RM300CA-9W

HIGH FREQUENCY USE
INSULATED TYPE

RM300CA-9W



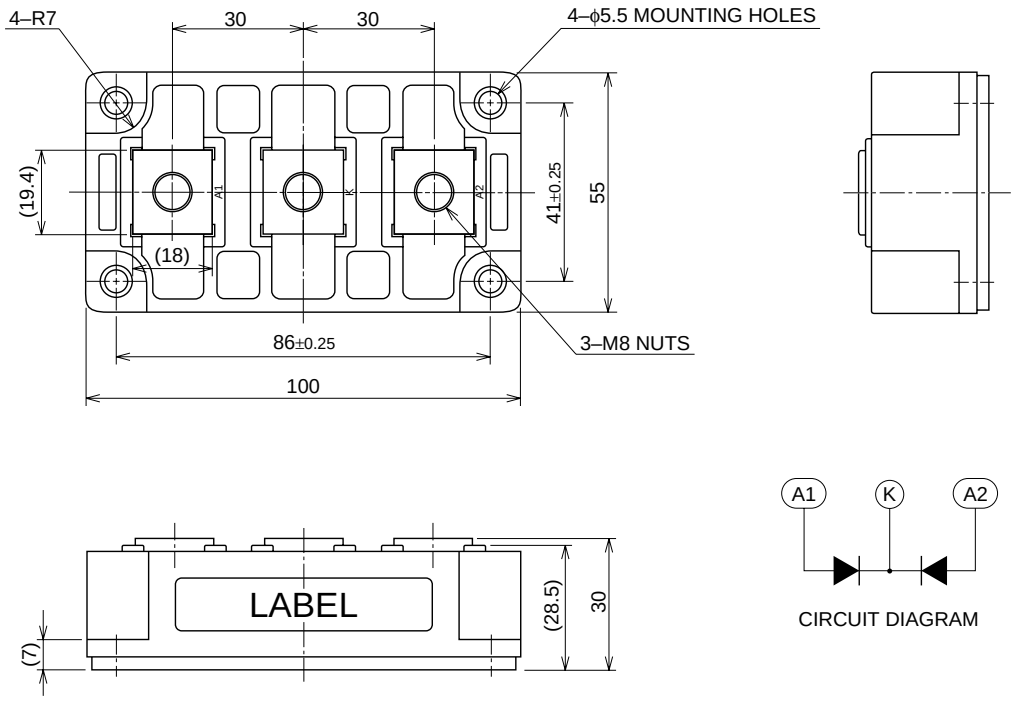
- **I_{DC}** DC current **300A**
- **V_{RRM}** Repetitive peak reverse voltage **450V**
- **t_{rr}** Reverse recovery time **0.5μs**

APPLICATION

Free wheel use, Welders

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



MITSUBISHI ELECTRIC

RM300CA-9W

HIGH FREQUENCY USE
INSULATED TYPE

ABSOLUTE MAXIMUM RATINGS (T_j=25°C)

Symbol	Parameter	Voltage class	Unit
		9W	
V_{RRM}	Repetitive peak reverse voltage	450	V
$V_{R\ (DC)}$	Reverse DC voltage	360	V

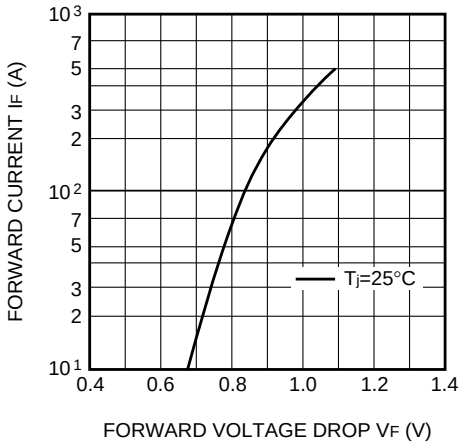
Symbol	Parameter	Conditions	Ratings	Unit
I_{DC}	DC current	Resistive load, T_C=119°C	300	A
I_{FSM}	Surge (non-repetitive) forward current	One half cycle at 60Hz, peak value	6000	A
I^2t	I^2t for fusing	Value for one cycle of surge current, t_w=8.3ms, T_j=25°C Start	1.5×10^5	A^2s
T_j	Junction temperature		–40~+150	°C
T_{stg}	Storage temperature		–40~+125	°C
V_{isol}	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

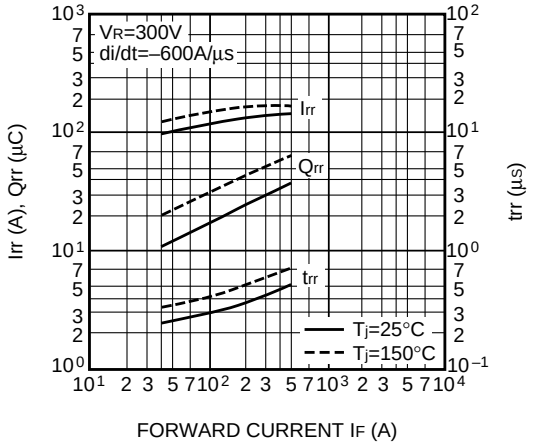
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I_{RRM}	Repetitive reverse current	T_j=150°C, V_{RRM} applied	—	—	40	mA
V_{FM}	Forward voltage	T_j=25°C, I_{FM}=300A	—	—	1.2	V
t_{rr}	Reverse recovery time	I_F=300A, T_j=25°C. di/dt=–600A/μs, V_R=300V	—	—	0.5	μs
Q_{rr}	Reverse recovery charge		—	—	50	μC
$R_{th\ (j-c)}$	Thermal resistance	Junction to case	—	—	0.085	°C/W
$R_{th\ (c-f)}$	Contact thermal resistance	Case to fin, with thermal compound	—	—	0.08	°C/W
—	Insulation resistance	Main terminal to case	10	—	—	MΩ

PERFORMANCE CURVES

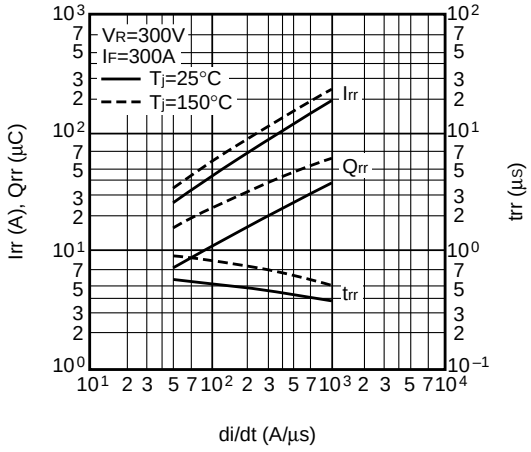
FORWARD VOLTAGE DROP CHARACTERISTIC (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. FORWARD CURRENT (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. di/dt (TYPICAL)



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