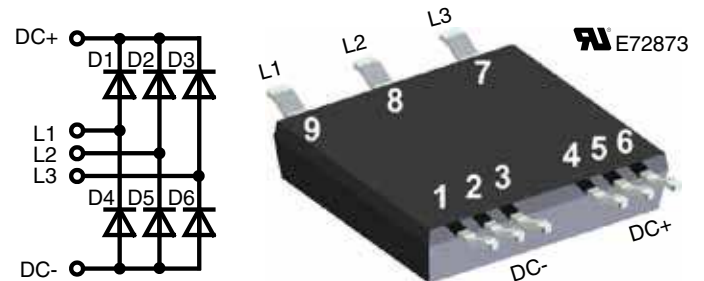


Three Phase Rectifier Bridge ISOPLUS™ Surface Mount Power Device

$$V_{RRM} = 1800 \text{ V}$$

$$I_{d(AV)M} = 99 \text{ A}$$

$$I_{FSM} = 320 \text{ A}$$



Rectifier Bridge

Symbol	Conditions	Maximum Ratings	
V_{RRM}		1800	V
I_{dAV}	$T_C = 80^\circ\text{C}$, sine 180° (per diode)	38	A
I_{dAVM}	$T_C = 80^\circ\text{C}$, rect. 120°	99	A
I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz); $V_R = 0 \text{ V}$	320	A
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (60 Hz); $V_R = 0 \text{ V}$	280	A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz); $V_R = 0 \text{ V}$	510	A ² s
	$T_{VJ} = 150^\circ\text{C}$; $t = 10 \text{ ms}$ (60 Hz); $V_R = 0 \text{ V}$	390	A ² s
P_{tot}	$T_{VJ} = 25^\circ\text{C}$ (per diode)	110	W

Features

- **Rectifier diode**
 - 1800 V blocking voltage
- **Package**
 - isolated back surface
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - low inductive current path
 - high reliability

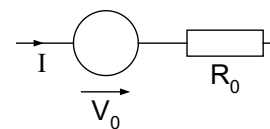
Applications

- 3phase input rectifier for drive applications, SMPS or UPS

Symbol	Conditions	Characteristic Values		
		(T _{VJ} = 25°C, unless otherwise specified)		
		typ.	max.	
V_F	$I_F = 30 \text{ A}$		1.3	V
				V
I_R	$V_R = V_{RRM}$		0.1	mA
	$V_R = V_{RRM}$			mA
R_{thJC}	per diode		1.1	K/W
R_{thCH}	with heatsink compound	1.5	1.85	K/W

Data according to IEC 60747 and per single diode unless otherwise specified.

