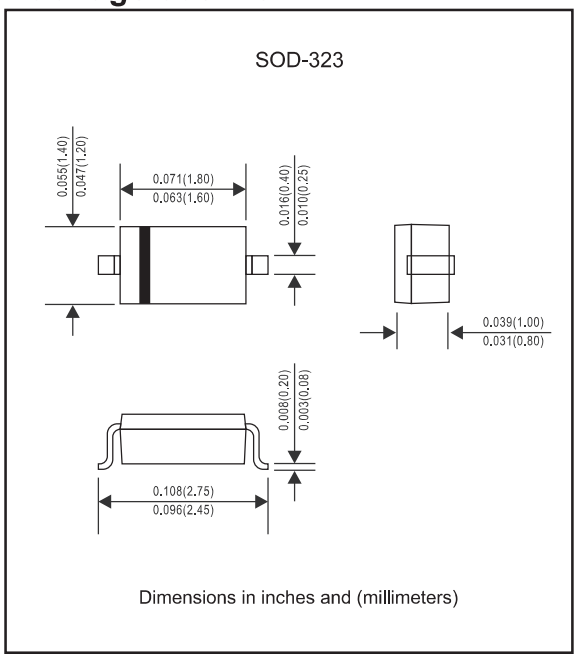
BZT52B47S

300mW Surface Mount Zener Diodes - 47V

Features

- Small package size for high density applications
- Ideally suited for automated assembly processes
- Pb-free package is available
- We declare that the material of product compliance with RoHS requirements
- Compliant to Halogen-free

Package outline



Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-323
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Maximum Ratings (at T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Power Dissipation(1)	P_{tot}	300	mW
Forward Voltage at I_F = 10 mA	V_F	0.9	V
Thermal resistance juncting to ambient	$R_{\theta JA}$	625	°C/W
Operating junction	T_j	150	°C
Storage temperature range	T_{stg}	-65 ~ +150	°C

(1) FR−4 printed circuit board, single−sided copper, mounting pad 1 cm^2.

Electrical Characteristics (at T_a=25°C unless otherwise noted)

Device	Marking	Zener Voltage Range				Maximum Zener Impedance			Maximum Reverse Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		Vz@Izt			Izt	Zzt @Izt	Zzk @Izk	Izk	IR	VR			
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
BZT52B47S	2WV	47	46.06	47.94	2	100	750	1.0	0.1	35.0	10.0	12.0	5

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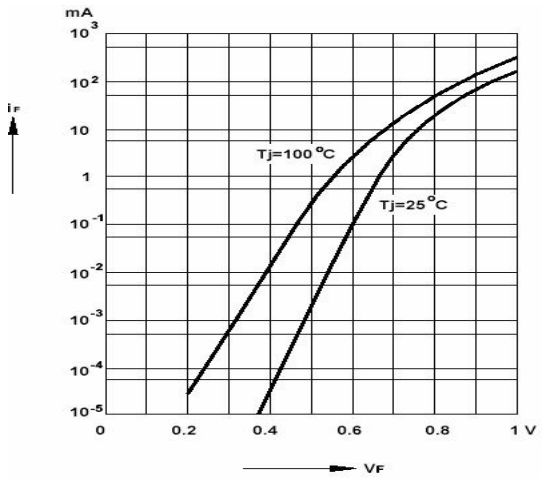
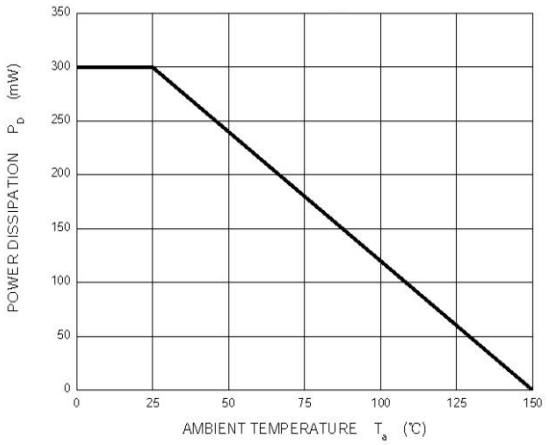
Rating and characteristic curves

