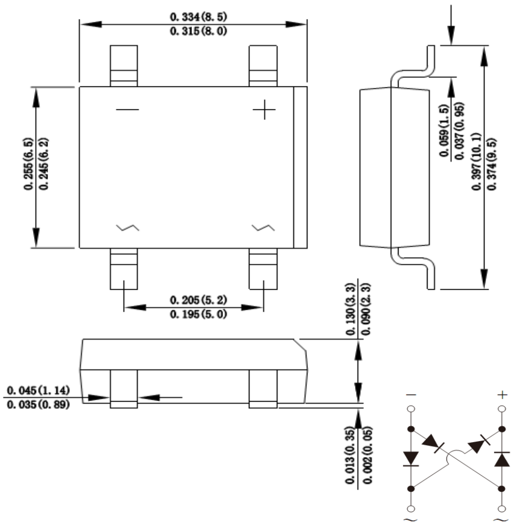
KDB34S~KDB320S

Single Phase 3.0Amp Schottky Bridge Rectifiers

Features

DBS

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Metal-Silicon junction chip
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed 250℃/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 : 0.0078 ounce, 0.22 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	KDB 34S	KDB 345S	KDB 36S	KDB 38S	KDB 310S	KDB 315S	KDB 320S	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	31.5	42	56	70	70	140	V
Maximum DC blocking voltage	V_{DC}	40	45	60	80	100	150	200	V
Maximum average forward rectified current at T_L=100℃ On glass-epoxy P.C.B (Note 1)	$I_{(AV)}$	3.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80.0							A
Rating for fusing (t=8.3ms, Ta=25˚C)	I^2t	26.5							A^2s
Maximum instantaneous forward voltage at 3.0A	V_F	0.55		0.7	0.85		0.95		V
Maximum DC reverse current T_A =25℃ at rated DC blocking voltage T_A=125˚C	I_R	0.5 50			0.2 20				mA
Typical thermal resistance	R_{qJA}	70.0							°C/W
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Note:1.Mounted on glass epoxy PC board with 1.3*1.3mm solder pad

