

# RM300CA-9W

HIGH FREQUENCY USE  
INSULATED TYPE

RM300CA-9W



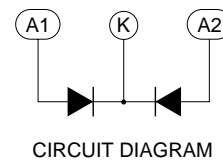
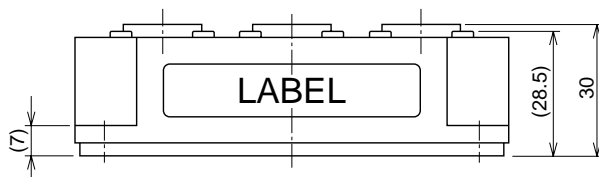
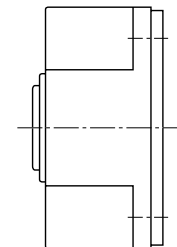
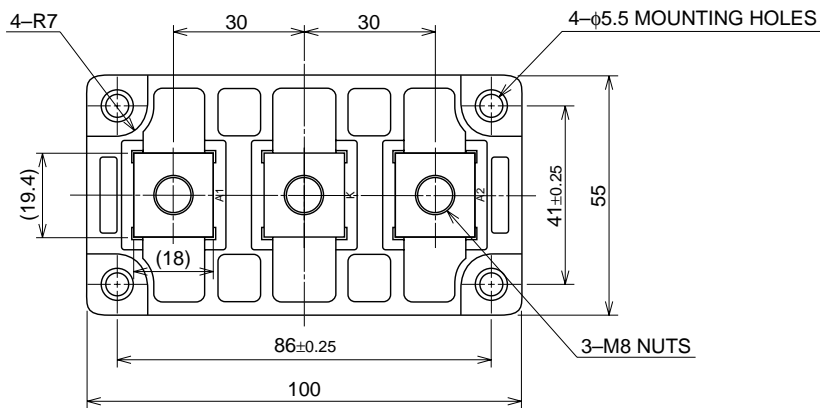
- **Idc** DC current ..... **300A**
- **VRRM** Repetitive peak reverse voltage  
..... **450V**
- **trr** Reverse recovery time ..... **0.5μs**

## APPLICATION

Free wheel use, Welders

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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**ABSOLUTE MAXIMUM RATINGS** (T<sub>j</sub>=25°C)

Symbol	Parameter	Voltage class		Unit
		9W		
V <sub>RRM</sub>	Repetitive peak reverse voltage	450		V
V <sub>R</sub> (DC)	Reverse DC voltage	360		V

Symbol	Parameter	Conditions	Ratings	Unit
I <sub>DC</sub>	DC current	Resistive load, T <sub>C</sub> =119°C	300	A
I <sub>FSM</sub>	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	6000	A
I <sup>2</sup> <sub>t</sub>	I <sup>2</sup> <sub>t</sub> for fusing	Value for one cycle of surge current, t <sub>w</sub> =8.3ms, T <sub>j</sub> =25°C Start	1.5 × 10 <sup>5</sup>	A <sup>2</sup> s
T <sub>j</sub>	Junction temperature		-40~+150	°C
T <sub>stg</sub>	Storage temperature		-40~+125	°C
V <sub>isol</sub>	Isolation voltage	Charged part to case	2500	V
—	Mounting torque	Main terminal screw M8	8.83~10.8	N·m
		Mounting screw M5	1.47~1.96	N·m
—	Weight	Typical value	460	g

**ELECTRICAL CHARACTERISTICS**

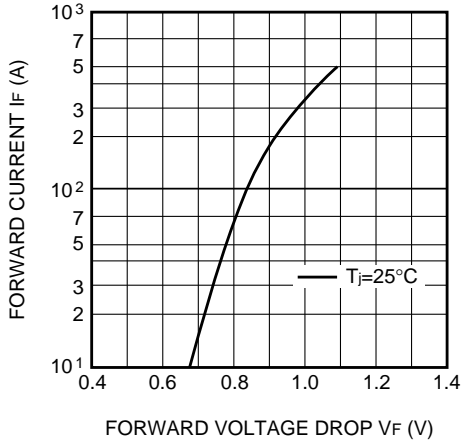
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I <sub>RRM</sub>	Repetitive reverse current	T <sub>j</sub> =150°C, V <sub>RRM</sub> applied	—	—	40	mA
V <sub>FM</sub>	Forward voltage	T <sub>j</sub> =25°C, I <sub>FM</sub> =300A	—	—	1.2	V
t <sub>rr</sub>	Reverse recovery time	I <sub>F</sub> =300A, T <sub>j</sub> =25°C. di/dt=-600A/μs, V <sub>R</sub> =300V	—	—	0.5	μs
Q <sub>rr</sub>	Reverse recovery charge		—	—	50	μC
R <sub>th (j-c)</sub>	Thermal resistance	Junction to case	—	—	0.085	°C/W
R <sub>th (c-f)</sub>	Contact thermal resistance	Case to fin, with thermal compound	—	—	0.08	°C/W
—	Insulation resistance	Main terminal to case	10	—	—	MΩ

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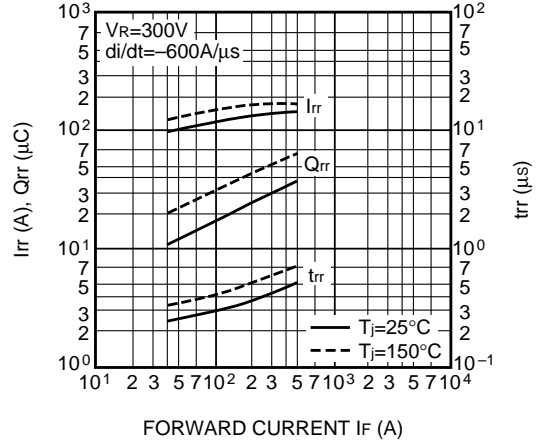
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## PERFORMANCE CURVES

FORWARD VOLTAGE DROP CHARACTERISTIC (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. FORWARD CURRENT (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. di/dt (TYPICAL)

