ESTF15SS60SC

Super Fast Recovery Diode

TO-220AC

Features

- Hyperfast Recovery trr = 40 ns (@ IF = 15 A)
- Max Forward Voltage, VF = 2.1 V (@ TC = 25°C)
- 600 V Reverse Voltage and High Reliability
- Avalanche Energy Rated
- RoHS Compliant

Applications

- Switching Power Supplies
- Power Switching Circuits
- General Purpose

Absolute Maximum Ratings @ Tc=25℃

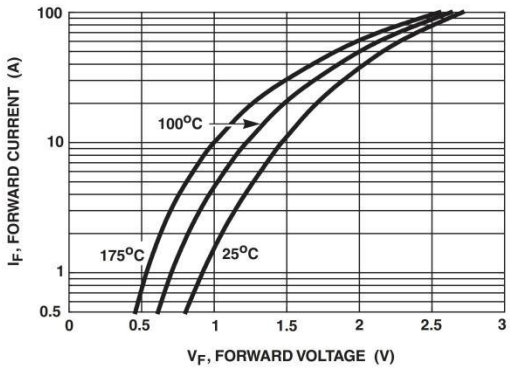
Symbol	Parameter	ratings	Unit
V_{RRM}	Repetitive peak reverse voltage @50μA	600	V
V_{RWM}	Working Peak Reverse Voltage	600	V
$I_{F(AV)}$	Average forward current @Tc=110℃	15	A
I_{FSM}	Peak one Cycle Surge Forward @t=8.3ms	30	A
E_{AVL}	Avalanche Energy(per diode) (1A, 40mH)	20	mJ
T_j	Junction Temperature	-40~+150	℃
T_{STG}	Storage temperature range	-65~+175	℃

Electrical Specifications @ Tc=25℃

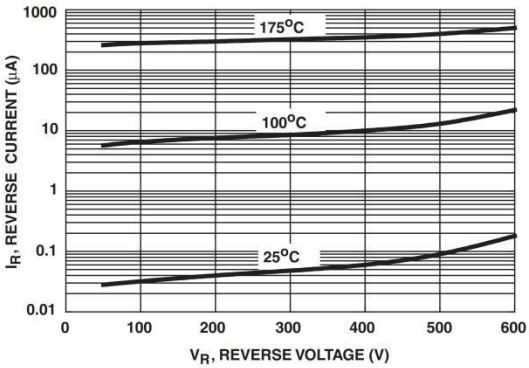
Symbol	Parameter		Ratings			Unit
			Min	Typ	Max	
I_R	T_j =25℃	$V_R=V_{RRM}$			100	μA
	T_j =125℃				500	μA
V_F	T_j =25℃	I_F=15A			2.1	V
	T_j =125℃				1.7	V
T_{rr}	I_F=1A, I_R=1A, I_{RR}=0.25A				35	ns
T_{rr}	I_F=15A, V_R=30V, di_F/dt=-100A/μs				40	ns
Qrr	I_F=15A,di_F/dt=-100A/μs				40	nC
Rth(j-c)	Thermal resistance from junction to case	TO-220AC		1.5		℃/W

Typical Performance Curves

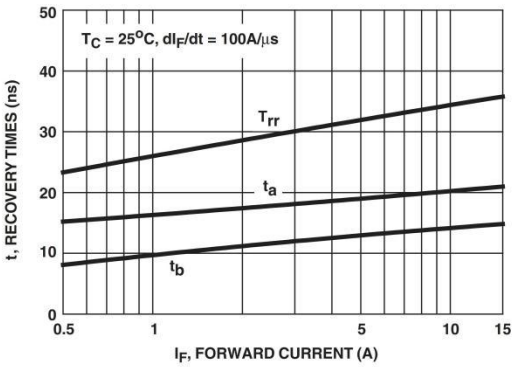
FORWARD CURRENT vs FORWARD VOLTAGE



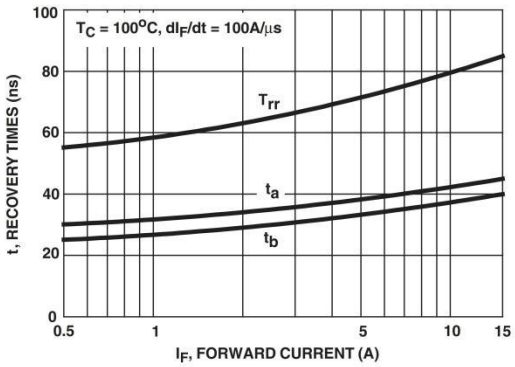
REVERSE CURRENT vs REVERSE VOLTAGE



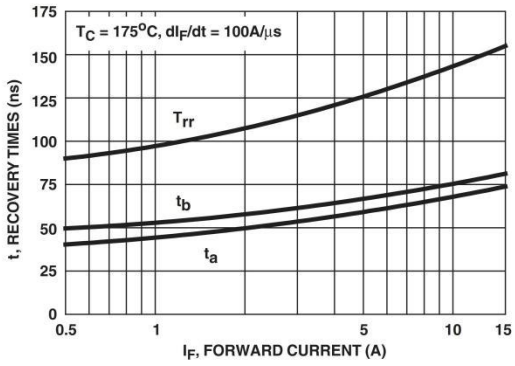
Trr, ta AND tb CURVES vs FORWARD CURRENT