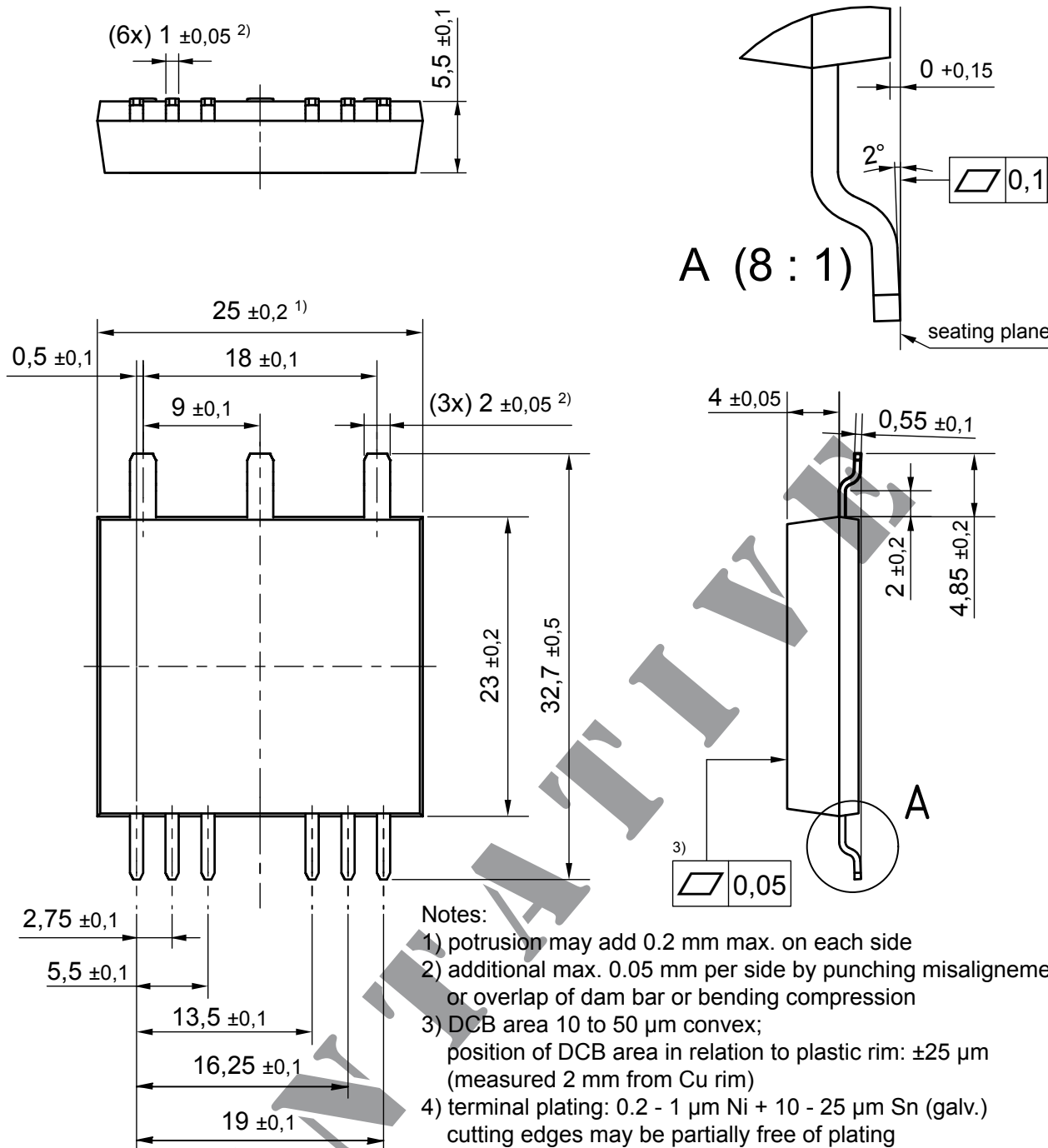
Component					
Symbol	Conditions	Maximum Ratings			
T_{vj}		-55...+150	°C		
T_{stg}		-55...+125	°C		
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	2500	V~		
F_c	mounting force	40 ... 130	N		
Symbol	Conditions	Characteristic Values			
		min.	typ.	max.	
C_p	coupling capacity between shorted pins and backside metal		90		pF
d_s, d_A	pin - pin	1.7			mm
d_s, d_A	pin - backside metal	4.5			mm
CTI		400			
Weight			8		g

Equivalent Circuits for Simulation
Conduction


Diode (typ. at $T_j = 125^\circ\text{C}$)
 $V_0 = 0.9 \text{ V}; R_0 = 8.5 \text{ m}\Omega$

Ordering	Part Name	Marking on Product	Delivering Mode	Base Qty	Ordering Code
Standard	DMA90U1800LB	DMA90U1800LB	T&R	200	tbd

Dimensions in mm (1 mm = 0.0394")



Product Status Definitions and Disclaimers

Datasheet Identification	Product Status	Definition
Tentative	Tentative	Datasheet represents a tentative draft based on experience and related products.
Advanced Technical Information	Under development/engineering	Datasheet contains the design specifications for product development.
Preliminary	Pilot Production	Datasheet contains preliminary data and supplementary data will be published at a later date.
Without Identification	Serial Production	Datasheet contains final specifications.