

Surface Mount Schottky Barrier Rectifier Voltage 45V Current 5 Amperes

FEATURES

- Low Profile Design
- Ideal for SMT Mounting
- Low forward voltage drop
- High forward surge capability
- Excellent High Temperature Stability

MECHANICAL DATA

- Epoxy : UL94 V-0 rated flame retardant
- Case: DO-214AA(SMB)
- Terminals: Lead solderable
- Weight: Approximated 0.093 grams
- Polarity: Color band denotes the cathode end



DO-214AA (SMB)

Primary Characteristic	
I_O	5A
V_{RRM}	45V
I_{FSM}	100A
V_F ($I_F=2.0A$), $T_A=125^\circ C$	0.29V
$T_{J\ max}$	125°C

Maximum Ratings $T_a=25^\circ C$ unless otherwise specified			
Characteristics	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	45	V
Working Peak Reverse Voltage	V_{RWM}	45	V
Maximum DC Blocking Voltage	V_{DC}	45	V
RMS Reverse Voltage	V_{RMS}	32	V
Maximum Average Forward Rectified Current	I_O	5	A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	100	A
Operating Temperature Range - in DC Forward Mode	T_J	-65 to +125	°C
	$T_{J\ max}$	125	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

Notes: (1) Pulse test: 300 μs pulse width, 1 % duty cycle

Electrical Characteristics ($T_a=25^\circ C$ unless otherwise specified)				
Characteristics	Symbol	Value	Unit	
Forward Voltage $I_F=2.0A$, $T_A=25^\circ$	V_F	Typ. 0.37	Max. 0.39	V
$I_F=5.0A$, $T_A=25^\circ C$		0.47	0.50	V
$I_F=2.0A$, $T_A=125^\circ C$		0.29	0.32	V
$I_F=5.0A$, $T_A=125^\circ C$		-	0.49	V
Maximum Reverse Current at Rated V_{RRM} $V_R=45.0V$, $T_A=25^\circ C$	I_R	Typ. 75	Max. 200	μA
$V_R=45.0V$, $T_A=125^\circ C$		-	50	mA

Notes: (2) Device mounted on FR-4 substrate, 2oz copper, with minimum recommended pad layout.

Notes: (3) Short duration pulse test used to minimize self-heating effect.

Notes: (4) Device might risk thermal failure during applied reverse bias, while typical $T_c > 105^\circ C$ is measured from die straight up to top center of the case surface.

