

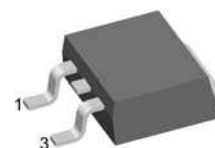
High Efficiency Standard Rectifier

Single Diode

$$\begin{aligned} V_{RRM} &= 800 \text{ V} \\ I_{FAV} &= 40 \text{ A} \\ V_F &= 1.15 \text{ V} \end{aligned}$$

Part number

DLA 40 IM 800 PC



Backside: cathode

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-263 (D2Pak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

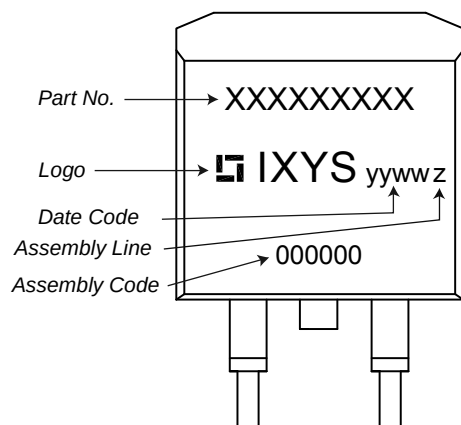
Ratings

Symbol	Definition	Conditions		min.	typ.	max.	Unit
V_{RRM}	max. repetitive reverse voltage		$T_{VJ} = 25^{\circ}\text{C}$			800	V
I_R	reverse current	$V_R = 800 \text{ V}$	$T_{VJ} = 25^{\circ}\text{C}$			10	μA
		$V_R = 800 \text{ V}$	$T_{VJ} = 150^{\circ}\text{C}$			0.05	mA
V_F	forward voltage	$I_F = 40 \text{ A}$	$T_{VJ} = 25^{\circ}\text{C}$			1.24	V
		$I_F = 80 \text{ A}$				1.47	V
		$I_F = 40 \text{ A}$	$T_{VJ} = 150^{\circ}\text{C}$			1.15	V
		$I_F = 80 \text{ A}$				1.47	V
I_{FAV}	average forward current	rectangular $d = 0.5$	$T_C = 130^{\circ}\text{C}$			40	A
V_{F0}	threshold voltage	} for power loss calculation only		$T_{VJ} = 175^{\circ}\text{C}$		0.81	V
r_F	slope resistance					8	m Ω
R_{thJC}	thermal resistance junction to case					0.80	K/W
T_{VJ}	virtual junction temperature			-55		175	$^{\circ}\text{C}$
P_{tot}	total power dissipation		$T_C = 25^{\circ}\text{C}$			185	W
I_{FSM}	max. forward surge current	$t = 10 \text{ ms}; (50 \text{ Hz}), \text{ sine}$	$T_{VJ} = 45^{\circ}\text{C}$			300	A
		$t = 8,3 \text{ ms}; (60 \text{ Hz}), \text{ sine}$	$V_R = 0 \text{ V}$			325	A
		$t = 10 \text{ ms}; (50 \text{ Hz}), \text{ sine}$	$T_{VJ} = 150^{\circ}\text{C}$			255	A
		$t = 8,3 \text{ ms}; (60 \text{ Hz}), \text{ sine}$	$V_R = 0 \text{ V}$			275	A
I^2t	value for fusing	$t = 10 \text{ ms}; (50 \text{ Hz}), \text{ sine}$	$T_{VJ} = 45^{\circ}\text{C}$			450	A ² s
		$t = 8,3 \text{ ms}; (60 \text{ Hz}), \text{ sine}$	$V_R = 0 \text{ V}$			440	A ² s
		$t = 10 \text{ ms}; (50 \text{ Hz}), \text{ sine}$	$T_{VJ} = 150^{\circ}\text{C}$			325	A ² s
		$t = 8,3 \text{ ms}; (60 \text{ Hz}), \text{ sine}$	$V_R = 0 \text{ V}$			315	A ² s
C_J	junction capacitance	$V_R = 400 \text{ V}; f = 1 \text{ MHz}$	$T_{VJ} = 25^{\circ}\text{C}$		10		pF

Symbol	Definition	Conditions	Ratings			
			min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal ¹⁾			35	A
R_{thCH}	thermal resistance case to heatsink			0.25		K/W
T_{stg}	storage temperature		-55		150	°C
Weight				2		g
F_c	mounting force with clip		20		60	N

