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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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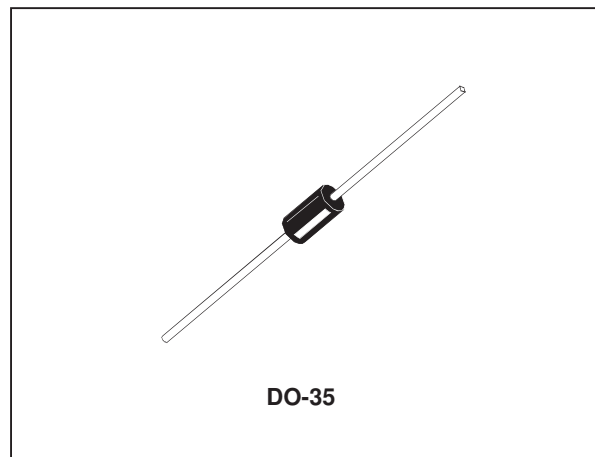


SMALL SIGNAL SCHOTTKY DIODES

DESCRIPTION

General purpose, metal to silicon diodes featuring very low turn-on voltage fast switching.

These devices have integrated protection against excessive voltage such as electrostatic dis-



ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage		30	V
I_F	Forward Continuous Current	$T_a = 25^\circ\text{C}$	200	mA
I_{FRM}	Repetitive Peak Forward Current	$t_p \leq 1\text{s}$ $\delta \leq 0.5$	500	mA
I_{FSM}	Surge non Repetitive Forward Current*	$t_p = 10\text{ms}$	4	A
P_{tot}	Power Dissipation*	$T_l = 65^\circ\text{C}$	200	mW
T_{stg} T_j	Storage and Junction Temperature Range		- 65 to +150 - 65 to +125	$^\circ\text{C}$ $^\circ\text{C}$
T_L	Maximum Temperature for Soldering during 10s at 4mm from Case		230	$^\circ\text{C}$

THERMAL RESISTANCE

Symbol	Test Conditions	Value	Unit
$R_{th(j-a)}$	Junction-ambient*	300	$^\circ\text{C}/\text{W}$

* On infinite heatsink with 4mm lead length

ELECTRICAL CHARACTERISTICS

STATIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
V_{BR}	$T_j = 25^\circ\text{C}$	$I_R = 100\mu\text{A}$	30			V
V_F^*	$T_j = 25^\circ\text{C}$	$I_F = 200\text{mA}$			1	V
	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$			0.4	
	$T_j = 25^\circ\text{C}$	$I_F = 50\text{mA}$			0.65	
	$T_j = 25^\circ\text{C}$	$I_F = 2\text{mA}$	0.26		0.33	
	$T_j = 25^\circ\text{C}$	$I_F = 15\text{mA}$			0.45	
I_R^*	$T_j = 25^\circ\text{C}$	$V_R = 25\text{V}$			0.5	μA
	$T_j = 100^\circ\text{C}$				100	

DYNAMIC CHARACTERISTICS

Symbol	Test Conditions		Min.	Typ.	Max.	Unit
C	$T_j = 25^\circ\text{C}$	$V_R = 1\text{V}$ $f = 1\text{MHz}$		7		pF
trr	$T_j = 25^\circ\text{C}$	$I_F = 10\text{mA}$ $I_R = 10\text{mA}$ $i_{rr} = 1\text{mA}$ $R_L = 100\Omega$			5	ns
h	$T_j = 25^\circ\text{C}$	$R_L = 15\text{K}\Omega$ $C_L = 300\text{pF}$ $f = 45\text{MHz}$ $V_i = 2\text{V}$	80			%

* Pulse test: $t_p \leq 300\mu\text{s}$ $\delta < 2\%$.

Fig. 1: Forward current versus forward voltage at different temperatures (typical values).