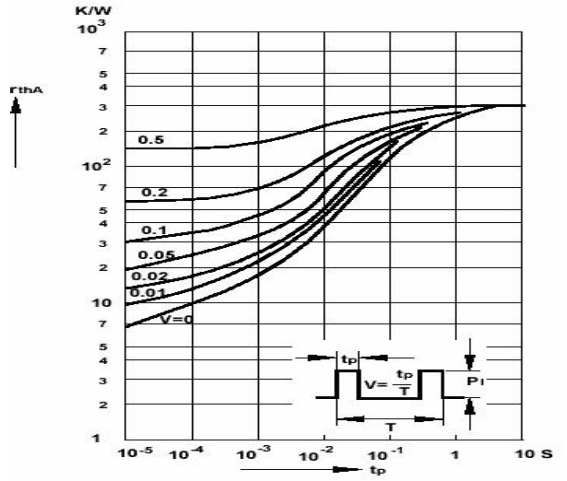
Forward characteristics



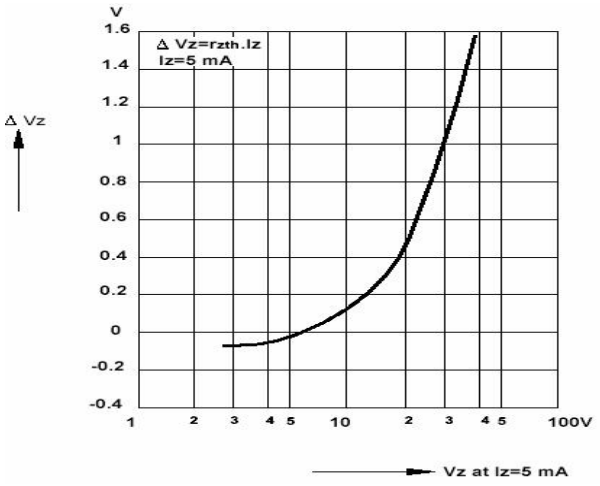
Admissible power dissipation versus ambient temperature



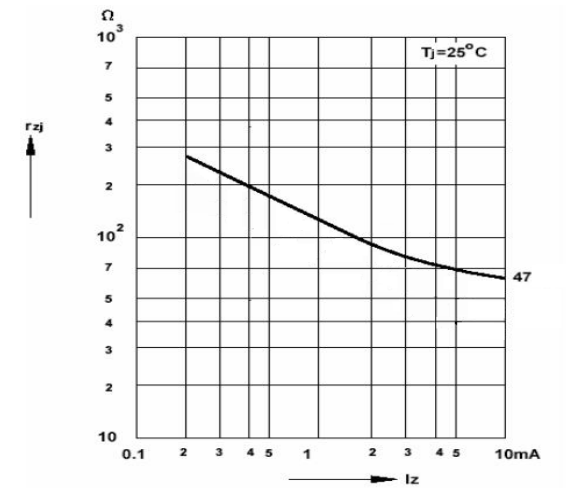
Pulse thermal resistance versus pulse duration



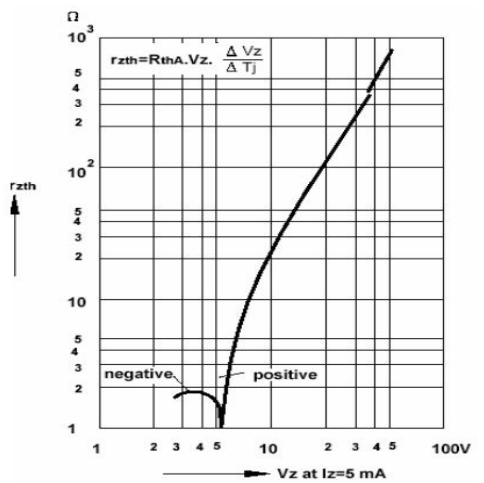
Change of Zener voltge from turn-on up to the point ofthermal equilibrium versus Zener voltage



