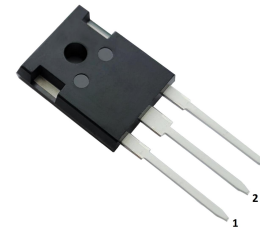
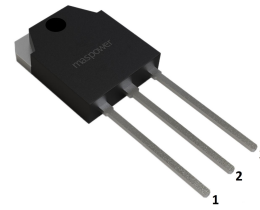


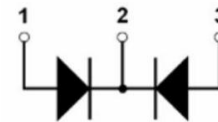
Features

- Low Loss and Soft Recovery
- High Performance Schottky Diode
- Common Cathode
- Very low V_f
- Extremely low switching losses
- Low I_{rm} values
- Improved thermal behaviour
- High reliability circuit operation
- Low voltage peaks for reduced protection circuits
- Low noise switching



Applications

- Rectifiers in switch mode power supplies (SMPS)
- Free wheeling diode in low voltage converters



Absolute Maximum Ratings($T_c=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions		Values	Unit
Repetitive Peak Reverse Voltage	V_{RRM}			200	V
Reverse current,drain current	I_R	$V_R=200V$	$T_C=25^{\circ}C$	900	μA
			$T_C=125^{\circ}C$	5	mA
Forward voltage drop (per)	V_F	$I_F=30A$	$T_C=25^{\circ}C$	0.9	V
		$I_F=45A$		1.1	V
Surge Current	I_{FSM}	Rectangular d=0.5 $T_C=125^{\circ}C$		45 x 2	A
Threshold voltage	V_{F0}	For power loss calculation only $T_C=125^{\circ}C$		0.52	V
Slope resistance	r_F			6.5	mΩ
Forward surge current	I_{FSM}	T=10ms,(50Hz),sine, $V_R=0V$		820	A
Power Dissipation	P_{tot}			275	W
Junction Temperature	T_J			-65~150	$^{\circ}C$
Storage Temperature Range	T_{STG}			-65~150	
Thermal Resistance junction to case	$R_{\theta JC}$			0.55	KW

Thermal Resistance case to heatsink	$R_{\theta ch}$		0.25	KW
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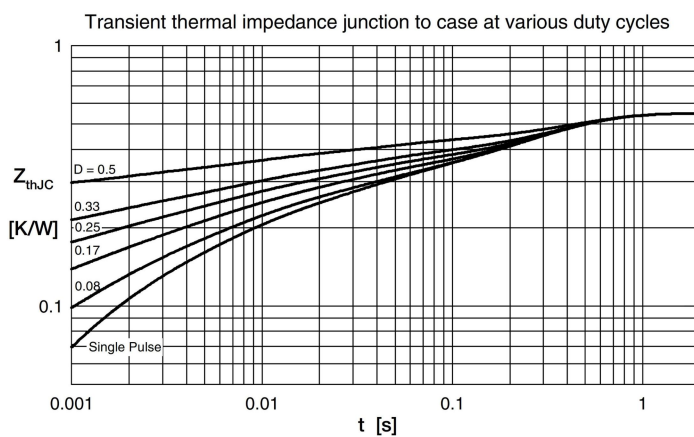
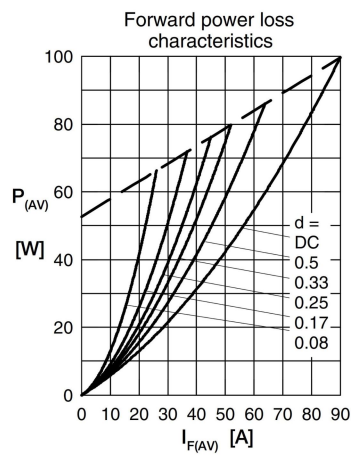
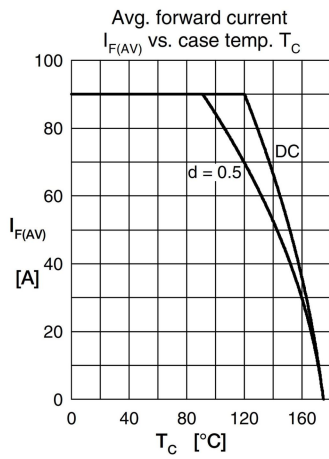
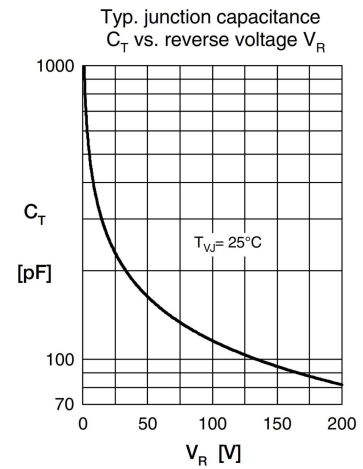
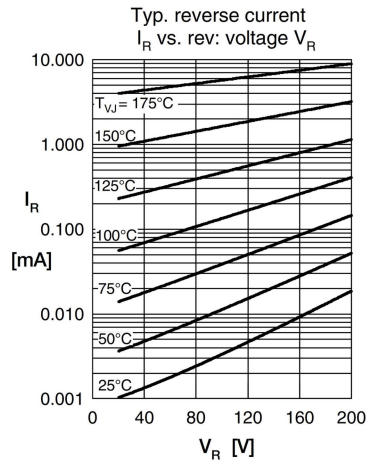
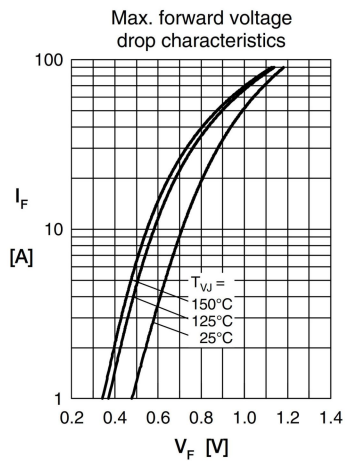
Electrical Characteristics($T_C=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Junction capacitance	C_J	$V_R=24\text{V}$ $f=1\text{MHz}$	-	-	261	pF
Reverse Recovery Time	t_{rr}	$I_F=1\text{A}$, $V_R=30\text{V}$ $diF/dt=-200\text{A/us}$	-	-	35	ns
Mounting torque	M_D		0.8	-	1.2	Nm
Mounting force with clip	F_C		20		120	N

Order Message

Marking	Package
ESTF90D20XB	TO-3PB
ESTF90D20XU	TO-247

Electrical characteristics(Curves)



Package outline dimension