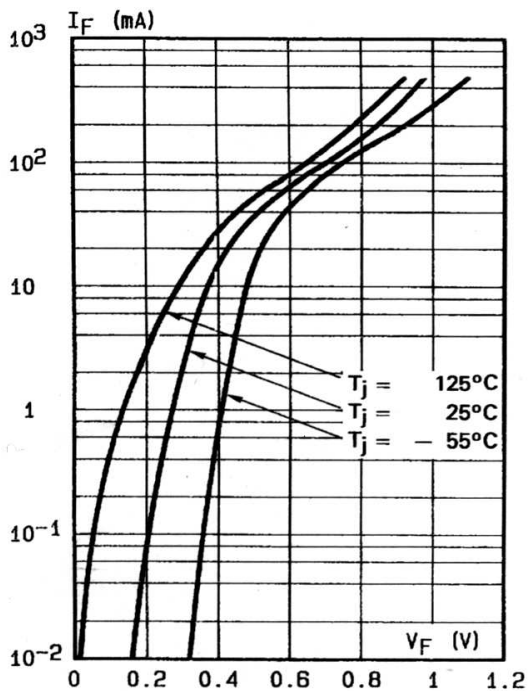


Fig. 2: Forward current versus forward voltage (typical values).

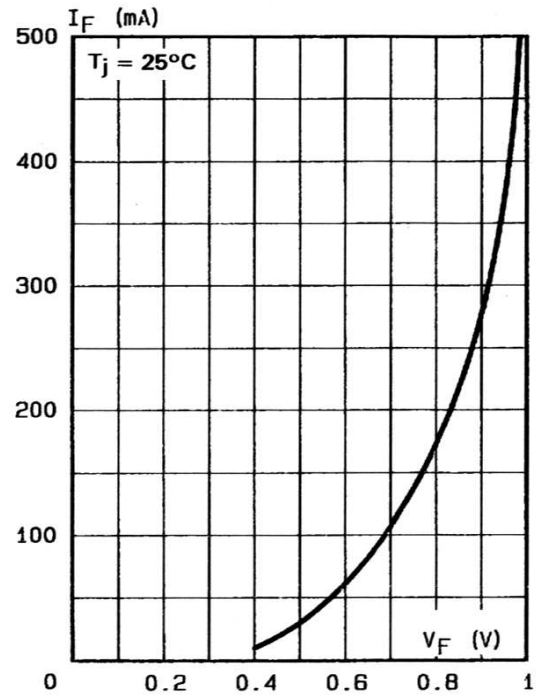


Fig. 3: Reverse current versus junction temperature (typical values).

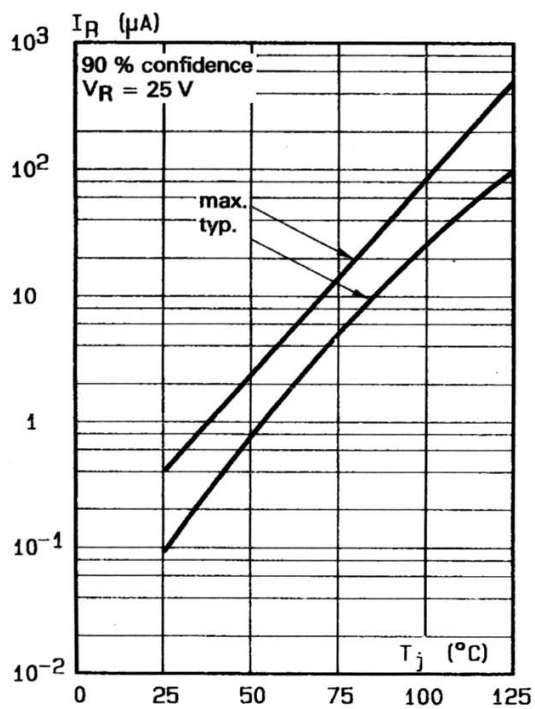


Fig. 4: Reverse current versus continuous reverse voltage.

