

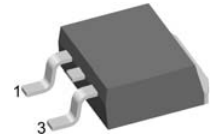
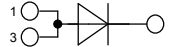
# High Efficiency Standard Rectifier

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:

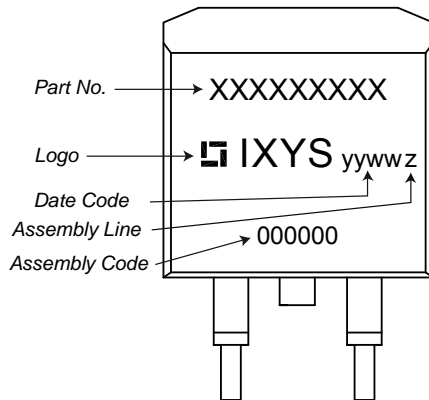
- Housing: TO-263 (D2Pak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

Symbol	Definition	Conditions	Ratings			Unit
			min.	typ.	max.	
$V_{RRM}$	max. repetitive reverse voltage				800	V
$I_R$	reverse current	$V_R = 800 \text{ V}$			10	$\mu\text{A}$
		$V_R = 800 \text{ V}$			0.05	mA
$V_F$	forward voltage	$I_F = 40 \text{ A}$			1.24	V
		$I_F = 80 \text{ A}$			1.47	V
		$I_F = 40 \text{ A}$			1.15	V
		$I_F = 80 \text{ A}$			1.47	V
$I_{FAV}$	average forward current	rectangular d = 0.5			40	A
$V_{FO}$	threshold voltage	} for power loss calculation only			0.81	V
$r_F$	slope resistance				8	m $\Omega$
$R_{thJC}$	thermal resistance junction to case				0.80	K/W
$T_{VJ}$	virtual junction temperature		-55		175	$^{\circ}\text{C}$
$P_{tot}$	total power dissipation				185	W
$I_{FSM}$	max. forward surge current	t = 10 ms; (50 Hz), sine			300	A
		t = 8,3 ms; (60 Hz), sine			325	A
		t = 10 ms; (50 Hz), sine			255	A
		t = 8,3 ms; (60 Hz), sine			275	A
$I^2t$	value for fusing	t = 10 ms; (50 Hz), sine			450	A <sup>2</sup> s
		t = 8,3 ms; (60 Hz), sine			440	A <sup>2</sup> s
		t = 10 ms; (50 Hz), sine			325	A <sup>2</sup> s
		t = 8,3 ms; (60 Hz), sine			315	A <sup>2</sup> 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 terminal <sup>1)</sup>			35	A
$R_{thCH}$	thermal resistance case to heatsink			0.25		K/W
$T_{stg}$	storage temperature		-55		150	°C
<b>Weight</b>				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

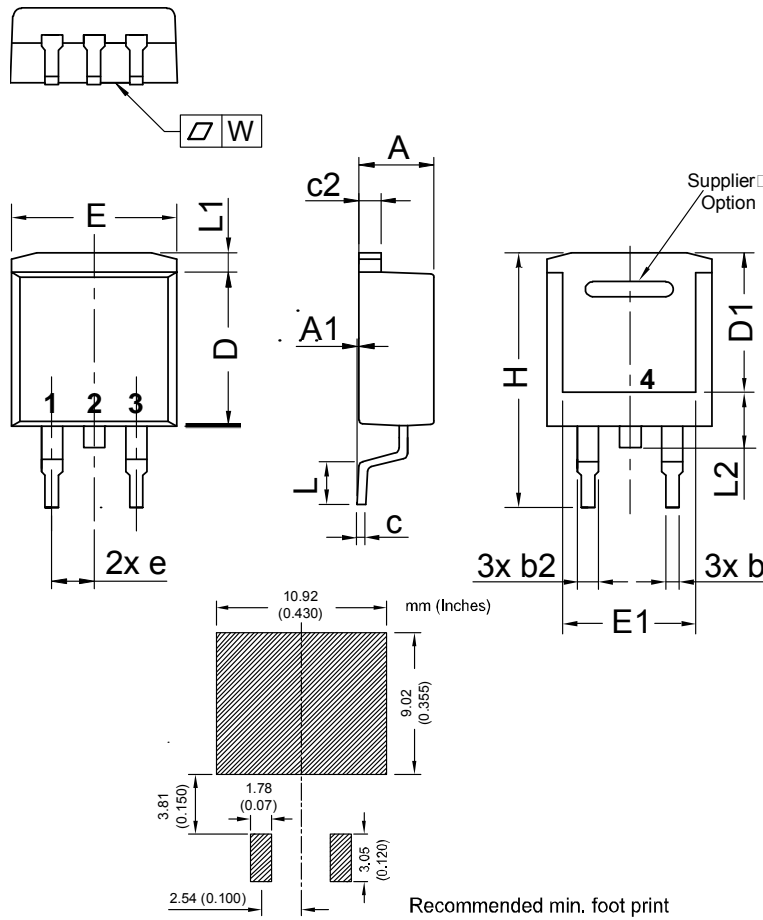


### Part number

- 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.