



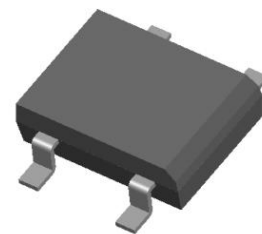
DB151S THRU DB157S

VOLTAGE RANGE	50 to 1000 Volts
CURRENT	1.5 Ampere



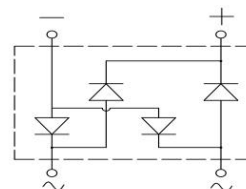
Features

- Glass passivated chip
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering: 260°C/10S at terminals
- Component in accordance to ROHS 2002/95/1 and WEEE 2002/96/EC



Mechanical Data

- Case: Molded plastic body
- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity: Molded on body
- Weight: 0.02 ounce, 0.40 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 derate current by 20%

TYPE NUMBER	SYMBOL	DB 151S	DB 152S	DB 153S	DB 154S	DB 155S	DB 156S	DB 157S	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.5							Amp
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	50							Amps
Maximum Instantaneous Forward Voltage @ 1.5A	V_F	1.1							Volts
Current squared time @ $1\text{ms} \leq t \leq 8.3\text{ms}$ $T_J=25^\circ\text{C}$, Rating of per diode	I^2t	15							A^2s
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ\text{C}$	5.0							μA
	$T_A = 125^\circ\text{C}$	100							
Typical Junction Capacitance ^(Note 1)	C_J	30							pF
Typical Thermal Resistance ^(Note 2)	$R_{\theta JA}$	26							$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	65							
Operating Junction Temperature Range	T_J, T_{STG}	(-55 to +150)							$^\circ\text{C}$

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 15mm*12mm*1.6mm AL pad attach 195mm*110mm*10mm steel plate.
3. The typical data above is for reference only.

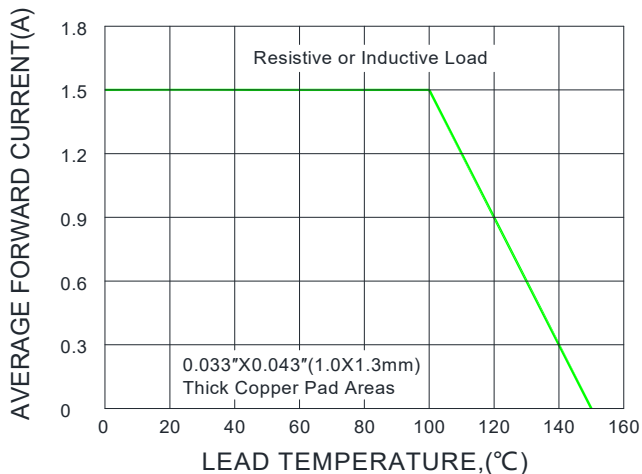


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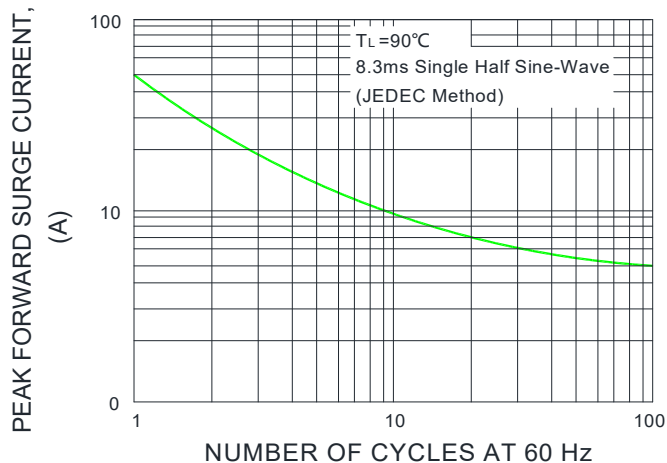
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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