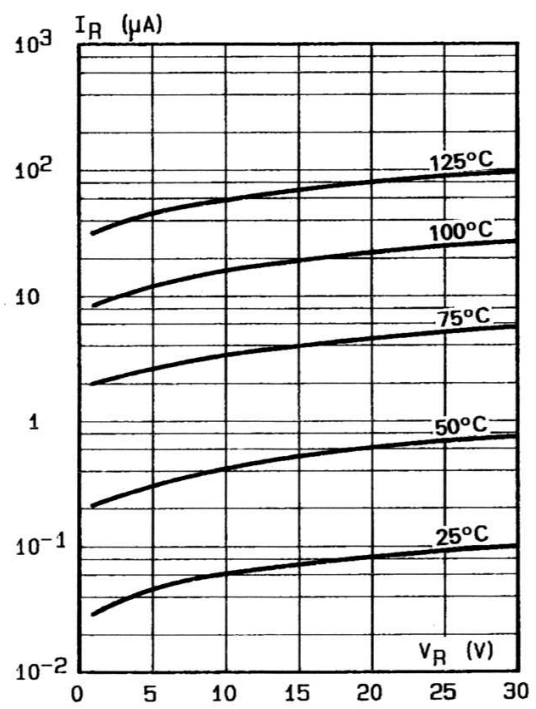
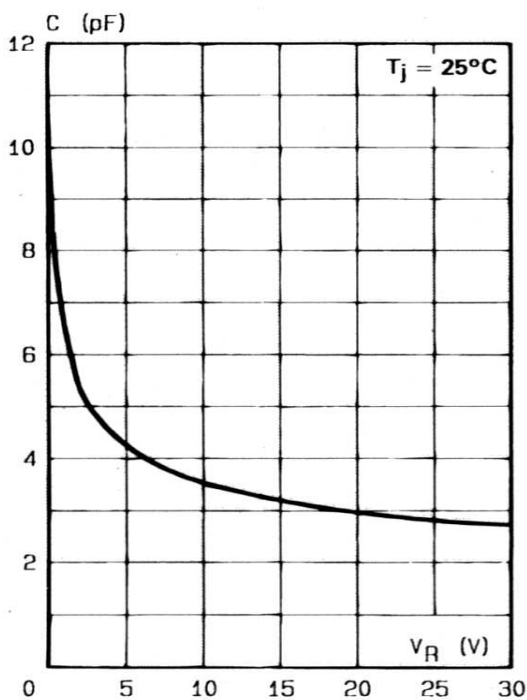
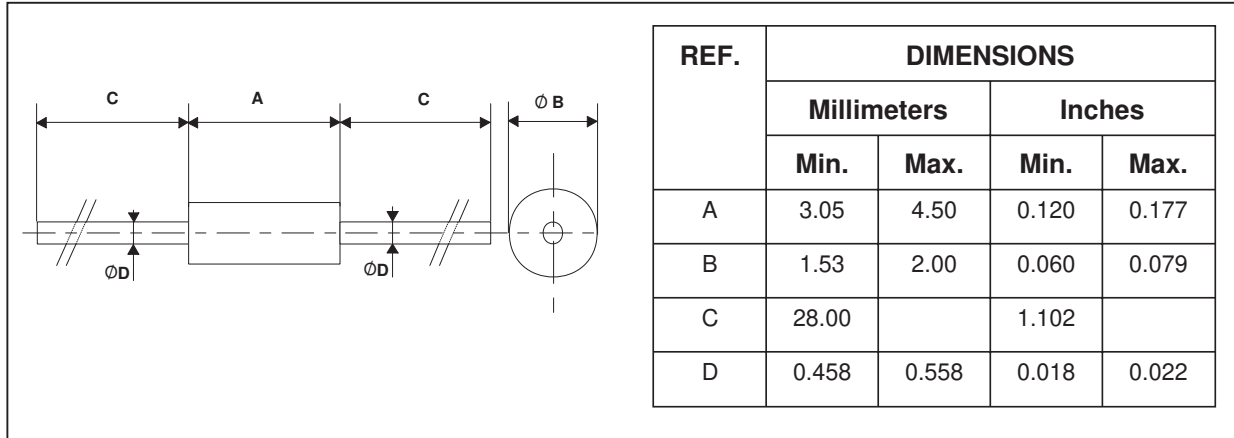


Fig. 5: Capacitance C versus reverse applied voltage V_R (typical values).



BAT42 / BAT43

PACKAGE MECHANICAL DATA DO-35



Cooling method: by convection and conduction
Marking: clear, ring at cathode end.
Weight: 0.15g

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