

5.0Amp Fast Recovery Surface Mounted Rectifiers

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Glass passivated Junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
250°C/10 seconds at terminals

Mechanical Data

Case : Molded plastic body

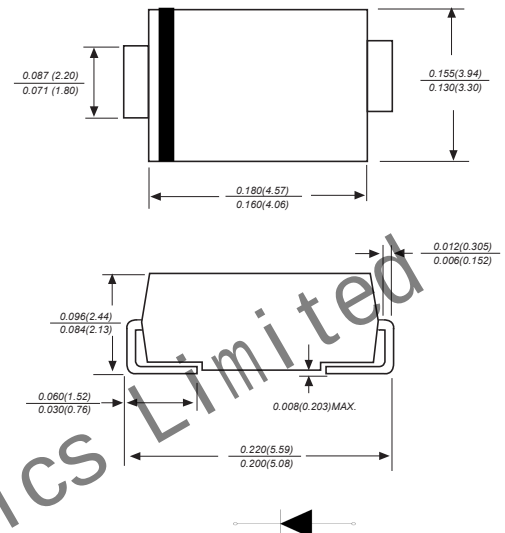
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0035 ounce, 0.098 grams

DO-214AA/SMB  



Maximum Ratings And Electrical Characteristics

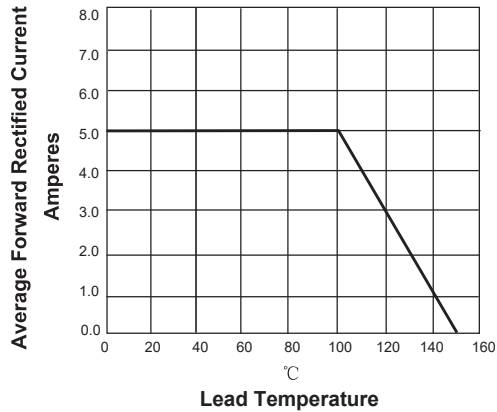
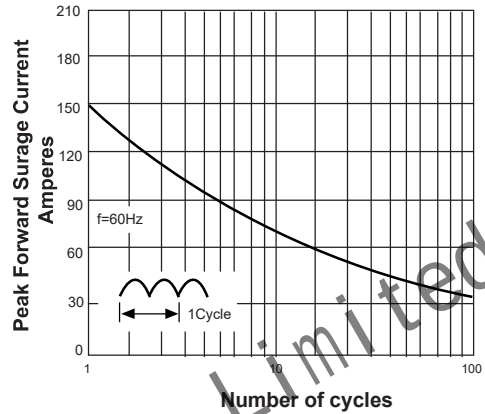
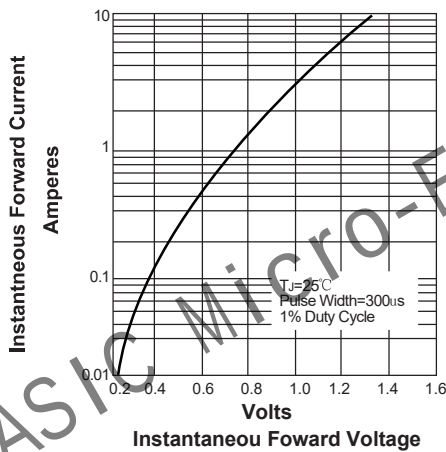
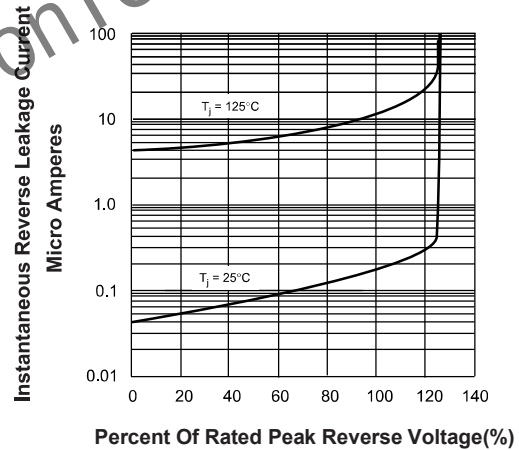
Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	ASFRS 5AMX0	ASFRS 5BMX0	ASFRS 5DMX0	ASFRS 5GMX0	ASFRS 5JMX0	ASFRS 5KMX0	ASFRS 5MMX0	UNITS
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at T _L =100°C	I _(AV)	5.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150.0							A
Maximum instantaneous forward voltage at 5.0A	V _F	1.30							V
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	5.0 500							uA
Maxinum reverse recovery time(Note 1)	T _{rr}	150				250	500		ns
Typical junction capacitance (Note2)	C _J	70.0							pF
Typical thermal resistance	R _{qJA}	85.0							°C/W
Operating junction and storage temperature range	T _J ,T _{STG}	-55 to +150							°C

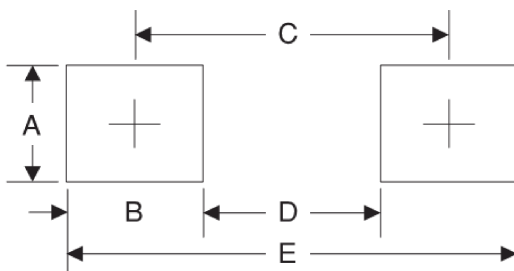
Note: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

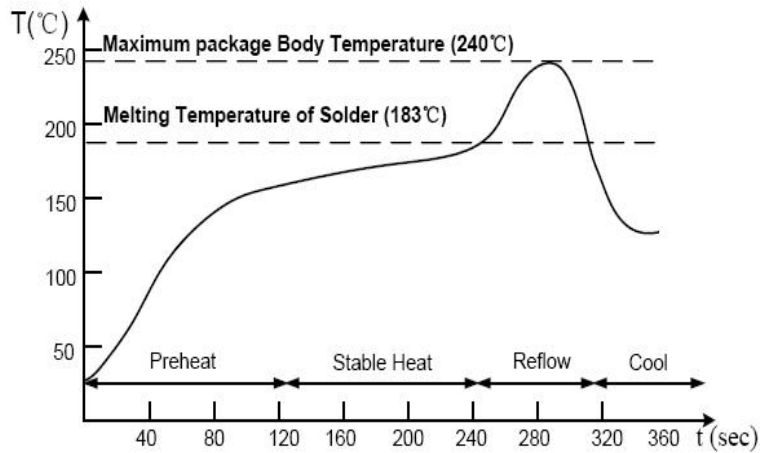
FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	2.00	0.078
C	4.10	0.161
D	2.10	0.083
E	6.10	0.240

Suggested Soldering Temperature Profile

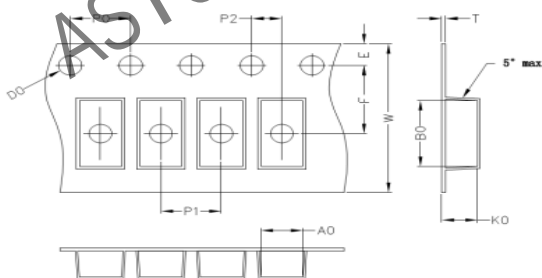


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
3.80	5.40	2.45	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMB	13'	330	3.0	340	6.0	360*360*360	48