

20 to 200V, 2A Schottky Barrier Rectifiers

Features

- ✧ Low power loss,high efficiency
- ✧ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ✧ For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- ✧ Guardring for over voltage protection
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

- ✧ Molded plastic over sky die
- ✧ Color band denotes cathode end
- ✧ Handling precaution:None
- ✧ Weight: 0.0007 oz., 0.02 g



Circuit Diagram



SOD123FL

Absolute Maximum Rating ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter Symbol	symbol	OVB 220K	OVB 240K	OVB 260K	OVB 280K	OVB 2100K	OVB 2150K	OVB 2200K	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	105	140	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	150	200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_F(AV)$	2.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Typical thermal resistance	$R_{\theta JA}$	85							$^{\circ}\text{C/W}$
Operating junction and storage temperature rang	T_J, T_{STG}	-55 to +125							$^{\circ}\text{C}$

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter Symbol	symbol	OV B 220K	OV B 240K	OV B 260K	OV B 280K	OV B 2100K	OV B 2150K	OV B 2200K	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	0.55		0.70	0.85		0.95		V
Maximum DC reverse current $T_A = 25^{\circ}\text{C}$ at rated DC blocking voltage $T_A = 125^{\circ}\text{C}$	I_R	0.5 50				0.05 10.0			mA

