

DO-27



Features

- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- Moisture sensitivity: level 1, per J-STD-020
- AEC-Q101 qualified
- High temperature soldering guaranteed:
260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



Primary characteristics

$I_{F(AV)}$	5A
V_{RRM}	20V to 60V
I_{FSM}	150A
I_{RM}	0.15mA
V_{FM} at $I_F=5A$	0.5/0.67V
T_J max.	150 °C

Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical data

- DO-27
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.

Maximum rating (Ta=25°C unless otherwise noted)

Parameter	Sym	DO-27					Unit
		SB520	SB530	SB540	SB550	SB560	
Max. repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	V
Max. RMS reverse voltage	V_{RMS}	14	21	28	35	42	V
Max. DC blocking voltage	V_{DC}	20	30	40	50	60	V
Max. average forward current	$I_{F(AV)}$	5					A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave	I_{FSM}	150					A
Max. instantaneous forward voltage drop per diode	V_{FM}	0.5		0.67			V
Max. instantaneous reverse current at rated DC blocking voltage	I_{RM}	0.15					mA
		15					
Operating junction temperature	T_J	-55 ~ +150					°C
Storage temperature	T_{STG}	-55 ~ +150					°C
Typical thermal resistance (Note1)	$R_{\theta J-A}$	43					°C/W
	$R_{\theta J-L}$	18					

Notes:

1 The thermal resistance from junction to lead and ambient



Ordering information (Example)

PREFERRED	UNITWEIGHT(g)	PREFERREDPACKAGECODE	BASEQUANTITY	DELIVERYMODE
SB520				

Typical characteristics

Fig. 1 - Forward Current Derating Curve

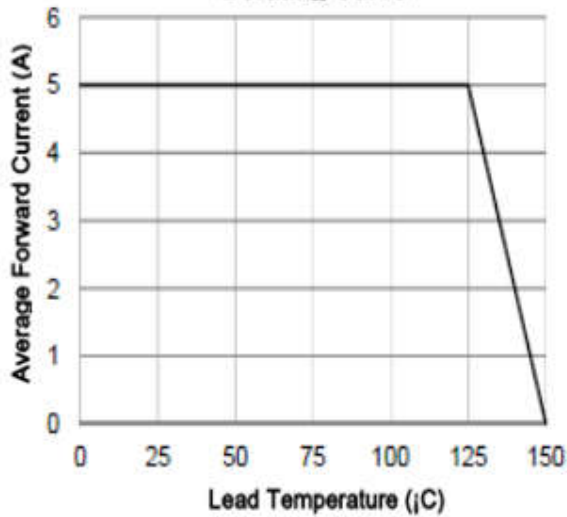


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

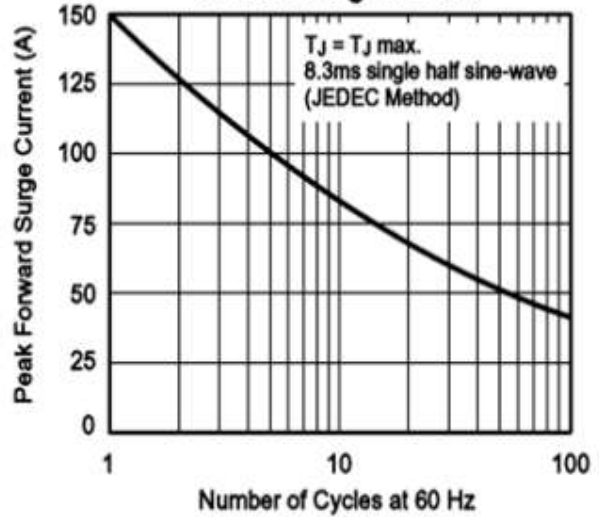


Fig. 3 - Typical Instantaneous Forward Characteristics

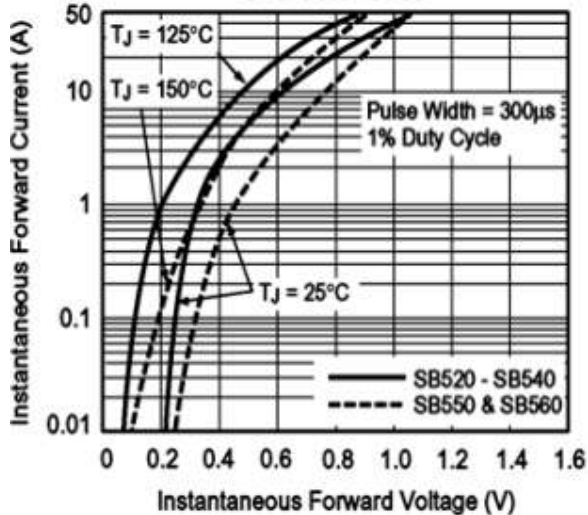
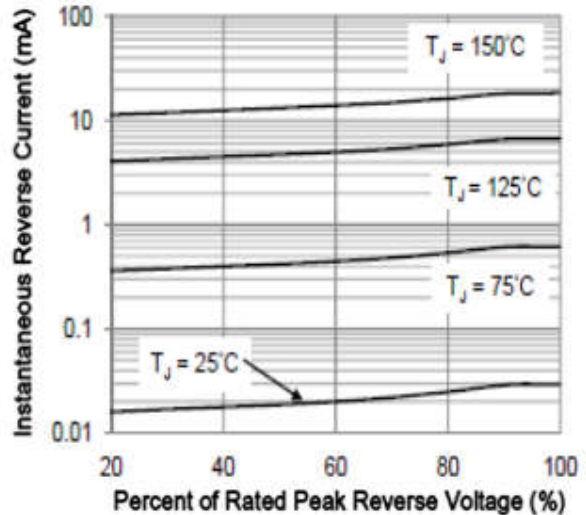


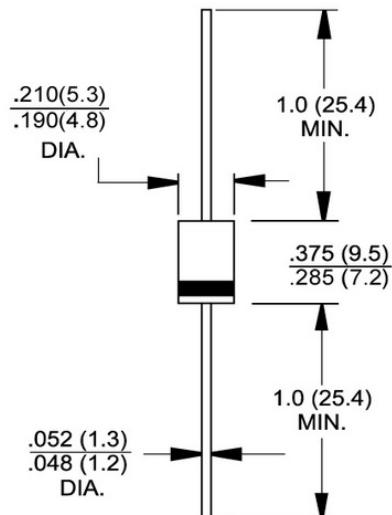
Fig. 4 - Typical Reverse Characteristics





Package outline dimensions

DO-201AD



Dimensions in inches and (millimeters)

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