

MITSUBISHI FAST RECOVERY DIODE MODULES

RM300CA-9W

HIGH FREQUENCY USE
INSULATED TYPE

RM300CA-9W



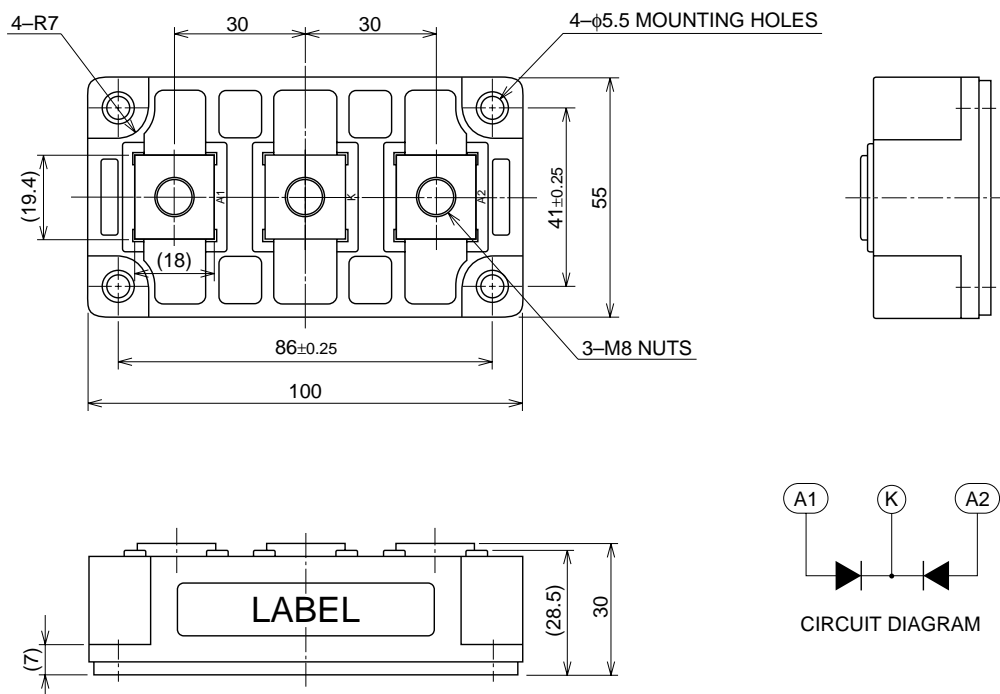
- **Idc** DC current **300A**
- **VRRM** Repetitive peak reverse voltage **450V**
- **trr** Reverse recovery time **0.5μs**

APPLICATION

Free wheel use, Welders

OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



Aug.1999



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INSULATED TYPEABSOLUTE 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 ² _t	I ² _t for fusing	Value for one cycle of surge current, t _w =8.3ms, T _j =25°C Start	1.5 × 10 ⁵	A ² s
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

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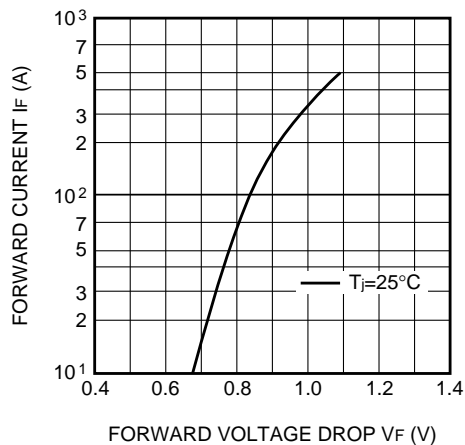
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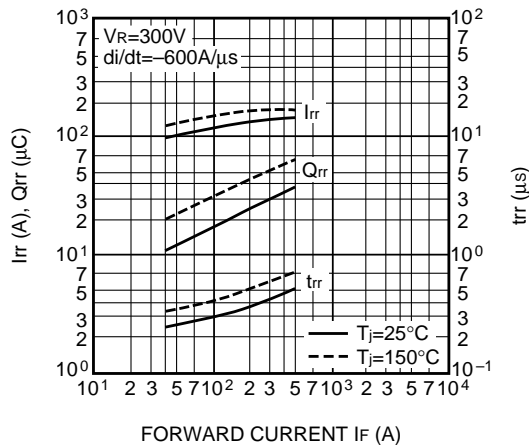
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PERFORMANCE CURVES

FORWARD VOLTAGE DROP CHARACTERISTIC (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. FORWARD CURRENT (TYPICAL)



REVERSE RECOVERY CHARACTERISTICS VS. di/dt (TYPICAL)

