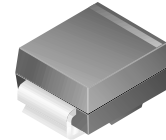


S320

3A, 200V, Surface Mount Package Schottky Rectifier

Features

- Low Profile, Mini Surface Mount Package: SMB / DO-214AA
- High Reverse Voltage: $V_{RRM} = 200V$
- Low Power Loss, High Efficiency
- High Surge Current: $I_{FSM} = 80A$
- RoHS 2002/95/EC Compliant



SMB / DO-214AA
Color Band Denotes Cathode
Mark: S320

Absolute Maximum Ratings* $T_A = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	200	V
V_{RMS}	Maximum RMS Voltage	140	V
V_{DC}	Maximum DC Blocking Voltage	200	V
$I_{F(AV)}$	Maximum Average Forward Current	3.0	A
I_{FSM}	Non-repetitive Peak Forward Surge Current : 8.3ms Single Half-Sine-Wave superimposed on rated load (JECEC method)	80	A
T_{STG}, T_J	Operating Junction and Storage Temperature Range	-65 to +150	$^\circ C$

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics*

Symbol	Parameter	Typ.	Units
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	160	$^\circ C/W$
Ψ_{JL}	Junction to Lead Thermal Characteristics	20	$^\circ C/W$

* Test condition - Test environment & PCB type: JESD51-2,3, Board size: 76.2x114.3mm,
Pad size: 2.5x2.2mm, Trace width: 30mils

Electrical Characteristics $T_A = 25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Typ.	Max.	Units
V_F	Forward Voltage*	@ 3.0A		0.9	V
I_R	DC Reverse Current	@ Rated V_{DC} $T_A = 25^\circ C$ $T_A = 100^\circ C$		7 120	μA μA
trr	Reverse recovery time**	$I_F=0.5A, I_R=1A, I_{RR}=0.25A$	14		ns
trr	Reverse recovery time	$I_F=1A, V_R=-30V,$ $I_{RR}=10\% I_{RM}, di/dt=50A/\mu s$	30		ns

* Pulse Test with $PW = 250\mu sec$, 2% Duty Cycle.

** $I_R < 1A$ due to fast reverse recovery

Typical Performance Characteristics

Figure 1. DC Forward Current Derating Curve

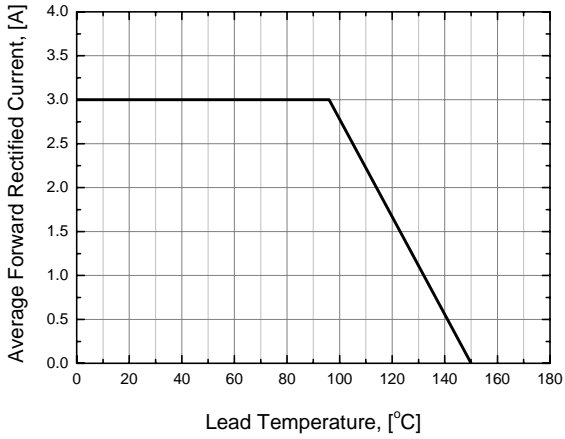


Figure 2. Forward Current Characteristics

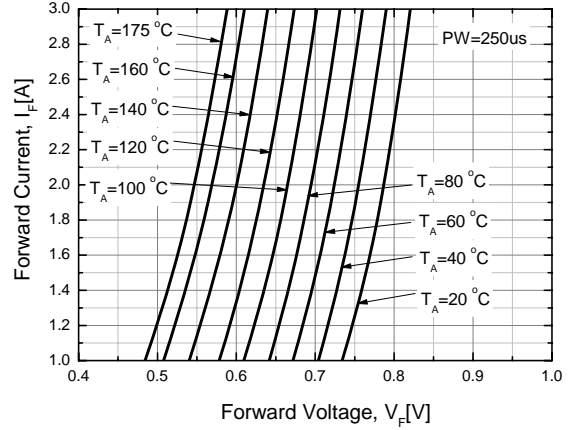


Figure 3. Typical Reverse Characteristics

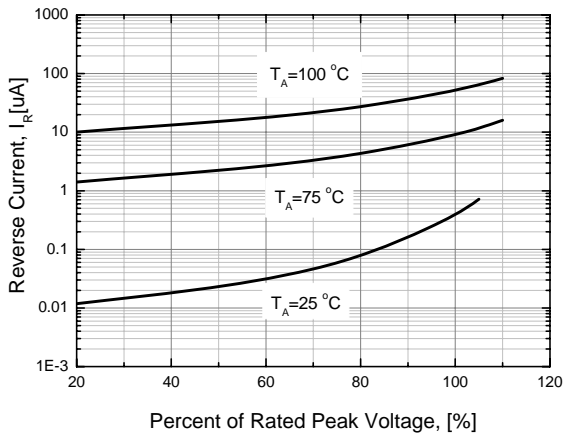
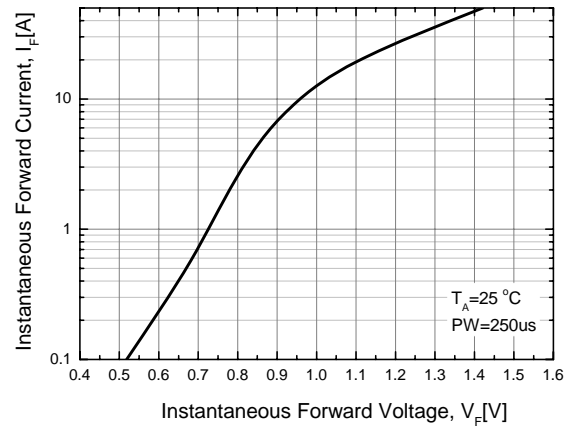





Figure 4. Typical Instantaneous Forward Characteristic





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