¹⁾ I_{RMS} is typically limited by the pin-to-chip resistance (1); or by the current capability of the chip (2).
In case of (1) and a product with multiple pins for one chip-potential,
the current capability can be increased by connecting the pins as one contact

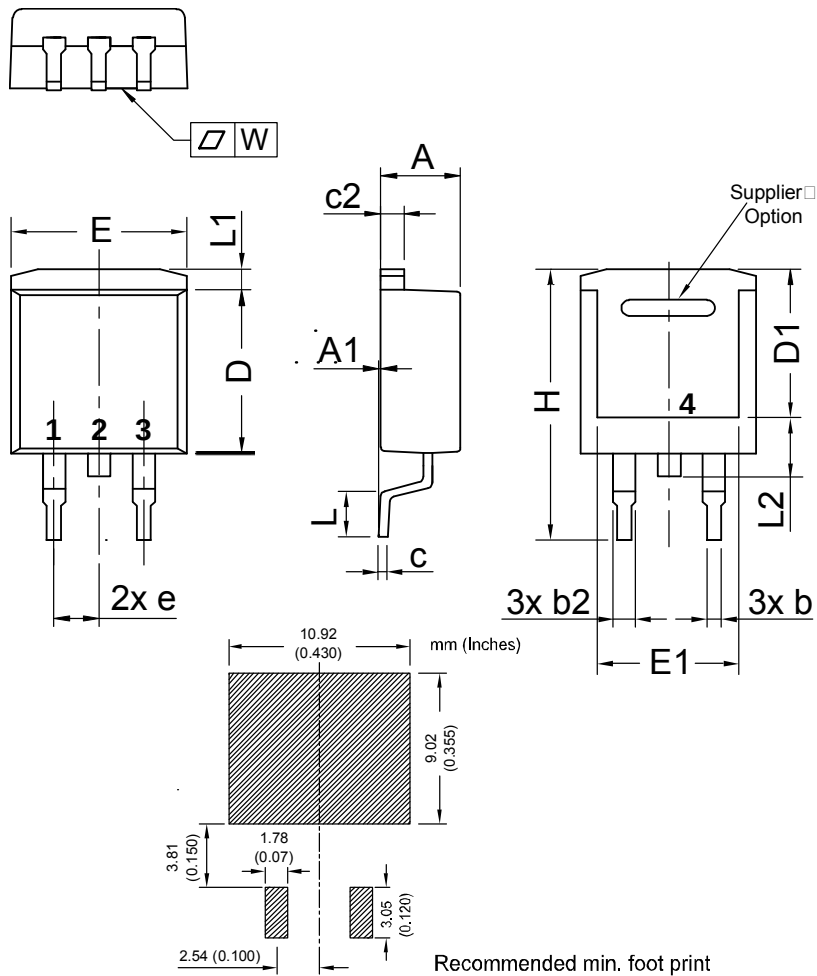
Product Marking



Part number

D = Diode
L = High Efficiency Standard Rectifier
A = (up to 1200 V)
40 = Current Rating [A]
IM = Single Diode
800 = Reverse Voltage [V]
PC = TO-263AB (D2Pak) (2)

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Code Key
Standard	DLA 40 IM 800 PC	DLA40IM800PC	Tape & Reel	800	509995

Outlines TO-263 (D2Pak)


Dim.	Millimeter		Inches	
	min	max	min	max
A	4.06	4.83	0.160	0.190
A1	typ. 0.10		typ. 0.004	
b	0.51	0.99	0.020	0.039
b2	1.14	1.40	0.045	0.055
c	0.40	0.74	0.016	0.029
c2	1.14	1.40	0.045	0.029
D	8.38	9.40	0.330	0.370
D1	8.00	8.89	0.315	0.350
E	9.65	10.41	0.380	0.410
E1	6.22	8.20	0.245	0.323
e	2,54 BSC		0,100 BSC	
H	14.61	15.88	0.575	0.625
L	1.78	2.79	0.070	0.110
L1	1.02	1.68	0.040	0.066
L2	1.02	1.52	0.040	0.060
W	typ. 0.02	0.040	typ. 0.0008	0.0016

All dimensions conform with and/or are within JEDEC standard.