Dynamic resistance versus Zener current



Thermal differential resistance versus Zener voltage



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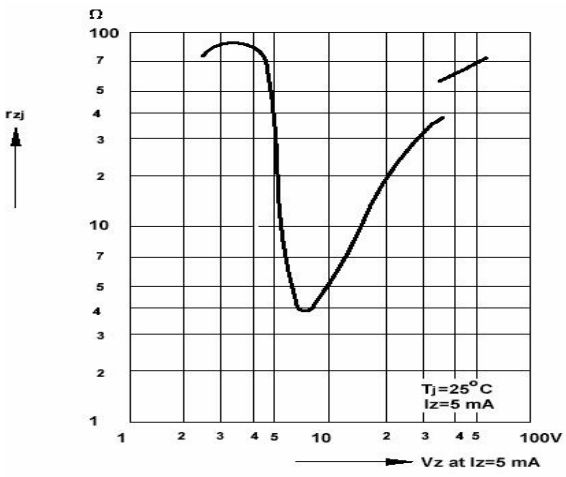
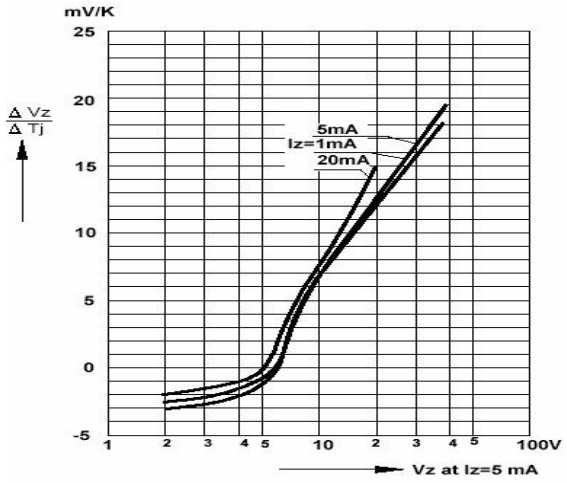
Rating and characteristic curves

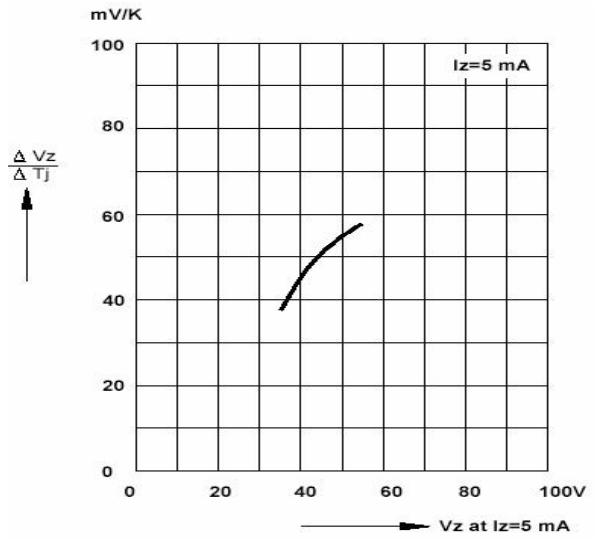
Dynamic resistance versus Zener voltage



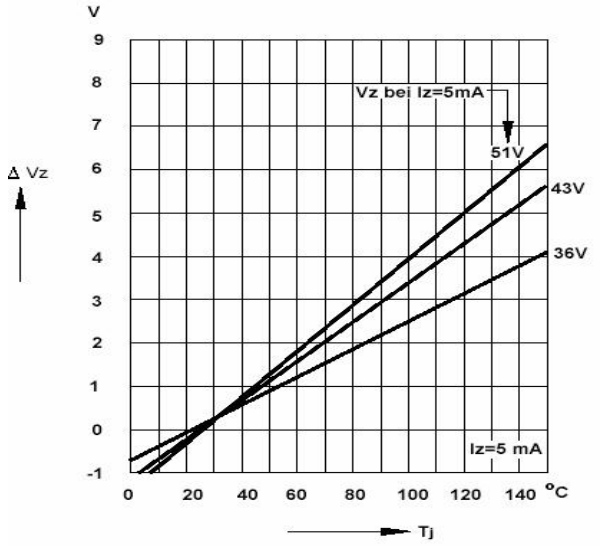
Temperature dependence of Zener voltage versus Zenervoltage



Temperature dependence of Zener voltage versus Zener voltage



Change of Zener voltage versus junction temperature



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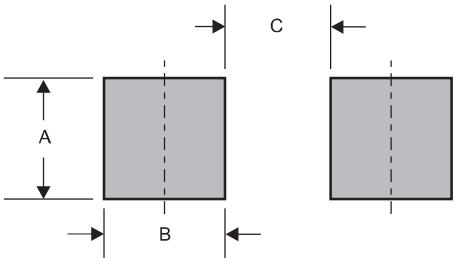
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

Suggested solder pad layout



Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-323	0.033 (0.83)	0.025 (0.63)	0.063 (1.60)