

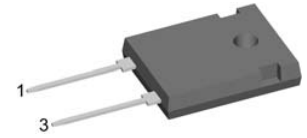
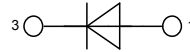
Standard Rectifier

Single Diode

$$\begin{aligned} V_{RRM} &= 1800 \text{ V} \\ I_{FAV} &= 30 \text{ A} \\ V_F &= 1.25 \text{ V} \end{aligned}$$

Part number

DMA 30 E 1800 HA



Backside: anode

Features / Advantages:

- Planar passivated chips
- Very low leakage current
- Very low forward voltage drop
- Improved thermal behaviour

Applications:

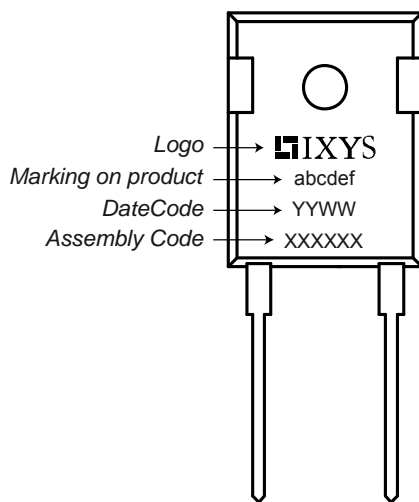
- Diode for main rectification
- For single and three phase bridge configurations

Package:

- Housing: TO-247
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

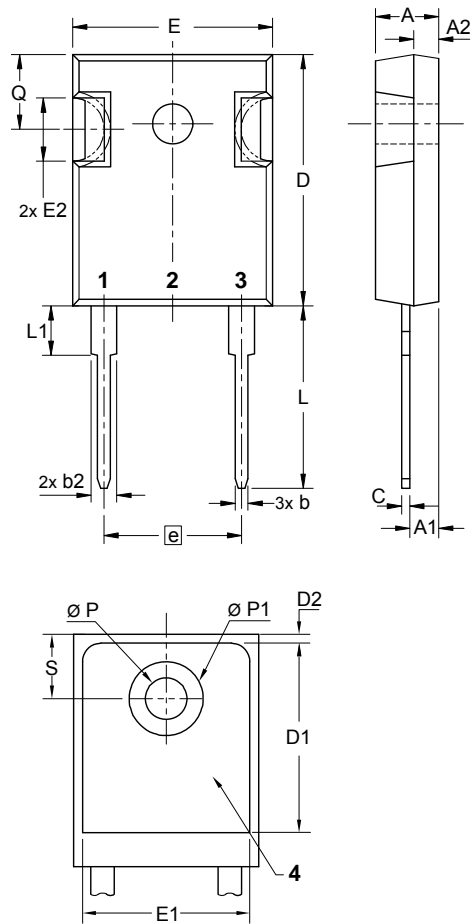
Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
V_{RRM}	max. repetitive reverse voltage				1800	V
I_R	reverse current	$V_R = 1800 \text{ V}$			40	μA
		$V_R = 1800 \text{ V}$			1.5	mA
V_F	forward voltage	$I_F = 30 \text{ A}$			1.27	V
		$I_F = 60 \text{ A}$			1.50	V
		$I_F = 30 \text{ A}$			1.25	V
		$I_F = 60 \text{ A}$			1.57	V
I_{FAV}	average forward current	rectangular d = 0.5			30	A
V_{FO}	threshold voltage	} for power loss calculation only			0.88	V
r_F	slope resistance				12.1	m Ω
R_{thJC}	thermal resistance junction to case				0.70	K/W
T_{VJ}	virtual junction temperature			-55	175	$^{\circ}\text{C}$
P_{tot}	total power dissipation				210	W
I_{FSM}	max. forward surge current	t = 10 ms; (50 Hz), sine			370	A
		t = 8,3 ms; (60 Hz), sine			400	A
		t = 10 ms; (50 Hz), sine			315	A
		t = 8,3 ms; (60 Hz), sine			340	A
I^2t	value for fusing	t = 10 ms; (50 Hz), sine			685	A ² s
		t = 8,3 ms; (60 Hz), sine			665	A ² s
		t = 10 ms; (50 Hz), sine			495	A ² s
		t = 8,3 ms; (60 Hz), sine			480	A ² s
C_J	junction capacitance	$V_R = 400 \text{ V}; f = 1 \text{ MHz}$		10		pF

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
I_{RMS}	RMS current	per pin			70	A
R_{thCH}	thermal resistance case to heatsink			0.25		K/W
T_{stg}	storage temperature		-55		150	°C
Weight				6		g
M_D	mounting torque		0.8		1.2	Nm
F_C	mounting force with clip		20		120	N

Product Marking

Part number

D = Diode
 M = Standard Rectifier
 A = (up to 1800 V)
 30 = Current Rating [A]
 E = Single Diode
 1800 = Reverse Voltage [V]
 HA = TO-247AD (2)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DMA 30 E 1800 HA	DMA30E1800HA	Tube	30	455156

Outlines TO-247


Sym.	Inches		Millimeter	
	min.	max.	min.	max.
A	0.185	0.209	4.70	5.30
A1	0.087	0.102	2.21	2.59
A2	0.059	0.098	1.50	2.49
D	0.819	0.845	20.79	21.45
E	0.610	0.640	15.48	16.24
E2	0.170	0.216	4.31	5.48
e	0.430 BSC		10.92 BSC	
L	0.780	0.800	19.80	20.30
L1	-	0.177	-	4.49
Ø P	0.140	0.144	3.55	3.65
Q	0.212	0.244	5.38	6.19
S	0.242 BSC		6.14 BSC	
b	0.039	0.055	0.99	1.40
b2	0.065	0.094	1.65	2.39
b4	0.102	0.135	2.59	3.43
c	0.015	0.035	0.38	0.89
D1	0.515	-	13.07	-
D2	0.020	0.053	0.51	1.35
E1	0.530	-	13.45	-
Ø P1	-	0.29	-	7.39