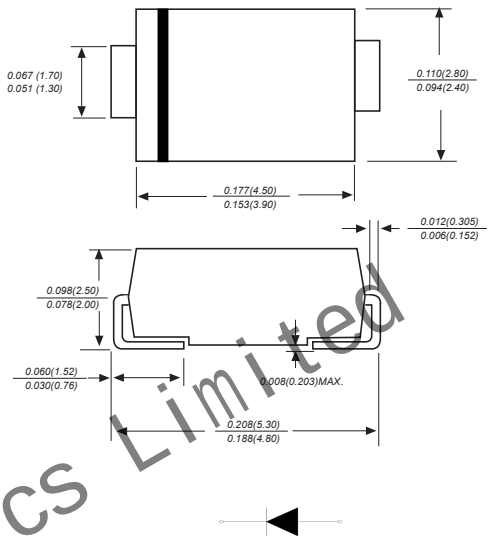
3.0Amp Fast Recovery Surface Mounted Rectifiers

DO-214AC/SMA

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 260℃/10 seconds at terminals



Dimensions in inches and (millimeters)

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 : 0.0023 ounce, 0.07 grams

Maximum Ratings And Electrical Characteristics

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

Parameter	SYMBOLS	ASFRS 3ALX0	ASFRS 3BLX0	ASFRS 3DLX0	ASFRS 3GLX0	ASFRS 3JLX0	ASFRS 3KLX0	ASFRS 3MLX0	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℃	$I_{(AV)}$	3.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80.0							A
Maximum instantaneous forward voltage at 3.0A	V_F	1.30							V
Maximum DC reverse current T_A =25℃ at rated DC blocking voltage T_A=125℃	I_R	5.0 500							uA
Maxinum reverse recovery time(Note 1)	Trr	150				250	500		ns
Typical junction capacitance (Note2)	C_J	63.0							pF
Typical thermal resistance	$R_{\theta JA}$	65.0							°C/W
Operating junction and storage temperature range	T_J,T_{STG}	-55 to +150							°C

Note: 1.Reverse recovery time test condition: IF=0.5A IR=1.0A Irr=0.25A
2.Measured at 1MHz and applied reverse voltage of 4.0V D.C.

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

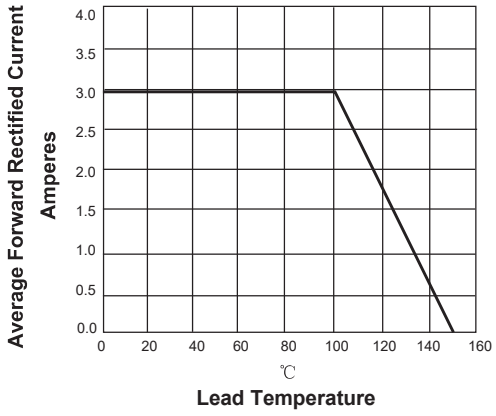


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

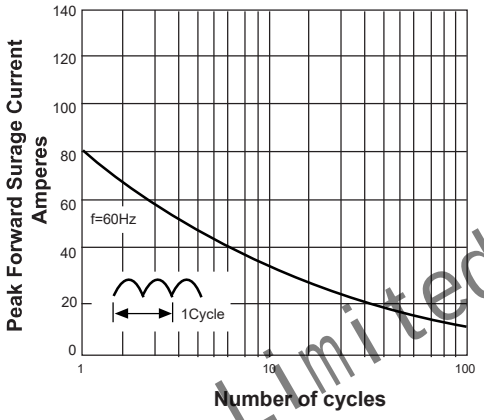


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

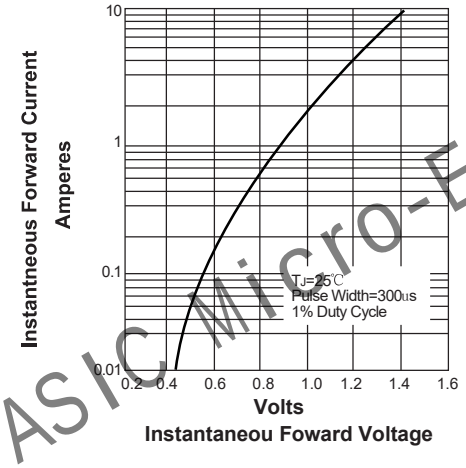
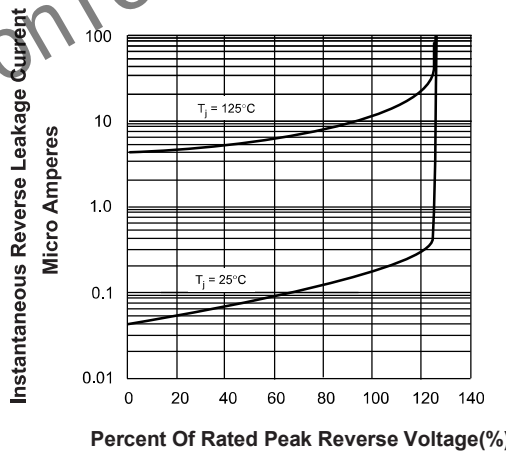
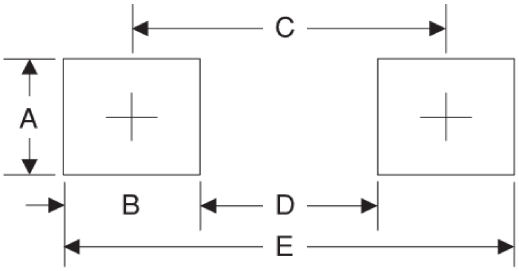


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

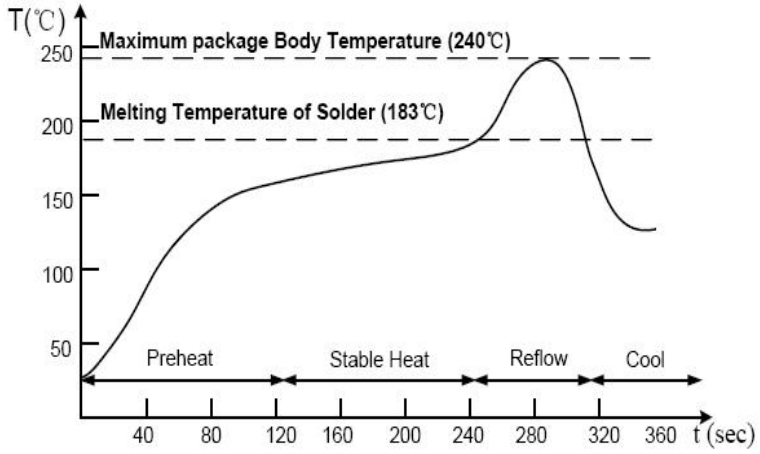


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

Suggested Soldering Temperature Profile

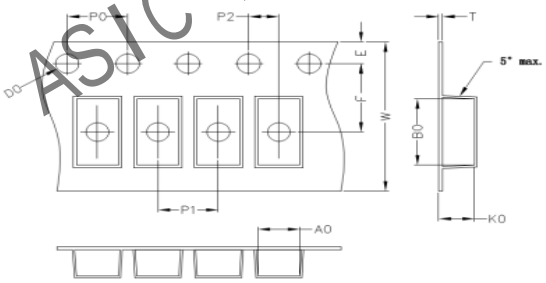


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°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
2.80	5.30	2.36	1.55	1.75	5.50
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	4.0	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)
SMA	11'	278	5	285	10	355*310*310	80
	13'	330	7.5	340	15	360*360*360	120