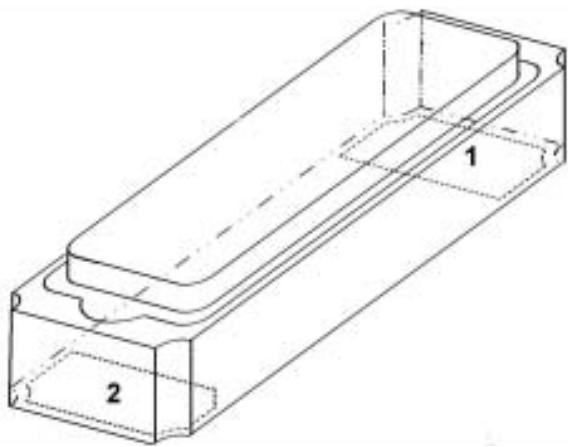


## HiRel Silicon Switching Diode

### Target datasheet

- *For high-speed switching applications*
- *Covers 1N6639 – 1N6643*



Type	Marking	Pin Configuration		Package
BAY6642	-	1 Anode	2 Cathode	HSL2-1808

### Maximum Ratings

at  $T_A=25^\circ\text{C}$ ; unless otherwise specified

Parameter	Symbol	Values	Unit
Working peak reverse voltage	$V_{RWM}$	75	V
Average output rectified current <sup>1)</sup>	$I_O$	300	mA
Forward surge current, $t \leq 10\text{ms}$	$I_{FSM}$	2.5	A
Junction temperature	$T_j$	175	$^\circ\text{C}$
Operating temperature range	$T_{op}$	-65...+175	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-65...+175	$^\circ\text{C}$

### Thermal Resistance

Junction to soldering point	$R_{thJS}$	Typ. 100	K/W
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1) For  $T_A > 25^\circ\text{C}$  the derating of  $I_O$  has to be considered. Nomograms will be available on request.

**Electrical Characteristics**

 at  $T_A=25^\circ\text{C}$ ; unless otherwise specified

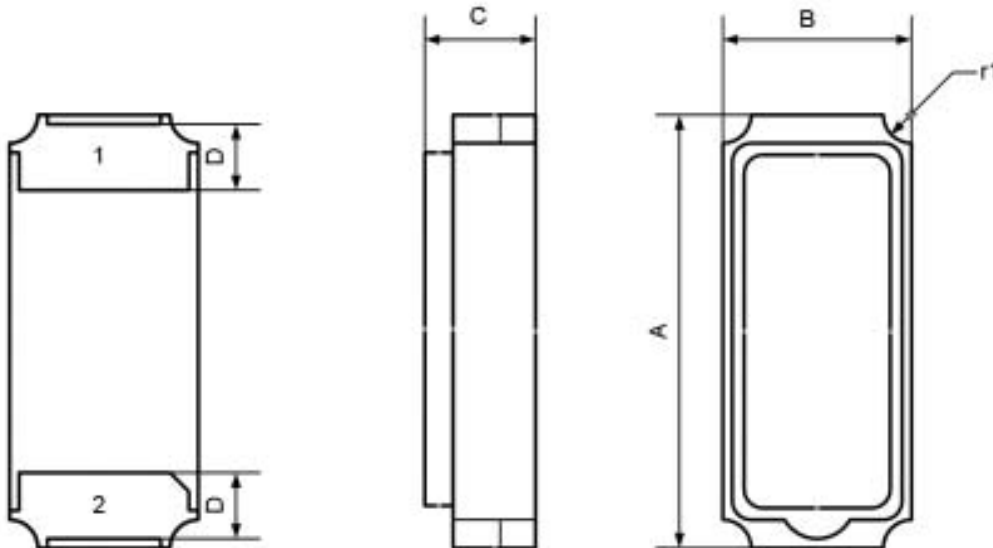
Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**DC Characteristics**

Breakdown voltage, $I_R = -10 \mu\text{A}$	$V_{(BR)}$	100	-	-	V
Reverse current $V_R = 75 \text{ V}$ $V_R = 75 \text{ V}, T_A = 150^\circ\text{C}$	$I_R$	-	-	0.5 100	$\mu\text{A}$ $\mu\text{A}$
D.C. Forward voltage $I_F = 1 \text{ mA}$ $I_F = 10 \text{ mA}$ $I_F = 100 \text{ mA}$ $I_F = 500 \text{ mA}$	$V_F$	- - - -	- - - -	0.62 0.80 0.92 1.20	V V V V

**AC Characteristics**

Total capacitance, $V_R = 0\text{V}, f = 1 \text{ MHz}$	$C_T$	-	-	2.5	pF
Reverse recovery time $I_F = 10 \text{ mA}, I_R = 10 \text{ mA}$ measured at $I_R = 2 \text{ mA}, R_L = 100 \Omega$	$t_{rr}$	-	4	-	ns
Forward recovery time, $I_F = 200 \text{ mA}$	$t_{fr}$	-	-	10	ns

**HSL2 Package:**


Symbol	A	B	C	D	r1
typical width [mm]	4.6	2.0	1.3	0.7	0.3

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