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

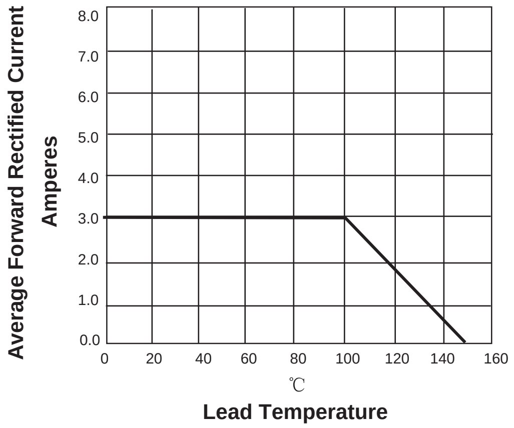


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

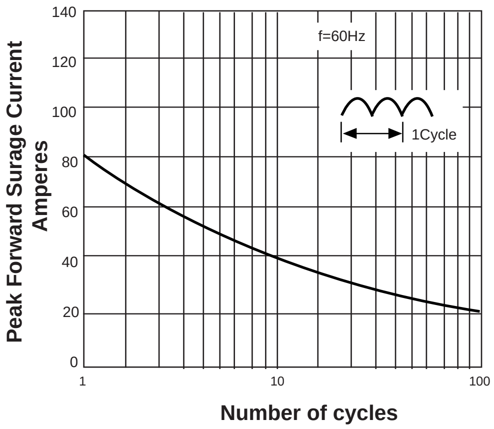


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

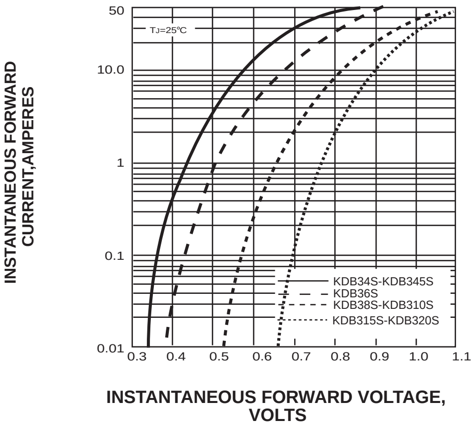
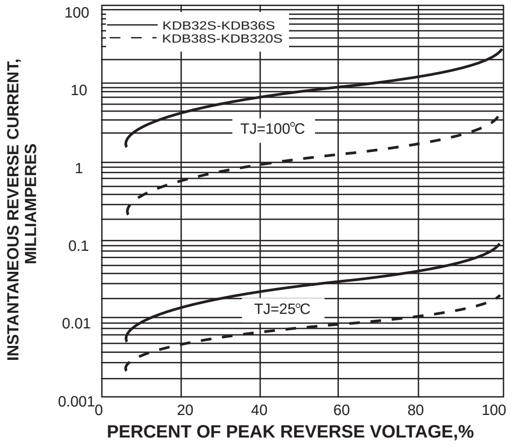
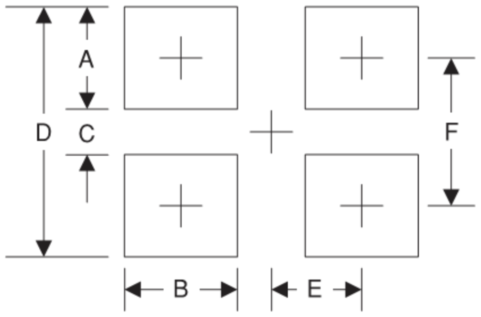


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

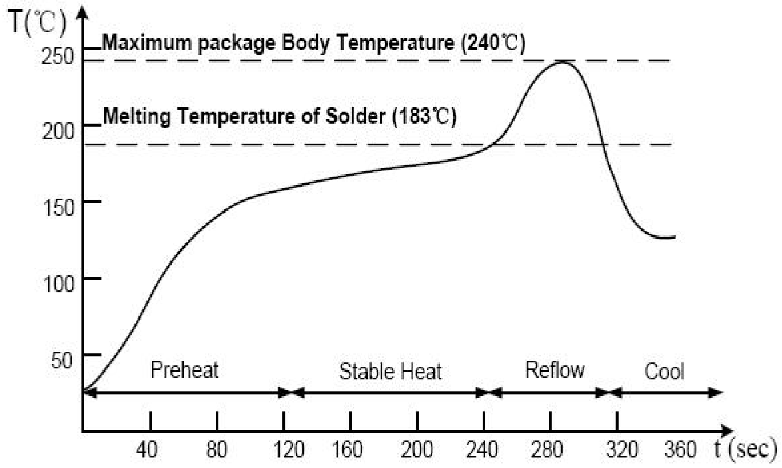


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.3	0.091
B	1.3	0.051
C	6.90	0.272
D	11.5	0.453
E	2.6	0.102
F	9.20	0.362

Suggested Soldering Temperature Profile

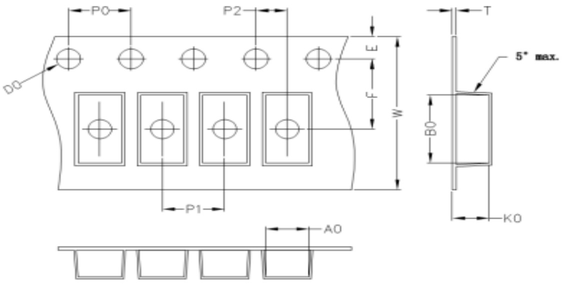


Note

- 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
8.64	10.4	3.3	1.55	1.75	7.50
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	12.0	2.0	0.30	16	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)
DBS	13'	330	1.5	338	3	365*365*360	20

Package	Tube (mm)	Q'TY/Tube (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
DBS	425	0.05	440*141*54	4	460*250*165	20