Characteristics Curves

Fig 1 Typical Instantaneous Forward Characteristics

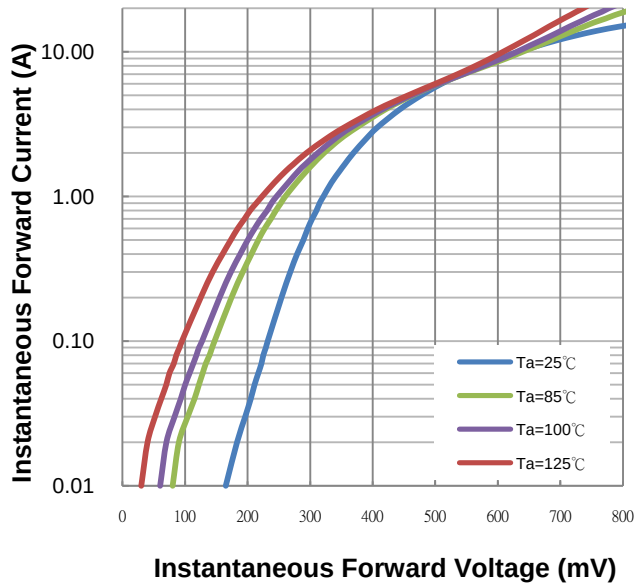


Fig 2 Typical Reverse Characteristics

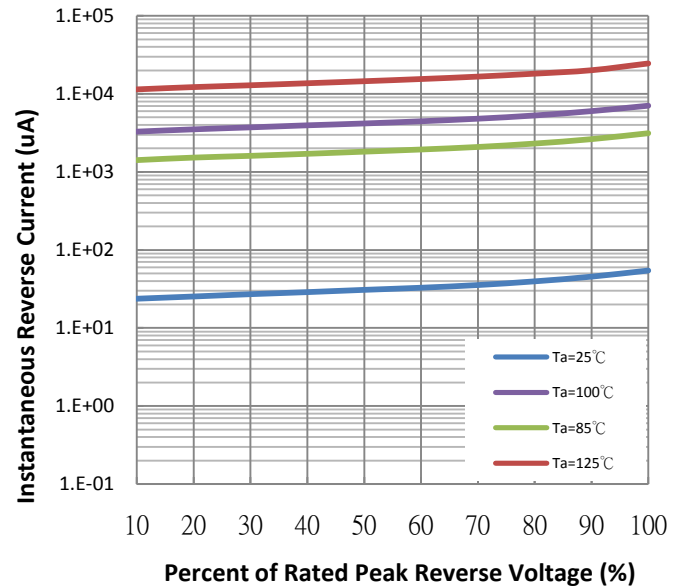


Fig 3 Typical Forward Current Derating Curve

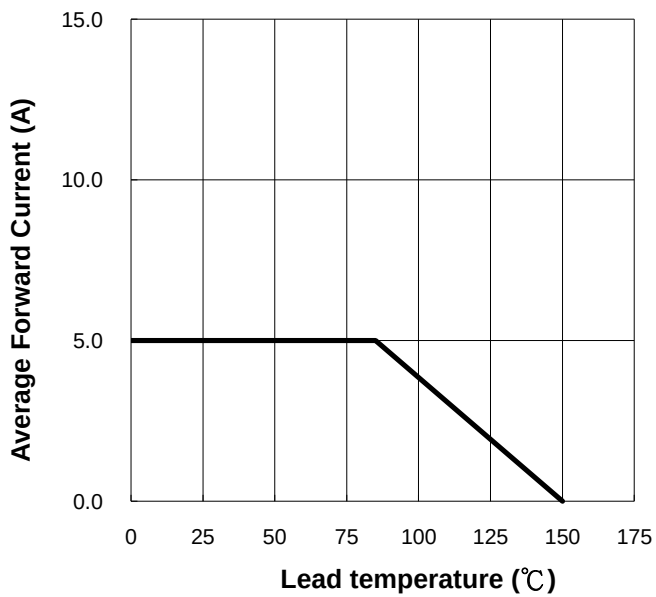
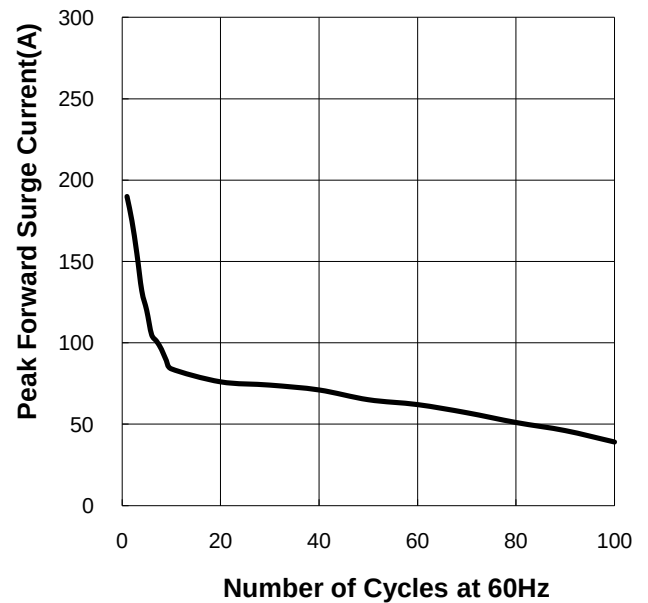


Fig 4. Max. Non-repetitive Forward Surge Current



Package Outline Dimensions



Unit: mm