advanced

High Efficiency Standard Rectifier

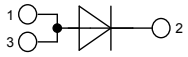
Single Diode

V_{RRM} = 800 V
I_{FAV} = 10 A
V_F = 1.01 V

Part number

DLA 10 IM 800 UC

Marking on Product: MARLUI



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-252 (DPak)
- Industry standard outline
- Epoxy meets UL 94V-0
- RoHS compliant

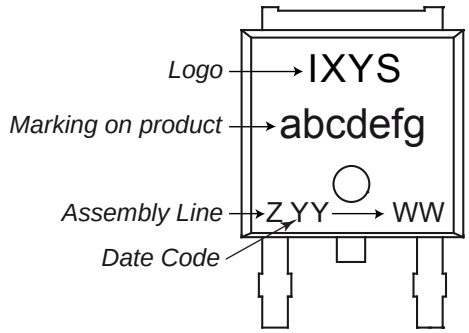
				Ratings			
Symbol	**Definition**	**Conditions**		**min.**	**typ.**	**max.**	**Unit**
V_{RRM}	*max. repetitive reverse voltage*		T_{VJ} = 25°C			800	V
I_R	*reverse current*	V_R = 800 V	T_{VJ} = 25°C			10	µA
		V_R = 800 V	T_{VJ} = 150 °C			0.1	mA
V_F	*forward voltage*	I_F = 10 A	T_{VJ} = 25°C			1.10	V
		I_F = 20 A				1.20	V
		I_F = 10 A	T_{VJ} = 150 °C			1.01	V
		I_F = 20 A				1.10	V
I_{FAV}	*average forward current*	rectangular d = 0.5	T_C = 135 °C			10	A
V_{F0}	*threshold voltage* } *for power loss calculation only*		T_{VJ} = 175 °C			0.80	V
r_F	*slope resistance* }					22	mΩ
R_{thJC}	*thermal resistance junction to case*					3.15	K/W
T_{VJ}	*virtual junction temperature*			-55		175	°C
P_{tot}	*total power dissipation*		T_C = 25°C			45	W
I_{FSM}	*max. forward surge current*	t = 10 ms; (50 Hz), sine	T_{VJ} = 45 °C			80	A
		t = 8,3 ms; (60 Hz), sine	V_R = 0 V			86	A
		t = 10 ms; (50 Hz), sine	T_{VJ} = 150 °C			68	A
		t = 8,3 ms; (60 Hz), sine	V_R = 0 V			73	A
I^2t	*value for fusing*	t = 10 ms; (50 Hz), sine	T_{VJ} = 45 °C			32	A²s
		t = 8,3 ms; (60 Hz), sine	V_R = 0 V			31	A²s
		t = 10 ms; (50 Hz), sine	T_{VJ} = 150 °C			23	A²s
		t = 8,3 ms; (60 Hz), sine	V_R = 0 V			22	A²s
C_J	*junction capacitance*	V_R = 400 V; f = 1 MHz	T_{VJ} = 25°C		3		pF

advanced

Symbol	Definition	Conditions	Ratings min.	typ.	max.	Unit
I_{RMS}	*RMS current*	per terminal [1]			20	A
R_{thCH}	*thermal resistance case to heatsink*			0.50		K/W
T_{stg}	*storage temperature*		-55		150	°C
Weight				0.3		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



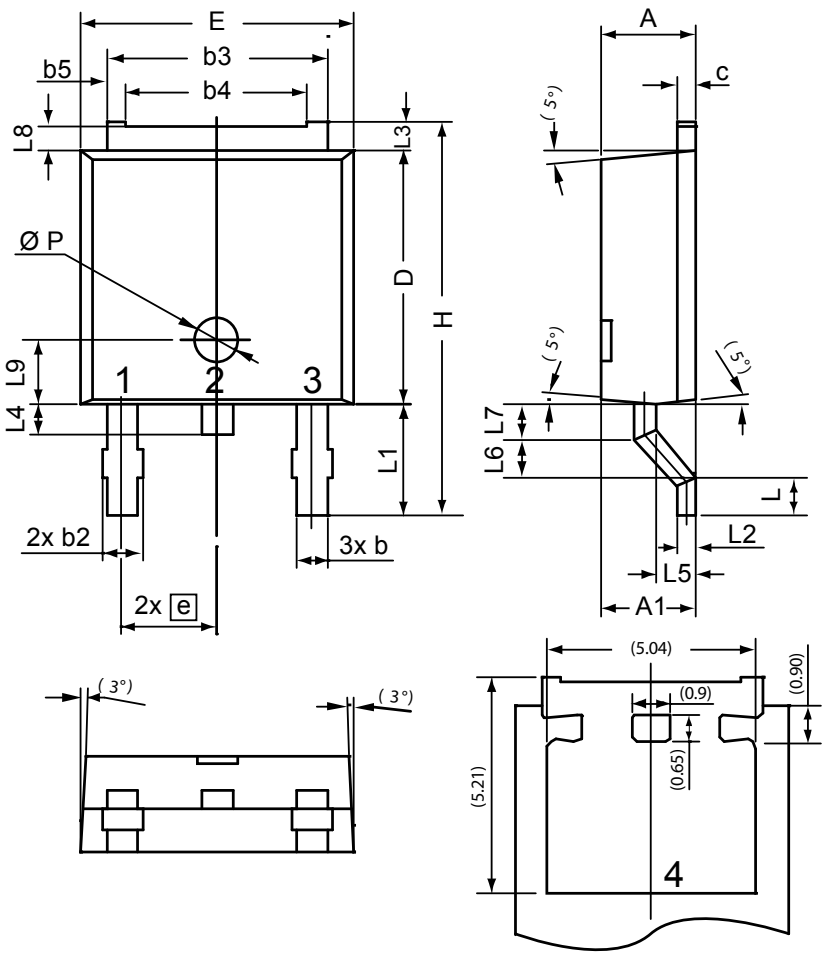
a) M = Semiconductor
b) A = Current Rating
c) R = Voltage Class
d) L = Technology
e) U = Package
f) I = Configuration

Part number

D = Diode
L = High Efficiency Standard Rectifier
A = (up to 1200 V)
10 = Current Rating [A]
IM = Single Diode
800 = Reverse Voltage [V]
UC = TO-252AA (DPak)

Ordering	Ordering Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	DLA 10 IM 800 UC	MARLUI	Tape & Reel	2500	503668

Outlines TO-252 (DPak)



Dim.	Millimeters		Inches	
	min	max	min	max
A	2.20	2.40	0.087	0.094
A1	2.10	2.50	0.083	0.098
b	0.66	0.86	0.026	0.034
b2	-	0.96	-	0.038
b3	5.04	5.64	0.198	0.222
b4	4.34 BSC		0.171 BSC	
b5	0.50 BSC		0.020 BSC	
c	0.40	0.60	0.016	0.024
D	5.90	6.30	0.232	0.248
E	6.40	6.80	0.252	0.268
e	2.10	2.50	0.083	0.098
H	9.20	9.80	0.362	0.386
L	0.55	1.02	0.022	0.040
L1	2.50	2.90	0.098	0.114
L2	0.40	0.60	0.016	0.024
L3	0.50	0.90	0.020	0.035
L4	0.60	1.00	0.024	0.039
L5	0.82	1.22	0.032	0.048
L6	0.79	0.99	0.031	0.039
L7	0.81	1.01	0.032	0.040
L8	0.40	0.80	0.016	0.031
L9	1.50 BSC		0.059 BSC	
Ø P	1.00 BSC		0.039 BSC	