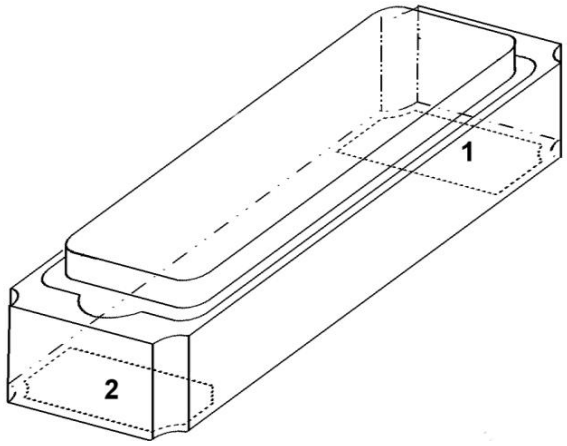
HiRel Silicon Switching Diode

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°C; unless otherwise specified

Parameter	Symbol	Values	Unit
Working peak reverse voltage	V_{RWM}	75	V
Average output rectified current [1)]	I_O	300	mA
Forward surge current, t ≤ 10ms	I_{FSM}	2.5	A
Junction temperature	T_j	175	°C
Operating temperature range	T_{op}	-65...+175	°C
Storage temperature range	T_{stg}	-65...+175	°C
Thermal Resistance			
Junction to soldering point	$R_{th\ JS}$	Typ. 100	K/W

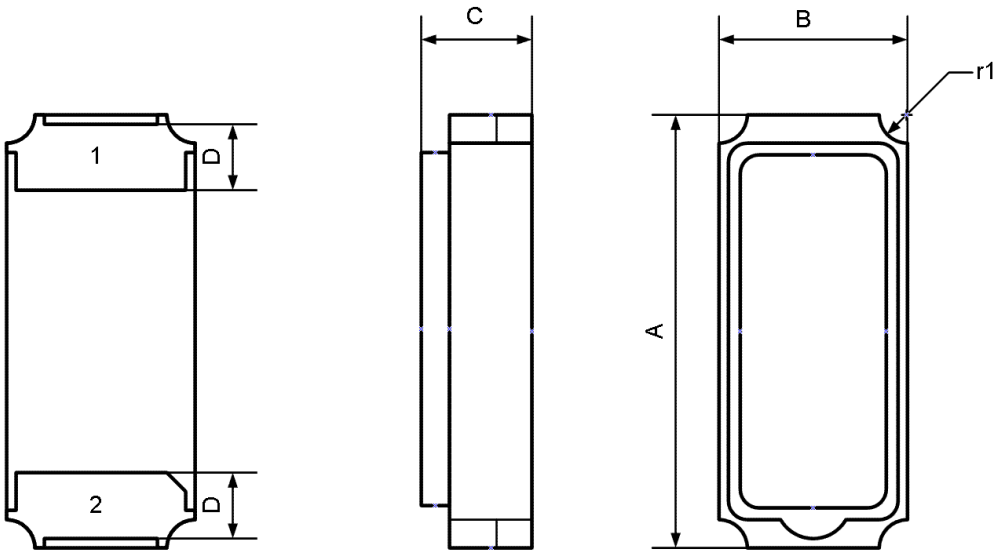
1) For T_S ≤ 110°C. For T_S > 110 °C derating is required.

Electrical Characteristics

at T_A=25°C; unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage, I_R = -10 µA	$V_{(BR)}$	100	-	-	V
Reverse current	I_R	-	-		
V_R = 75 V				0.5	µA
V_R = 75 V, T_A = 150°C				100	µA
D.C. Forward voltage	V_F				
I_F = 1 mA		-	-	0.62	V
I_F = 10 mA		-	-	0.80	V
I_F = 100 mA		-	-	0.92	V
I_F = 500 mA		-	-	1.20	V
AC Characteristics					
Total capacitance, VR = 0V, f = 1 MHz	C_T	-	-	2.5	pF
Reverse recovery time I_F = 10 mA, I_R = 10 mA measured at I_R = 2 mA, R_L = 100 Ω	t_{rr}	-	4	-	ns
Forward recovery time, I_F = 200 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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