

## SILICON PLANAR SCHOTTKY DIODES

**BAT42  
BAT43**

**DO-35  
Glass Axial Package**



General Purpose Metal to Silicon Diodes Featuring Very Low Turn-on Voltage and Fast Switching

### ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Forward Current (DC)	$*I_F$	200	mA
Repetitive Peak Forward Current $t_p \leq 1s$ $d \leq 0.5$	$*I_{FRM}$	500	mA
Surge Non Repetitive Forward Current $t_p \leq 10ms$	$*I_{FSM}$	4.0	A
Power Dissipation $T_a = 65^\circ C$	$P_D$	200	mW
Storage Temperature Range	$T_{stg}$	- 65 to +150	$^\circ C$
Junction Temperature	$T_j$	- 65 to +125	$^\circ C$
Maximum Lead Temperature for Soldering during 10s at 4mm from case	$T_L$	230	$^\circ C$

### THERMAL RESISTANCE

Junction to Ambient in free air	$*R_{th(j-a)}$	300	$^\circ C/W$
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\*On infinite heat sink with 4mm lead length

### ELECTRICAL CHARACTERISTICS ( $T_j = 25^\circ C$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100\mu A$	30		V
Forward Voltage	$**V_F$	$I_F = 200mA$ <b>All Types</b> $I_F = 10mA$ <b>BAT42</b> $I_F = 50mA$ <b>BAT42</b> $I_F = 2mA$ <b>BAT43</b> $I_F = 15mA$ <b>BAT43</b>	0.26	1.0 0.40 0.65 0.33 0.45	V V V V V
Reverse Current	$**I_R$	$V_R = 25V$ $T_j = 25^\circ C$ $V_R = 25V$ $T_j = 100^\circ C$		0.5 100	$\mu A$ $\mu A$

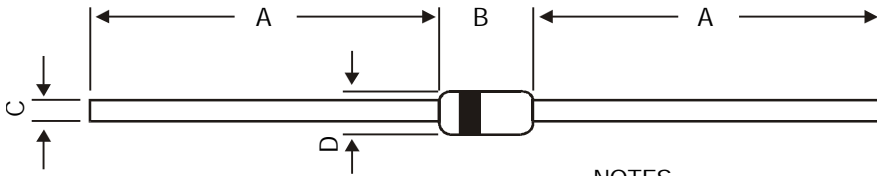
### DYNAMIC CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Diode Capacitance	$C_d$	$V_R = 1V$ , $f = 1MHz$		TYP 7.0	pF
Reverse Recovery Time When Switched From	$t_{rr}$	$I_F = 10mA$ to $I_R = 10mA$ , measured at $I_{RR} = 1mA$ , $R_L = 100\Omega$		5	ns
Detection Efficiency	$\pi_v$	$R_L = 15K\Omega$ , $C_L = 300pF$ , $f = 45MHz$ , $V_i = 2V$	80		%

Pulse test:  $t_p = 300ms$   $d \leq 2\%$

BAT42\_43Rev300105E

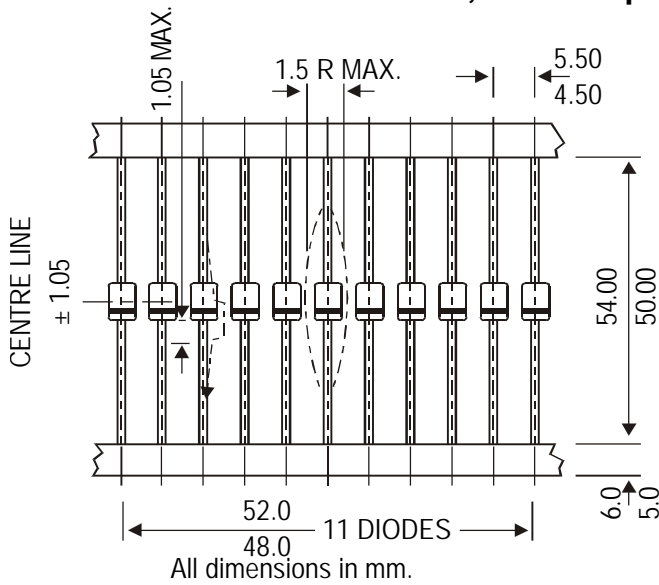
**DO-35 Glass Axial Package**



DIM	MIN	MAX
A	25.40	—
B	3.03	4.44
C	0.46	0.56
D	1.52	2.29

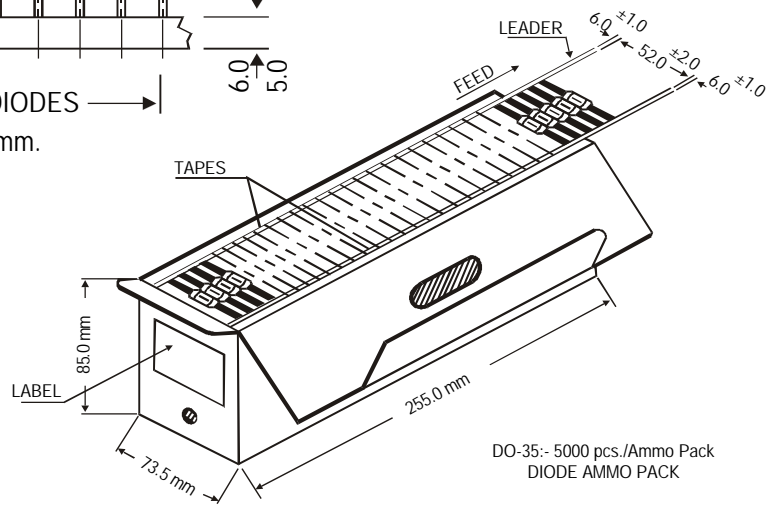
- NOTES  
 1. Cathode is marked by Band.  
 2. All dimensions are in mm.

**DO-35, 52mm Taping Specification**



**52 mm Taping Specification**

1. T & A indicates Axial Tape & Ammo packing (52 mm Tape Spacing).
2. 300 mm (min) leader tape on every spool.
3. No. of empty places allowed 0.25% without consecutive empty places.
4. Ends of leads shall preferably not protrude beyond the tapes.
5. Components shall be held sufficiently in the tape or tapes so that they can not come free in normal handling.



DO-35:- 5000 pcs./Ammo Pack  
 DIODE AMMO PACK

**On request also available in 26 mm Tape and Ammo Pack**

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
DO-35 T&A	5K/ammo box	0.88 kg/5K pcs	10" x 3.5" x 3.5"	5.0K	12.7" x 12.7" x 20"	125.0K	25 kgs

**Component Disposal Instructions**

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

**Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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