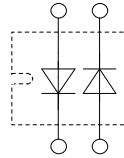


Sonic Fast Recovery Diode

High Performance Fast Recovery Diode
Low Loss and Soft Recovery
Anti-parallel legs

Part number

DH2x60-18A



Backside: Isolated

E72873

Features / Advantages:

- Planar passivated chips
- Very low leakage current
- Very short recovery time
- Improved thermal behaviour
- Very low I_{rm} -values
- Very soft recovery behaviour
- Avalanche voltage rated for reliable operation
- Soft reverse recovery for low EMI/RFI
- Low I_{rm} reduces:
 - Power dissipation within the diode
 - Turn-on loss in the commutating switch

Applications:

- Antiparallel diode for high frequency switching devices
- Antisaturation diode
- Snubber diode
- Free wheeling diode
- Rectifiers in switch mode power supplies (SMPS)
- Uninterruptible power supplies (UPS)

Package:

- Housing: SOT-227B (minibloc)
- Industry standard outline
- Cu base plate internal DCB isolated
- Isolation Voltage 3000 V
- Epoxy meets UL 94V-0
- RoHS compliant

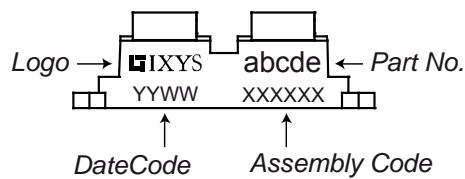
Ratings

Symbol	Definition	Conditions	min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage	$T_{VJ} = 25^{\circ}\text{C}$			1800	V
I_R	reverse current	$V_R = 1800\text{V}$ $T_{VJ} = 25^{\circ}\text{C}$			200	μA
		$V_R = 1800\text{V}$ $T_{VJ} = 125^{\circ}\text{C}$			2	mA
V_F	forward voltage	$I_F = 60\text{A}$ $T_{VJ} = 25^{\circ}\text{C}$			2.63	V
		$I_F = 120\text{A}$			3.23	V
		$I_F = 60\text{A}$ $T_{VJ} = 125^{\circ}\text{C}$			2.62	V
		$I_F = 120\text{A}$			3.32	V
I_{FAV}	average forward current	rectangular $d = 0.5$ $T_C = 30^{\circ}\text{C}$			60	A
V_{F0}	threshold voltage	} for power loss calculation only $T_{VJ} = 150^{\circ}\text{C}$			1.93	V
r_F	slope resistance				11.4	$\text{m}\Omega$
R_{thJC}	thermal resistance junction to case				0.60	K/W
T_{VJ}	virtual junction temperature		-40		150	$^{\circ}\text{C}$
P_{tot}	total power dissipation	$T_C = 25^{\circ}\text{C}$			200	W
I_{FSM}	max. forward surge current	$t = 10\text{ ms (50 Hz), sine}$ $T_{VJ} = 45^{\circ}\text{C}$			650	A
I_{RM}	max. reverse recovery current	$T_{VJ} = 25^{\circ}\text{C}$		tbd		A
		$I_F = 100\text{ A}; V_R = 1200\text{ V}$ $T_{VJ} = 125^{\circ}\text{C}$		55		A
t_{rr}	reverse recovery time	$-di_F/dt = 600\text{ A}/\mu\text{s}$ $T_{VJ} = 25^{\circ}\text{C}$		tbd		ns
		$T_{VJ} = 125^{\circ}\text{C}$		350		ns
C_J	junction capacitance	$V_R = 900\text{ V}; f = 1\text{ MHz}$ $T_{VJ} = 25^{\circ}\text{C}$		32		pF

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
I_{RMS}	RMS current	per pin ¹⁾			100	A
R_{thCH}	thermal resistance case to heatsink			0.10		K/W
T_{stg}	storage temperature		-40		150	°C
Weight				30		g
M_D	mounting torque		1.1		1.5	Nm
M_T	terminal torque		1.1		1.5	Nm
V_{ISOL}	isolation voltage	t = 1 second	3000			V
		t = 1 minute	2500			V
d_s	creepage distance on surface		8			mm
d_A	striking distance through air		4			mm

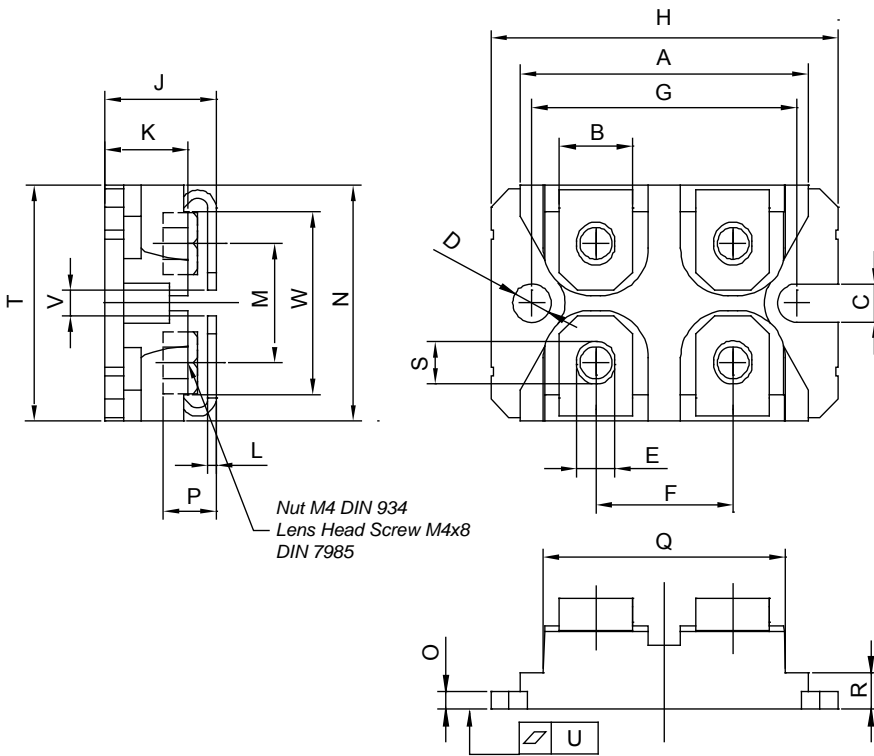
¹⁾ I_{RMS} is typically limited by: 1. pin-to-chip resistance; or by 2. current capability of the chip.
 In case of 1, a common cathode/anode configuration and a non-isolated backside, the whole current capability can be used by connecting the backside.

Product Marking



Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DH2x60-18A	DH2x60-18A	Tube	10	507191

Similar Part	Package	Voltage Class
DH2x61-18A	SOT-227B (minibloc)	1800

Outlines SOT-227B (minibloc)


SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	31.50	31.88	1.240	1.255
B	7.80	8.20	.307	.323
C	4.09	4.29	.161	.169
D	4.09	4.29	.161	.169
E	4.09	4.29	.161	.169
F	14.91	15.11	.587	.595
G	30.12	30.30	1.186	1.193
H	37.80	38.23	1.489	1.505
J	11.68	12.22	.460	.481
K	8.92	9.60	.351	.378
L	0.76	0.84	.030	.033
M	12.60	12.85	.496	.506
N	25.15	25.42	.990	1.001
O	1.98	2.13	.078	.084
P	4.95	5.97	.195	.235
Q	26.54	26.90	1.045	1.059
R	3.94	4.42	.155	.174
S	4.72	4.85	.186	.191
T	24.59	25.07	.968	.987
U	-.05	.10	-.002	.004
V	3.30	4.57	.130	.180
W	19.81	21.08	.780	.830