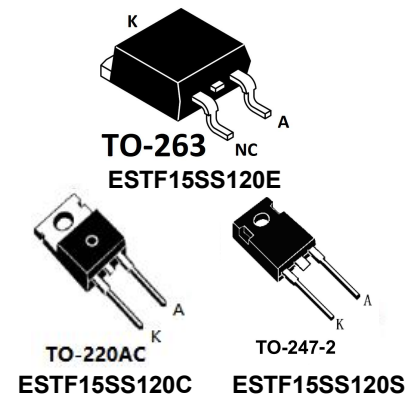


ESTF15SS120S/C/E

Fast Recovery Diode

Features

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



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 @ $T_c = 25^{\circ}C$

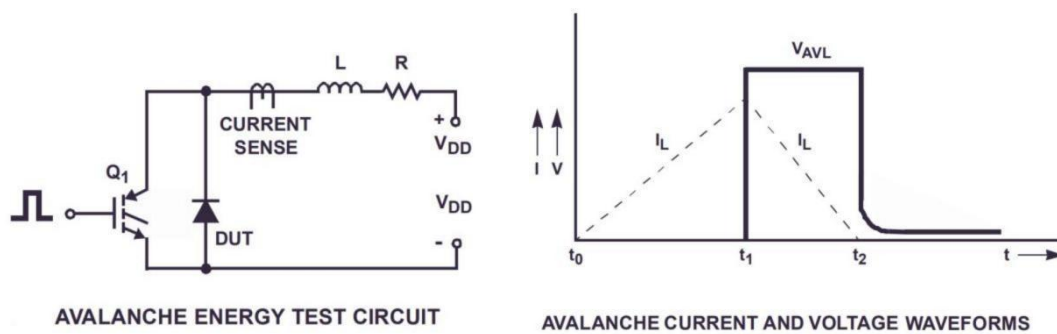
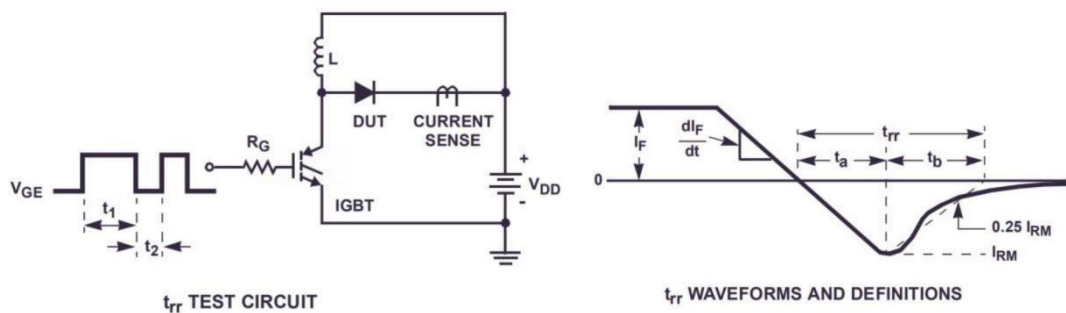
Symbol	Parameter		Ratings			Unit
			Min	Typ	Max	
I _R	T _j =25℃	V _R =V _{RRM}			100	μA
	T _j = 125℃				500	μA
V _F	T _j =25℃	I _F = 15A		2.2	3.2	V
	T _j = 125℃				2.6	V
T _{rr}	I _F =1A, di _F /dt=100A/μs				65	ns
	I _F =15A, di _F /dt=100A/μs				75	ns

