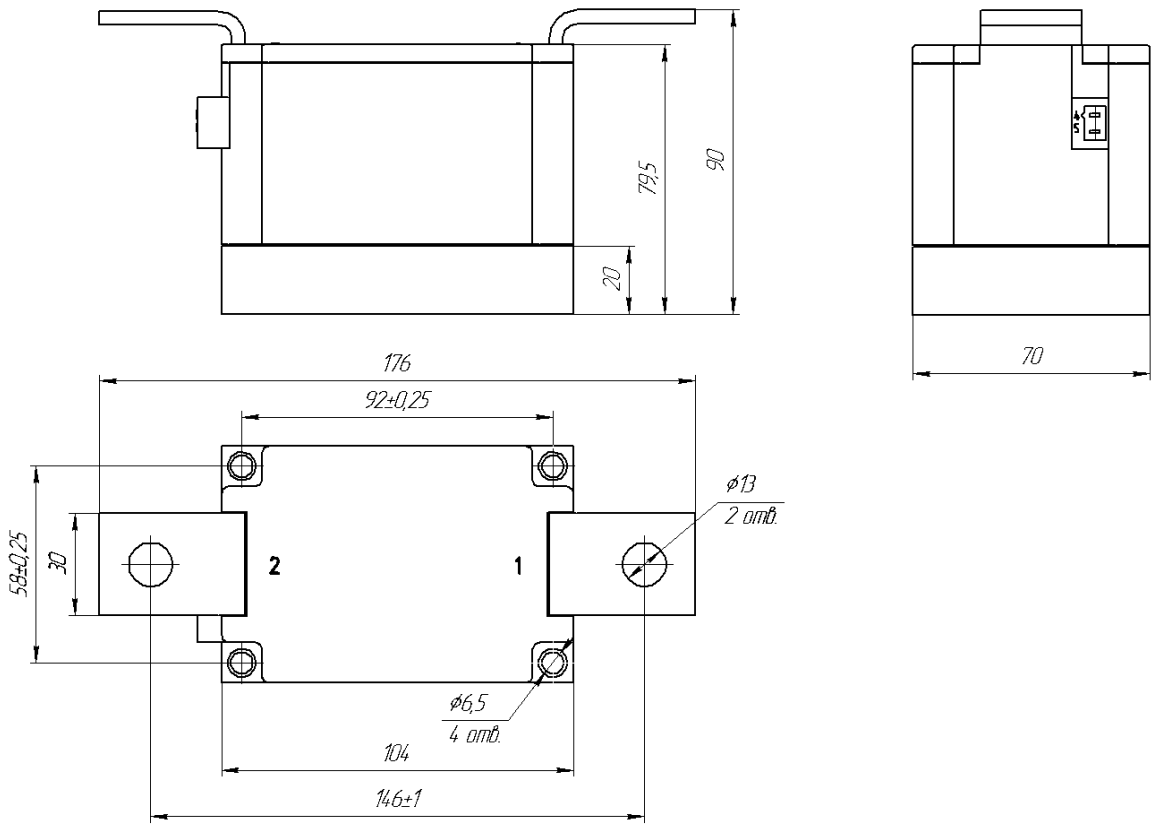
Electrically isolated base plate
Industrial standard package
Simplified mechanical design, rapid assembly
Pressure contact

Single Diode Module
For Phase Control
MD1-1250-28-E

Average forward current			I_{FAV}	1250 A	
Repetitive peak reverse voltage			V_{RRM}	2000 ÷ 2800 V	
V_{RRM}, V	2000	2200	2400	2600	2800
Voltage code	20	22	24	26	28
T_j, °C	- 40 ÷ 160				

MD1



All dimensions in millimeters (inches)

MAXIMUM ALLOWABLE RATINGS

Symbols and parameters		Units	Values	Test conditions	
ON-STATE					
I_{FAV}	Average forward current	A	1250	T_c= 91 °C;	
I_{FRMS}	RMS forward current	A	1962	180° half-sine wave; 50 Hz	
I_{FSM}	Surge forward current	kA	36.0 43.0	T_j=$T_{j\,max}$ T_j=25 °C	180° half-sine wave; t_p=10 ms; single pulse; V_R=0 V;
			38.0 46.0	T_j=$T_{j\,max}$ T_j=25 °C	180° half-sine wave; t_p=8.3 ms; single pulse; V_R=0 V;
I^2t	Safety factor	$A^2s\cdot10^3$	6400 9200	T_j=$T_{j\,max}$ T_j=25 °C	180° half-sine wave; t_p=10 ms; single pulse; V_R=0 V;
			5900 8700	T_j=$T_{j\,max}$ T_j=25 °C	180° half-sine wave; t_p=8.3 ms; single pulse; V_R=0 V;
BLOCKING					
V_{RRM}	Repetitive peak reverse voltages	V	2000÷2800	$T_{j\,min}$< T_j <$T_{j\,max}$; 180° half-sine wave; 50 Hz;	
V_{RSM}	Non-repetitive peak reverse voltages	V	2100÷2900	$T_{j\,min}$< T_j <$T_{j\,max}$; 180° half-sine wave; single pulse;	
V_R	Reverse continuous voltages	V	0.6·V_{RRM}	T_j=$T_{j\,max}$;	
THERMAL					
T_{stg}	Storage temperature	°C	- 40 ÷ 50		
T_j	Operating junction temperature	°C	- 40 ÷ 160		
$T_{c\,op}$	Operating temperature	°C	- 40 ÷ 125		
MECHANICAL					
a	Acceleration under vibration	m/s^2	50		

CHARACTERISTICS

Symbols and parameters		Units	Values	Conditions	
ON-STATE					
V_{FM}	Peak forward voltage, max	V	1.38	T_j=25 °C; I_{FM}= 3140 A	
$V_{F(TO)}$	Forward threshold voltage, max	V	0.80	T_j=$T_{j\,max}$; 0.5 π I_{FAV} < I_T < 1.5 π I_{FAV}	
r_T	Forward slope resistance, max	mΩ	0.170		
BLOCKING					
I_{RRM}	Repetitive peak reverse current, max	mA	70	T_j=$T_{j\,max}$; V_R=V_{RRM}	
THERMAL					
R_{thjc}	Thermal resistance, junction to case				
	per module	°C/W	0.0420	180° half-sine wave, 50 Hz	
R_{thch}	Thermal resistance, case to heatsink				
	per module	°C/W	0.0100		
INSULATION					
V_{ISOL}	Insulation test voltage	kV	3.00	Sine wave, 50 Hz; RMS	t=60 sec
			3.60		t=1 sec
MECHANICAL					
M_1	Mounting torque (M6)[1)]	Nm	6.00	Tolerance ± 15%	
M_2	Terminal connection torque (M12)[1)]	Nm	18.00	Tolerance ± 10%	
w	Weight, max	g	2250		

PART NUMBERING GUIDE	NOTES
MD 1 - 1250 - 28 - E - 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.E) 6. Ambient Conditions: N – Normal	[1)] The screws must be lubricated
UL certified file-No. E255404	