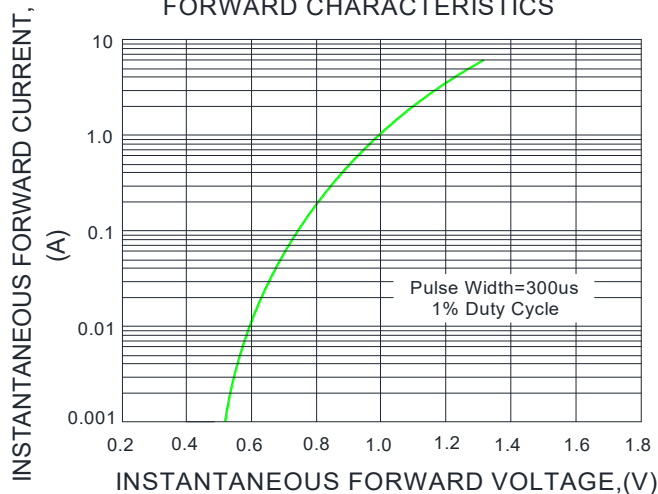
F1G.1-FORWARD CURRENT DERATING CURVE



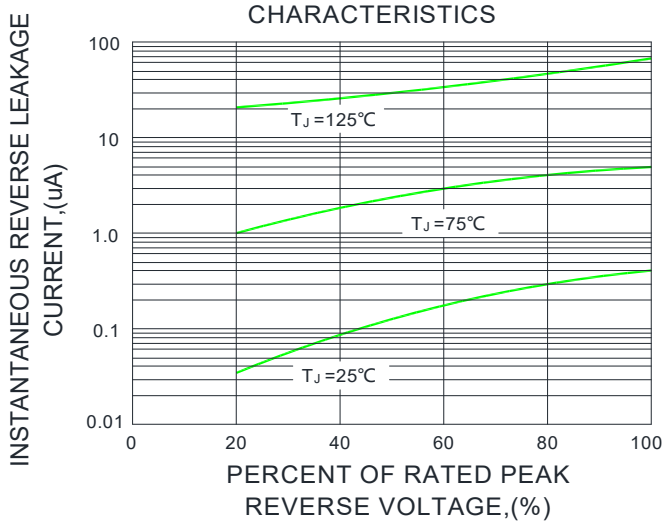
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



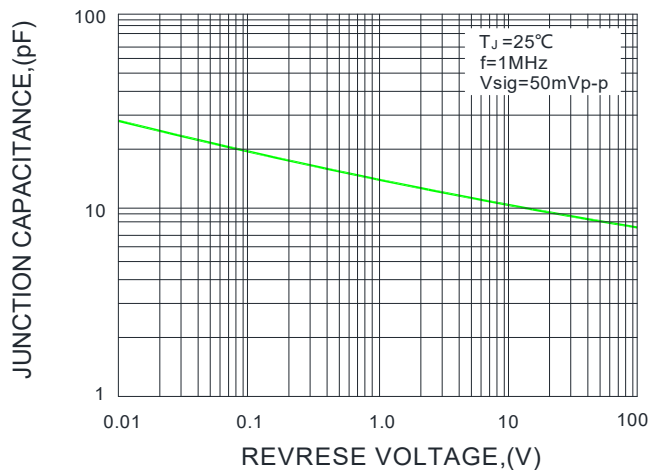
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE





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VOLTAGE RANGE

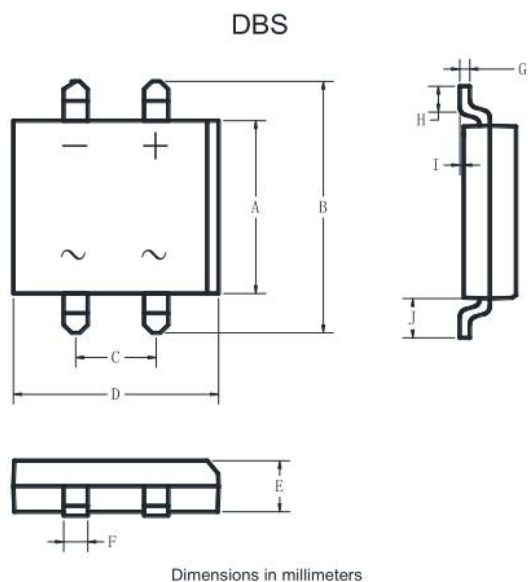
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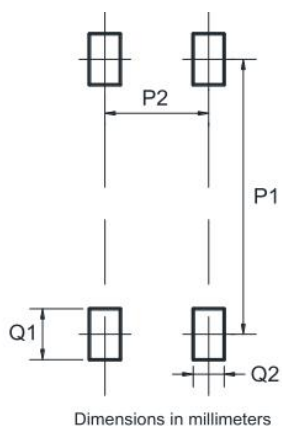
Package Outline Dimensions in inches (millimeters)