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	$^{\circ}C/W$

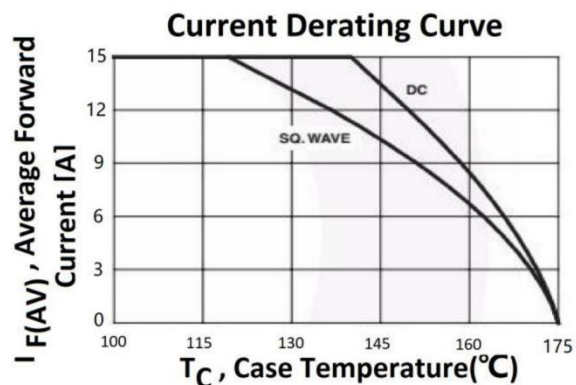
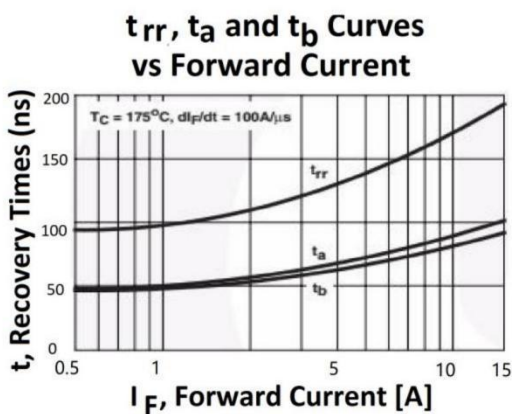
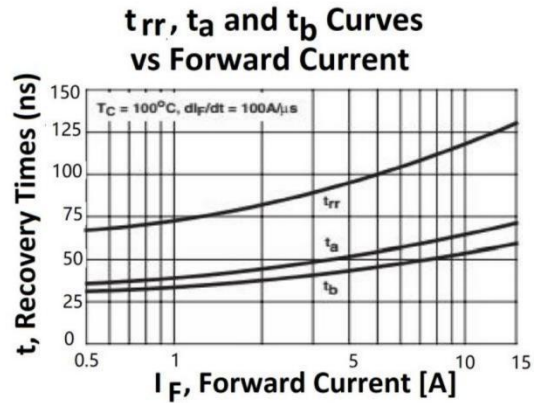
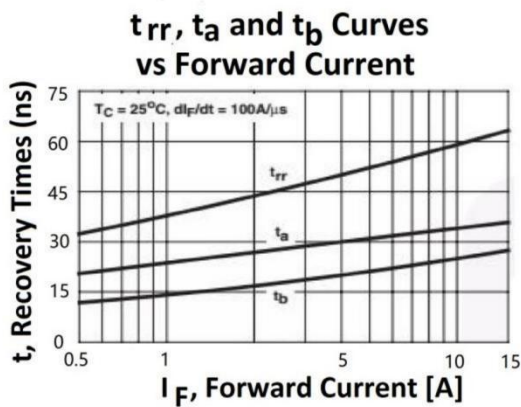
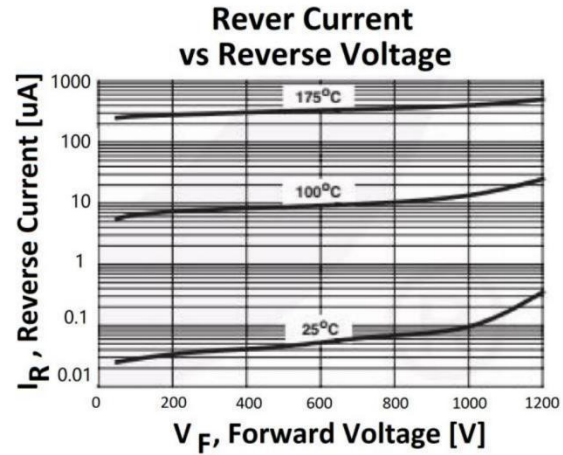
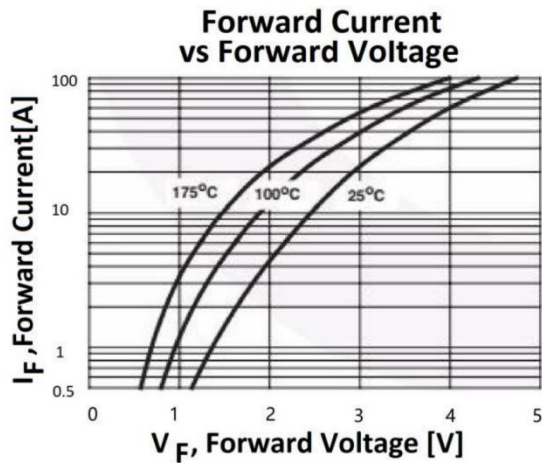
Order Information