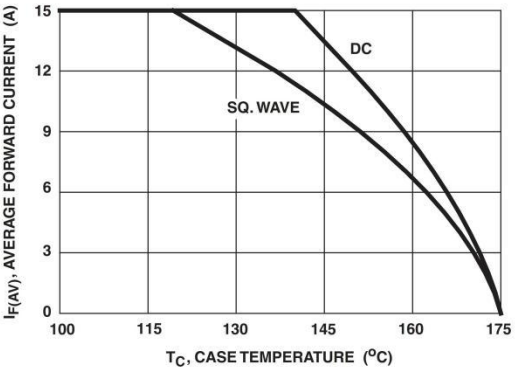
Trr, ta AND tb CURVES vs FORWARD CURRENT



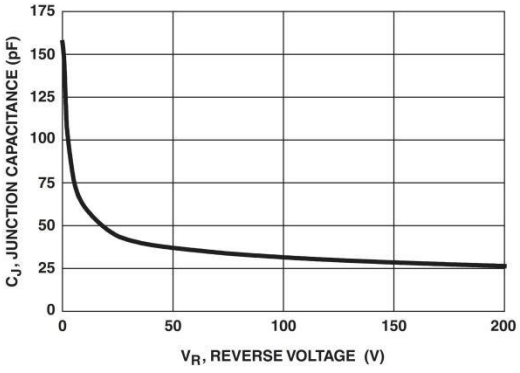
Trr, ta AND tb CURVES vs FORWARD CURRENT



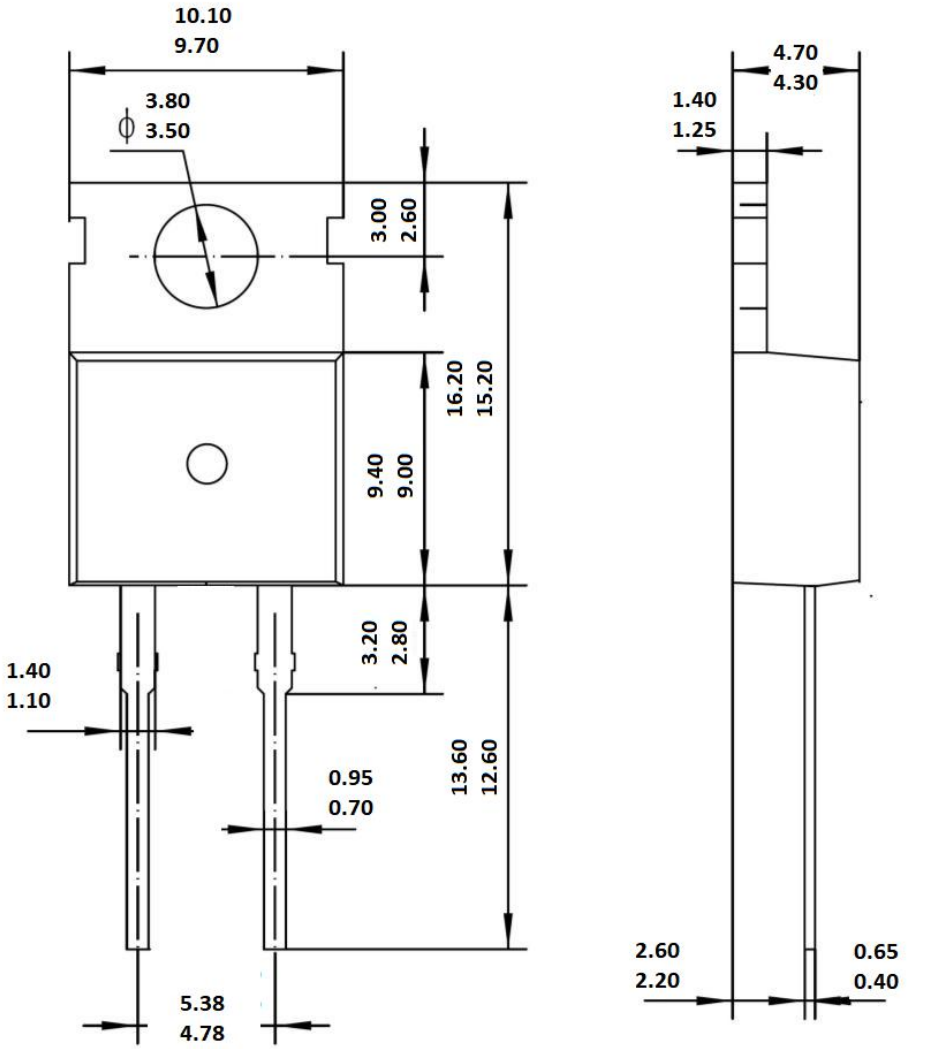
CURRENT DERATING CURVE

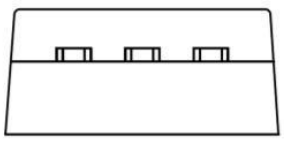


JUNCTION CAPACITANCE vs REVERSE VOLTAGE



Package





TO-220 AC Unit: mm