

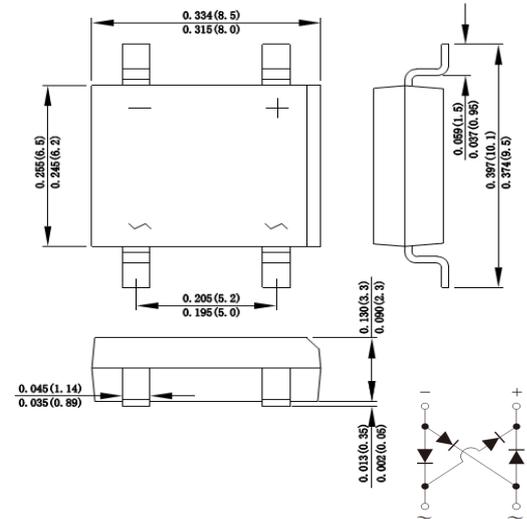
Features

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°C/10 seconds at terminals

Mechanical Data



Dimensions in inches and (millimeters)

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

Parameter	SYMBOLS	KDB 54S	KDB 545S	KDB 56S	KDB 58S	KDB 510S	KDB 515S	KDB 520S	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°C On glass-epoxy P.C.B (Note 1)	I _(AV)	5.0							A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	120.0							A	
Rating for fusing (t=8.3ms, T _a =25°C)	I _t ²	59.76							A ² _s	
Maximum instantaneous forward voltage at 5.0A	V _F	0.55	0.7	0.85	0.95				V	
Maximum DC reverse current T _A =25°C at rated DC blocking voltage T _A =125°C	I _R	0.5			0.2			50	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

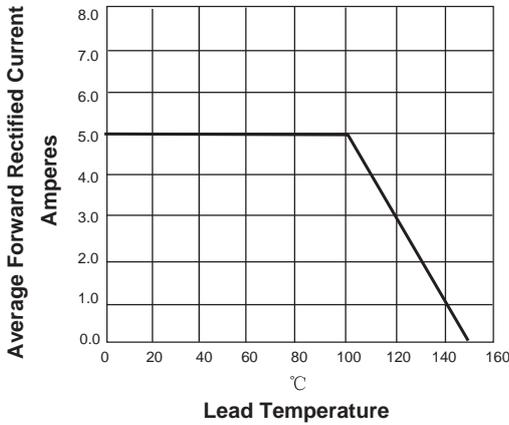


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

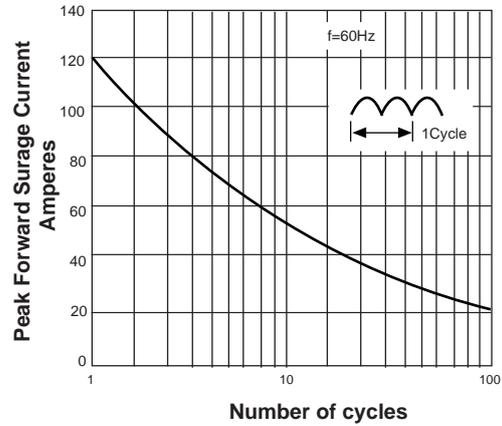


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

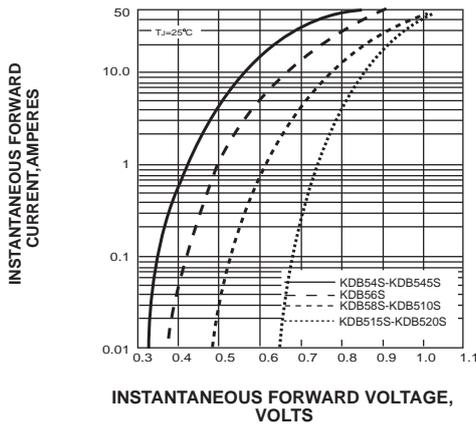
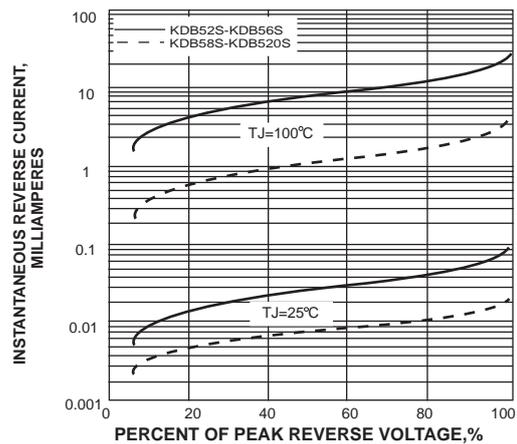
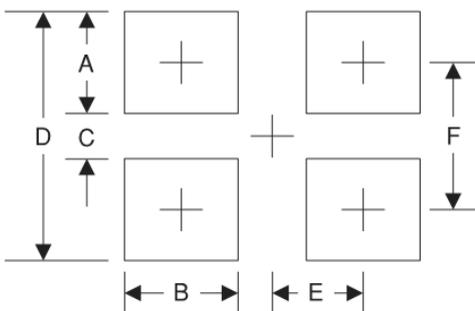


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

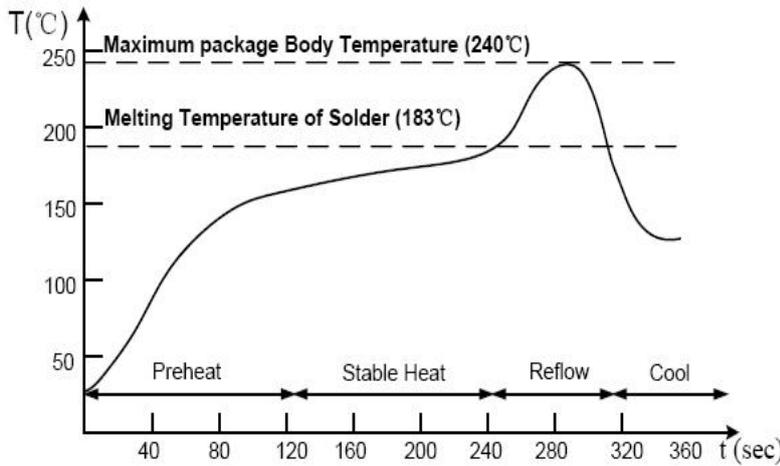


Suggested Pad Layout



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

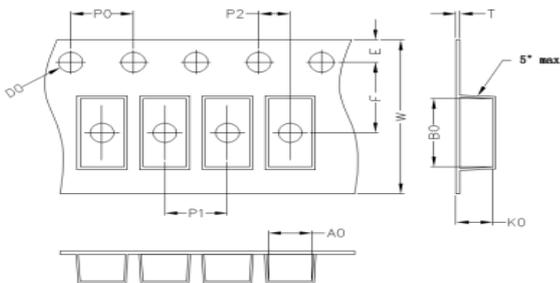


Note

- 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