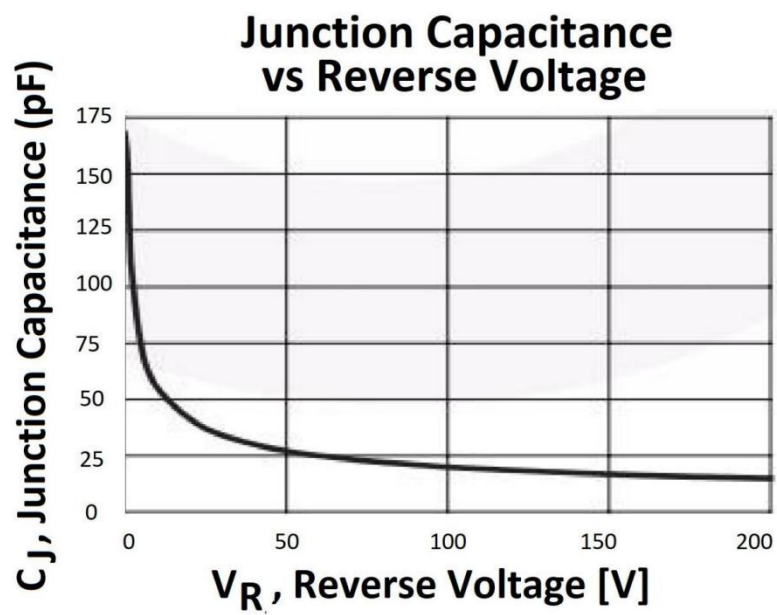
Order codes	Silkscreen	Package	Packaging
ESTF15SS120C	F15S120C	TO-220C-2L	
ESTF15SS120S	F15S120S	TO-247-2L	
ESTF15SS120E	F15S120E	TO-263	