Typical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

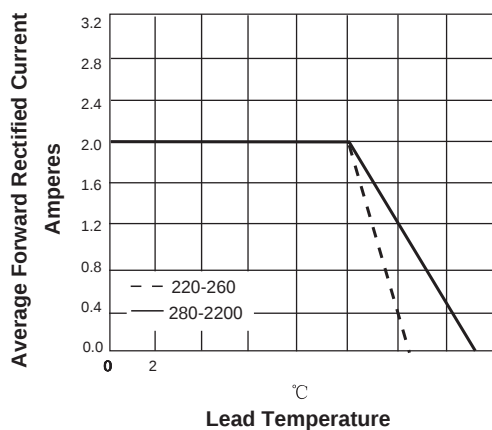


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

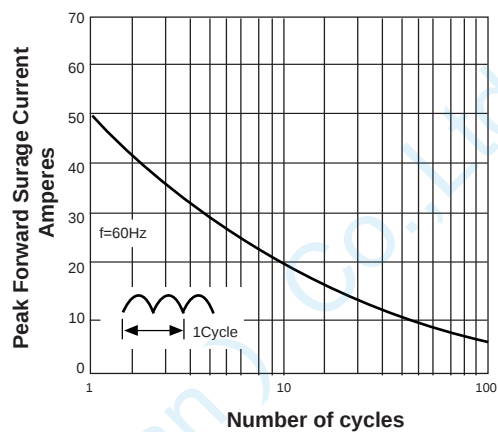


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

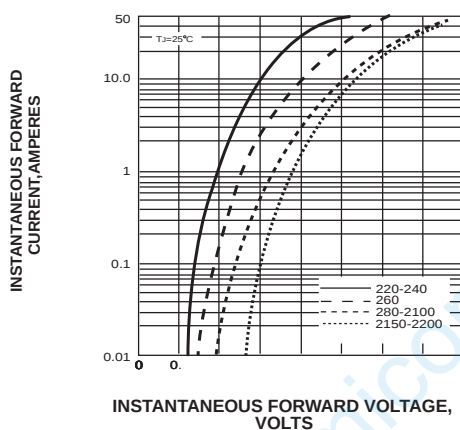
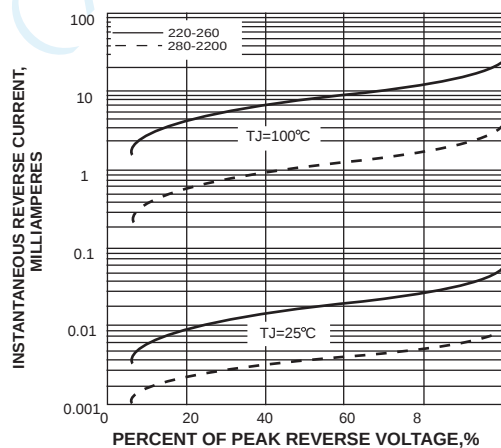
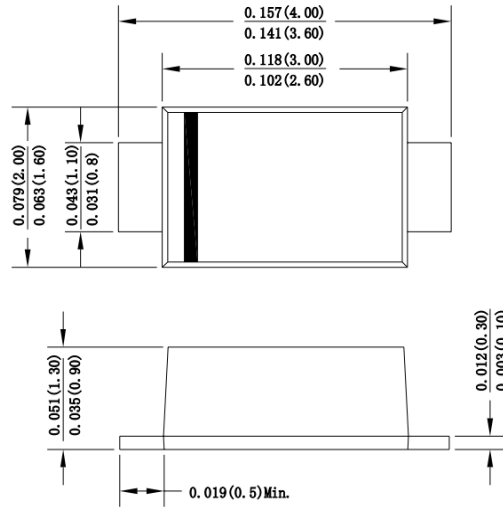


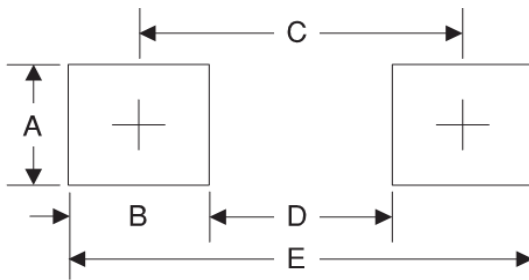
FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Information



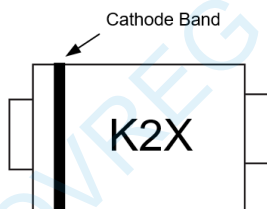
Recommend PCB Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.048
B	1.15	0.045
C	3.10	0.122
D	1.95	0.077
E	4.25	0.167

Notes: This PCB Layout Is For Reference Purposes Only

Marking

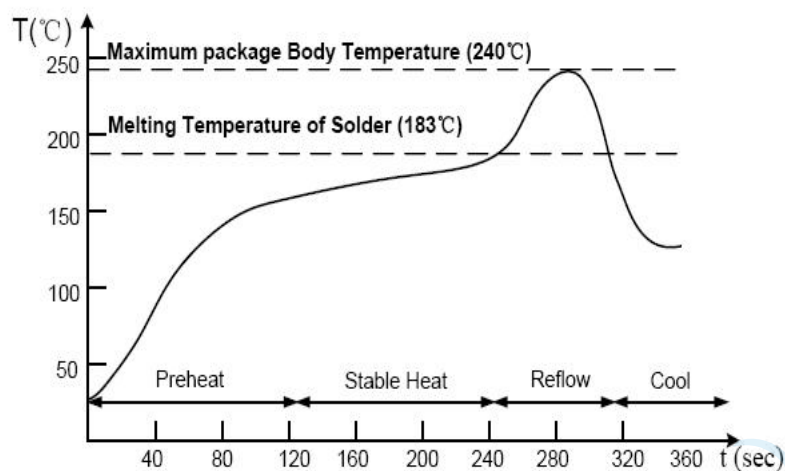


X: Voltage Code
 2 ---- V_{RRM}=20V
 4 ---- V_{RRM}=40V
 6 ---- V_{RRM}=60V
 8 ---- V_{RRM}=80V
 10 ---- V_{RRM}=100V
 15 ---- V_{RRM}=150V
 20 ---- V_{RRM}=200V

Ordering Information

Part number	Material	Type	Reel size	MOQ	MOQ/internal box	MOQ/carton
OV B220K Series	GREEN	T/R	7 inch	3k/reel	10reel= 30k/box	4boxes=120k/carton

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.