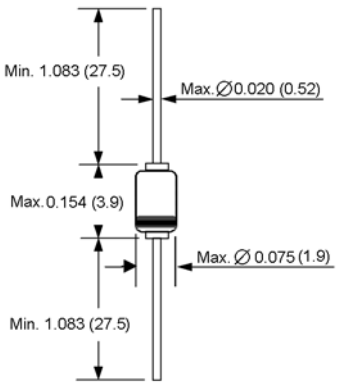
BAT42 and BAT43

Small-Signal Diode
Schottky Diodes

Features

- For general purpose applications.
- These diodes feature very low turn-on voltage and fast switching. These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- This diode is also available in the MiniMELF case with type designation LL42 to LL43.

DO-204AH (DO-35 Glass)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: DO-35 Glass Case
- Weight: approx. 0.13g

Maximum Ratings and Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	30	Volts
Forward continuous current at T_{amb}=25°C	I_F	200 (1)	mA
Repetitive peak forward Current at tp<1s, δ<0.5, T_{amb}=25°C	I_{FRM}	500 (1)	mA
Surge forward current at t_p<10ms, T_{amb}=25°C	I_{FSM}	4 (1)	Amps
Power dissipation (1) at T_{amb}=65°C	P_{tot}	200 (1)	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	300 (1)	°C/W
Junction temperature	T_j	125	°C
Ambient operating temperature range	T_{amb}	-65 to +125	°C
Storage temperature range	T_S	-65 to +150	°C

Electrical Characteristics

(T_J=25°C unless otherwise noted.)

Parameter		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse breakdown voltage		$V_{(BR)R}$	I_R=100uA (pulsed)	30	-	-	Volts
Leakage current pulse test t_p<300us, δ<2%		I_R	V_R=25V V_R=25V, T_j=100°C	- -	- -	0.5 100	uA
Forward voltage pulse test t_p<300us, δ<2%	BAT42, 43 BAT42 BAT43 BAT43 BAT43	V_F	I_F=200mA I_F=10mA I_F=50mA I_F=2mA I_F=15mA	- - - 0.26 -	- - - - -	1.0 0.40 0.65 0.33 0.45	Volt
Capacitance		C_{tot}	V_R=1V, f=1MHz	-	7	-	pF
Reverse recovery time		t_{rr}	I_F=10mA, I_R=10mA, I_{rr}=1mA, R_L=100Ω	-	-	5	ns
Detection efficiency		η_v	R_L=15KΩ, C_L=300pF f=45MHz, V_{RF}=2V	80	-	-	%

Notes: 1. Valid provided that leads at a distance of 4mm from case are kept at ambient temperature.