Test Circuits and Waveform

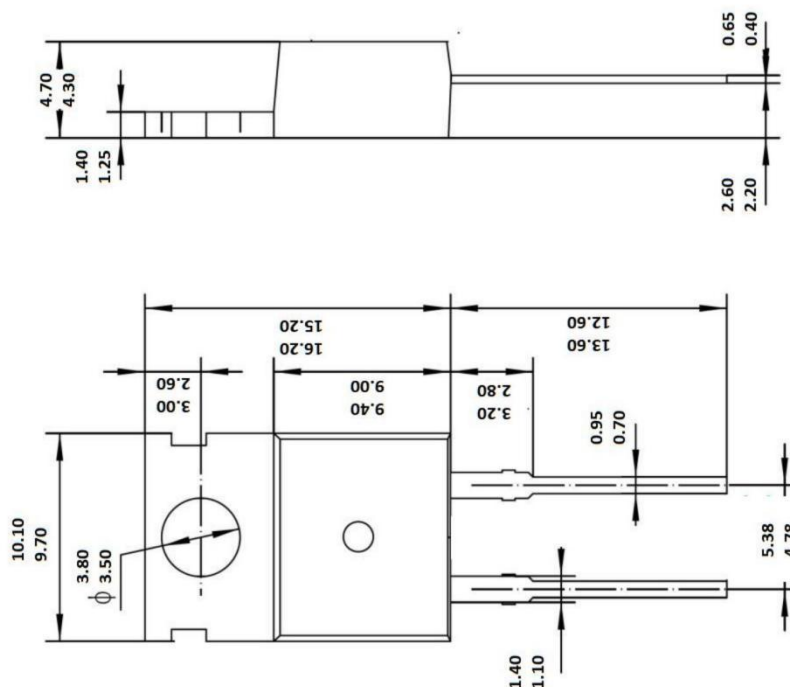


Typical Performance Curves

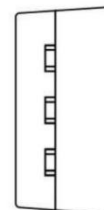


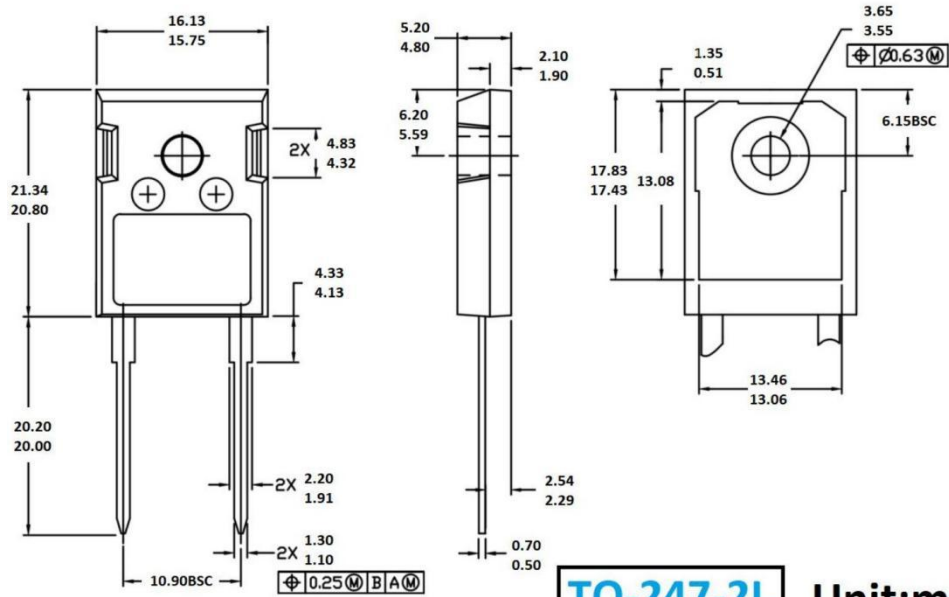


Package

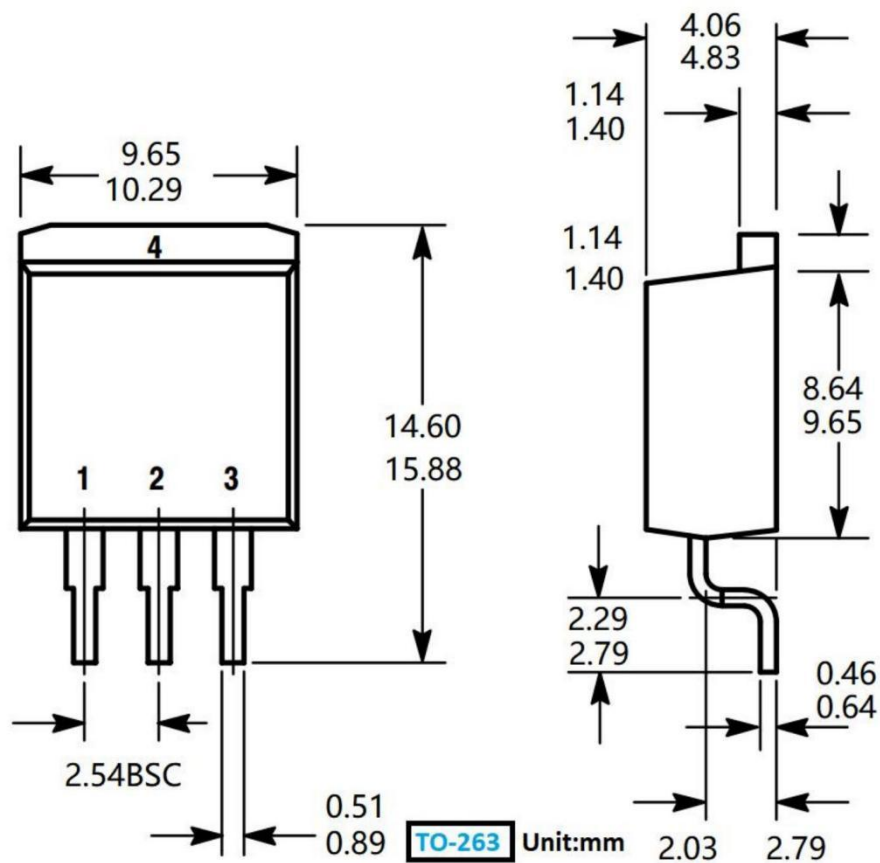


TO-220C-2L Unit: mm





TO-247-2L Unit:mm



TO-263 Unit:mm