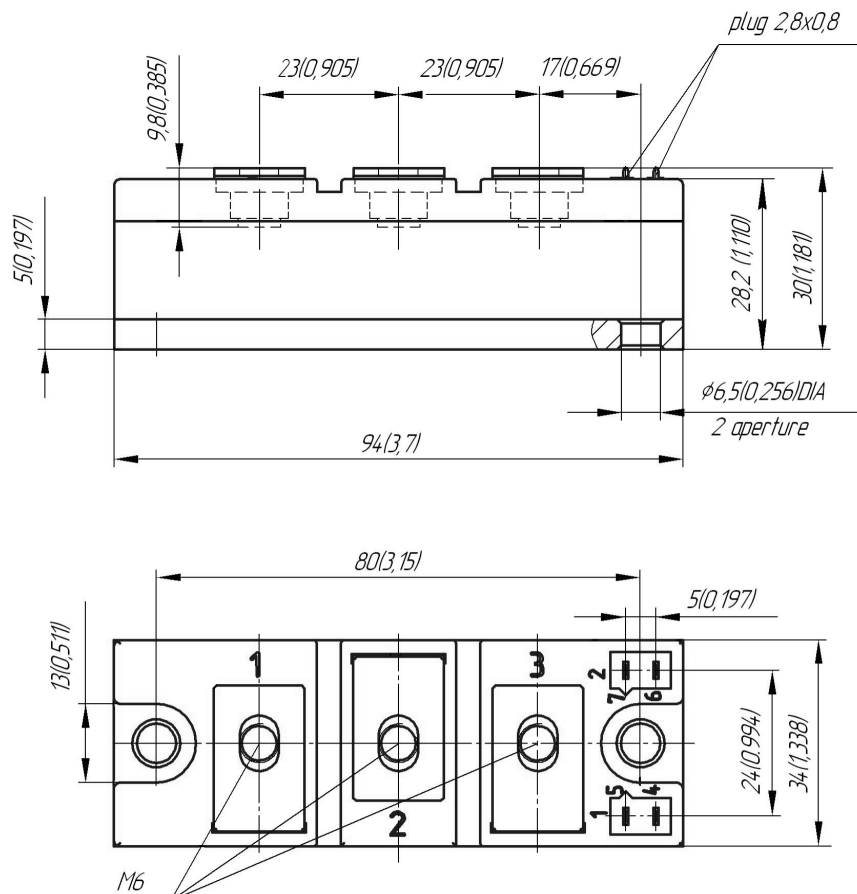
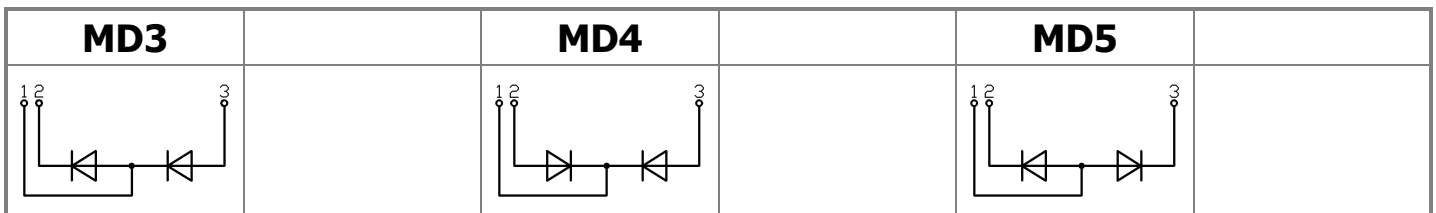




**Double Diode Module  
For Phase Control  
MDx-155-36-F**

Electrically isolated base plate  
Industrial standard package  
Simplified mechanical design, rapid assembly  
Pressure contact

Average forward current		$I_{FAV}$	155 A	
Repetitive peak reverse voltage		$V_{RRM}$	3000 ÷ 3600 V	
$V_{RRM}, V$	3000	3200	3400	3600
Voltage code	30	32	34	36
$T_j, ^\circ C$	- 40 ÷ 150			



All dimensions in millimeters (inches)


## MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions
<b>ON-STATE</b>				
$I_{FAV}$	Average forward current	A	155	$T_c = 100\text{ }^\circ\text{C}$ ; 180° half-sine wave; 50 Hz
$I_{FRMS}$	RMS forward current	A	243	
$I_{FSM}$	Surge forward current	kA	4.5 5.2	$T_j = T_{j\max}$ $T_j = 25\text{ }^\circ\text{C}$ 180° half-sine wave; 50 Hz ( $t_p = 10\text{ ms}$ ); single pulse; $V_R = 0\text{ V}$ ;
			4.7 5.4	$T_j = T_{j\max}$ $T_j = 25\text{ }^\circ\text{C}$ 180° half-sine wave; 60 Hz ( $t_p = 8.3\text{ ms}$ ); single pulse; $V_R = 0\text{ V}$ ;
$I^2t$	Safety factor	$A^2s \cdot 10^3$	101 134	$T_j = T_{j\max}$ $T_j = 25\text{ }^\circ\text{C}$ 180° half-sine wave; 50 Hz ( $t_p = 10\text{ ms}$ ); single pulse; $V_R = 0\text{ V}$ ;
			93 123	$T_j = T_{j\max}$ $T_j = 25\text{ }^\circ\text{C}$ 180° half-sine wave; 60 Hz ( $t_p = 8.3\text{ ms}$ ); single pulse; $V_R = 0\text{ V}$ ;
<b>BLOCKING</b>				
$V_{RRM}$	Repetitive peak reverse voltages	V	3000÷3600	$T_{j\min} < T_j < T_{j\max}$ ; 180° half-sine wave; 50 Hz;
$V_{RSM}$	Non-repetitive peak reverse voltages	V	3100÷3700	$T_{j\min} < T_j < T_{j\max}$ ; 180° half-sine wave; 50 Hz; single pulse;
$V_R$	Reverse continuous voltages	V	$0.75 \cdot V_{RRM}$	$T_j = T_{j\max}$ ;
<b>THERMAL</b>				
$T_{stg}$	Storage temperature	$^\circ\text{C}$	- 40 ÷ 125	
$T_j$	Operating junction temperature	$^\circ\text{C}$	- 40 ÷ 150	
<b>MECHANICAL</b>				
a	Acceleration under vibration	$\text{m/s}^2$	50	

## CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions
<b>ON-STATE</b>				
$V_{FM}$	Peak forward voltage, max	V	2.00	$T_j = 25\text{ }^\circ\text{C}$ ; $I_{FM} = 500\text{ A}$
$V_{F(TO)}$	Forward threshold voltage, max	V	0.93	$T_j = T_{j\max}$ ; $0.5 \pi I_{FAV} < I_T < 1.5 \pi I_{FAV}$
$r_T$	Forward slope resistance, max	$\text{m}\Omega$	2.000	
<b>BLOCKING</b>				
$I_{RRM}$	Repetitive peak reverse current, max	mA	50	$T_j = T_{j\max}$ ; $V_R = V_{RRM}$
<b>THERMAL</b>				
$R_{thjc}$	Thermal resistance, junction to case			180° half-sine wave, 50 Hz
	per module	$^\circ\text{C/W}$	0.0950	
	per arm	$^\circ\text{C/W}$	0.1900	
	per module	$^\circ\text{C/W}$	0.0900	DC
per arm	$^\circ\text{C/W}$	0.1800		
$R_{thch}$	Thermal resistance, case to heatsink			
	per module	$^\circ\text{C/W}$	0.0300	
	per arm	$^\circ\text{C/W}$	0.0600	

<b>INSULATION</b>					
V <sub>ISOL</sub>	Insulation test voltage	kV	3.00	Sine wave, 50 Hz; RMS	t=1 min
			3.60		t=1 sec
<b>MECHANICAL</b>					
M <sub>1</sub>	Mounting torque (M6) <sup>1)</sup>	Nm	6.00	Tolerance ± 15%	
M <sub>2</sub>	Terminal connection torque (M6) <sup>1)</sup>	Nm	6.00	Tolerance ± 15%	
w	Weight	g	320		

<b>PART NUMBERING GUIDE</b>						<b>NOTES</b>				
MD	3	-	155	-	36	-	F	-	N	
1	2		3		4		5		6	
1. MD - Rectifier Diode 2. Circuit Schematic 3. Average Forward Current, A 4. Voltage Code 5. Package Type (M.F) 6. Ambient Conditions: N – Normal										<sup>1)</sup> The screws must be lubricated
		UL certified file-No. E255404								

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