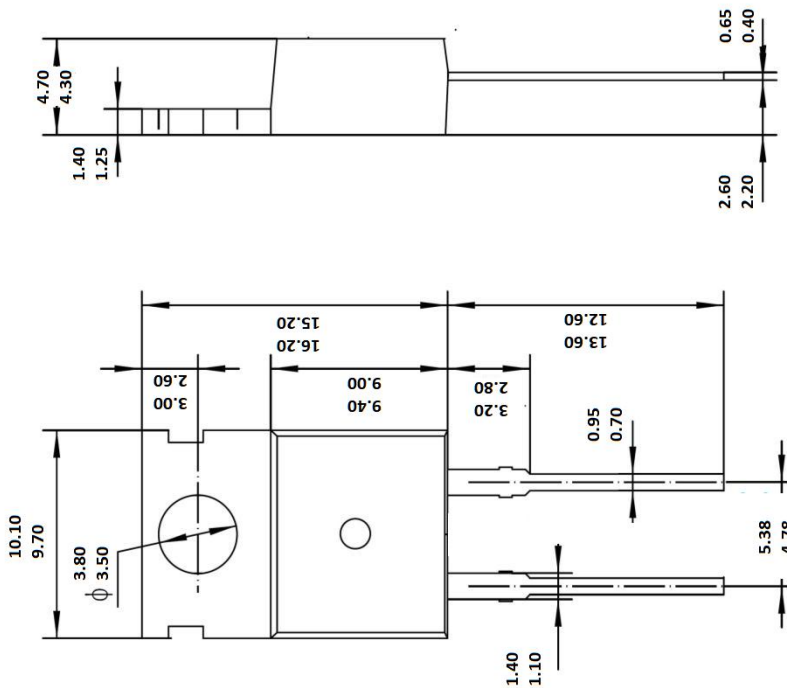
Typical Performance Curves



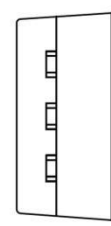
Junction Capacitance vs Reverse Voltage

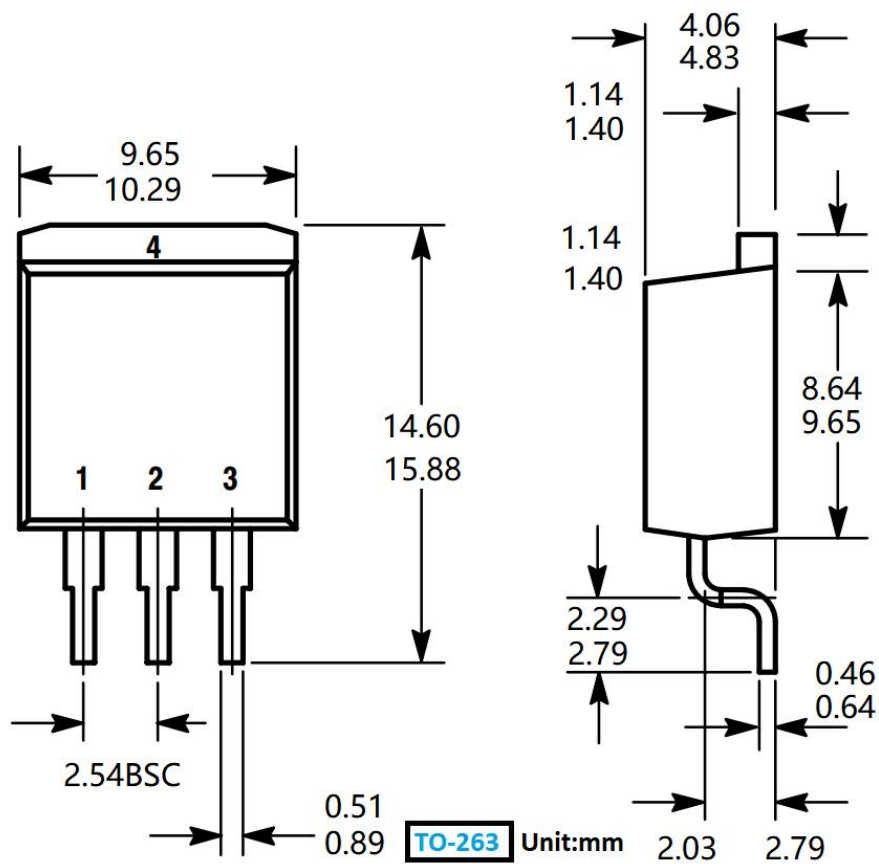
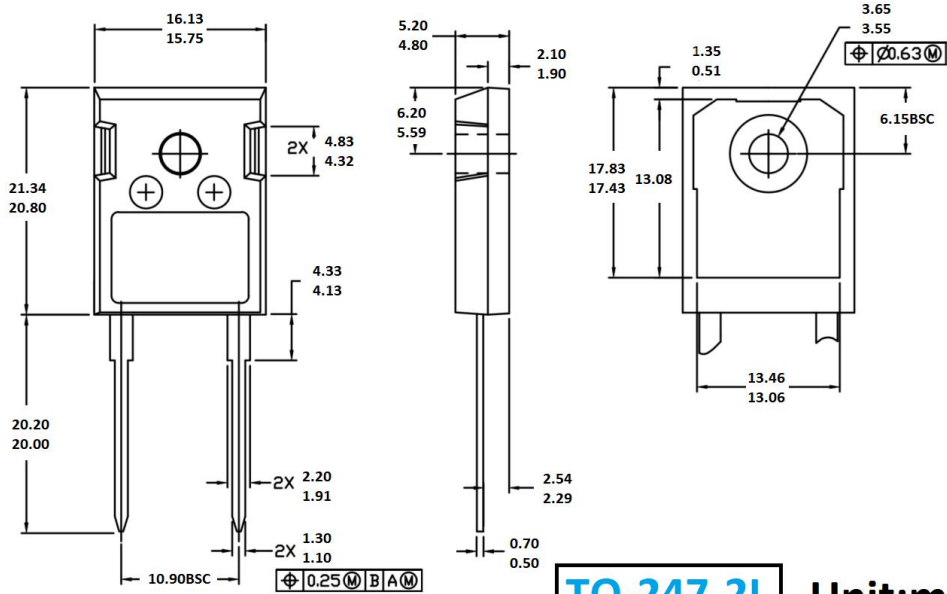


Package



TO-220C-2L Unit: mm





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