- Outline Dimensions



Dim	mm		in	
	min	max	min	max
A	6.20	6.50	.244	.256
B	9.60	10.30	.378	.406
C	5.00	5.20	.197	.205
D	8.13	8.51	.320	.335
E	2.38	2.45	.093	.096
F	0.98	1.13	.038	.044
G	0.18	0.23	.007	.009
H	1.02	1.53	.040	.060
I	0.05	0.20	.001	.007
J	1.80	2.10	.070	.082

- Suggested pad layout



Dim	Min
P1	8.73
P2	5.12
Q1	2.22
Q2	1.2

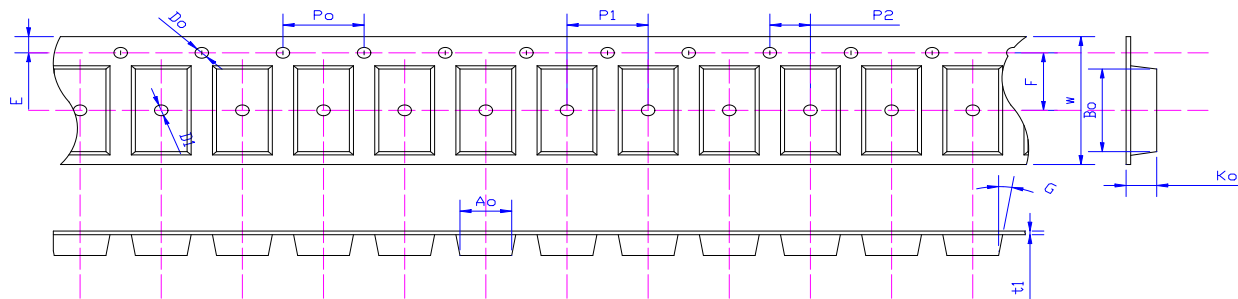


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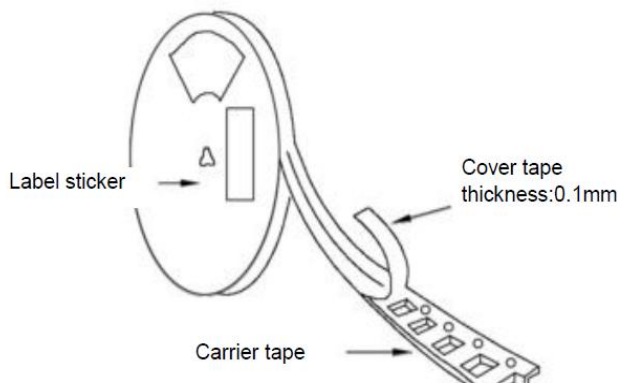
Packing Requirments

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	t1
DBS	8.64±0.10	9.85±0.10	2.60±0.10	4.00±0.1	16.0±0.10	0.30±0.02

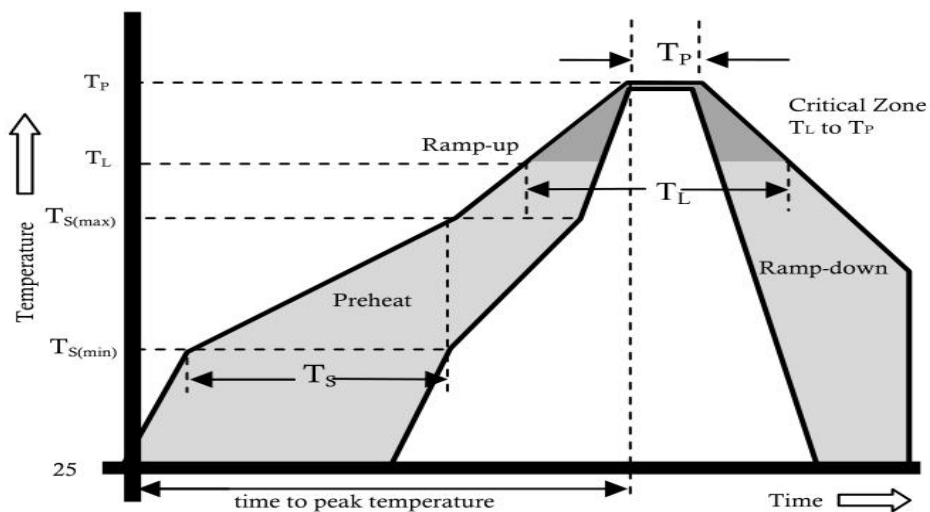
- 13 "antistatic plastic reel



DEVICE TYPE	13" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
DBS	3000	2	8	48000



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_P)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C



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Disclaimer

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