

Fast Switching Emitter Controlled Diode

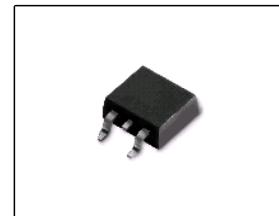
Feature

- 1200 V Emitter Controlled technology
- Fast recovery
- Soft switching
- Low reverse recovery charge
- Low forward voltage
- Easy paralleling
- Qualified according to JEDEC⁰⁾ for target applications

Product Summary

V_{RRM}	1200	V
I_F	30	A
V_F	1.65	V
T_{jmax}	150	°C

PG-T0263-3-2



Type	Package	Ordering Code	Marking	Pin 1	Pin 2	Pin 3
IDB30E120	PG-T0263-3-2	-	D30E120	NC	C	A

Maximum Ratings, at $T_j = 25$ °C, unless otherwise specified

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	1200	V
Continous forward current $T_C=25^\circ\text{C}$ $T_C=90^\circ\text{C}$	I_F	50 30	A
Surge non repetitive forward current $T_C=25^\circ\text{C}, t_p=10$ ms, sine halfwave	I_{FSM}	102	
Maximum repetitive forward current $T_C=25^\circ\text{C}, t_p$ limited by T_{jmax} , $D=0.5$	I_{FRM}	76.5	
Power dissipation $T_C=25^\circ\text{C}$ $T_C=90^\circ\text{C}$	P_{tot}	138 66	W
Operating and storage temperature	T_j, T_{stg}	-55...+150	°C
Soldering temperature reflow soldering, MSL1	T_S	260	°C

Thermal Characteristics

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Characteristics					
Thermal resistance, junction - case	R_{thJC}	-	-	0.9	K/W
Thermal resistance, junction - ambient, leaded	R_{thJA}	-	-	62	
SMD version, device on PCB: @ min. footprint	R_{thJA}	-	-	62	
@ 6 cm ² cooling area ¹⁾		-	35	-	

Electrical Characteristics, at $T_j = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Static Characteristics					
Reverse leakage current $V_R=1200\text{V}, T_j=25^\circ\text{C}$	I_R	-	-	100	μA
$V_R=1200\text{V}, T_j=150^\circ\text{C}$		-	-	2500	
Forward voltage drop $I_F=30\text{A}, T_j=25^\circ\text{C}$	V_F	-	1.65	2.15	V
$I_F=30\text{A}, T_j=150^\circ\text{C}$		-	1.7	-	

⁰J-STD20 and JESD22

¹Device on 40mm*40mm*1.5mm epoxy PCB FR4 with 6cm² (one layer, 70 μm thick) copper area for drain connection. PCB is vertical without blown air.

