

**Features:**

- n Soft Reverse Recovery Characteristics
- n Ultrafast Reverse Recovery Time
- n Low Reverse Recovery Loss

Typical Applications

- n Inversion Welder
- n UPS
- n Plating Power Supply
- n Ultrasonic Cleaner and Welder

V_{RRM}	Type & Outline
1200V	MRC100-12-224H3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	$T_C=75^{\circ}C$, Per Diode	150			100	A
		$T_C=85^{\circ}C$, 20KHz, Per Module				75	A
$I_{F(RMS)}$	RMS forward current	$T_C=75^{\circ}C$, Per Diode				150	A
I_{RRM}	Repetitive peak current	at V_{RRM}	125			10	mA
I_{FSM}	Surge forward current	$V_R=0V$, $t_p=10ms$	45			1100	A
		$V_R=0V$, $t_p=8.3ms$	45			1200	
I^2t	I^2t for fusing coordination	$V_R=0V$, $t_p=10ms$	45			6050	10^3A^2s
		$V_R=0V$, $t_p=8.3ms$	45			7200	
P_D	Maximum power dissipation				280		W
V_{FM}	Peak forward voltage	$I_{FM}=100A$	25		1.58	1.80	V
			125		1.35		
t_{rr}	Reverse recovery time	$I_F=1A$, $di_F/dt=-200A/\mu s$, $V_R=30V$	25		90		ns
t_{rr}	Reverse recovery time	$V_R=600V$, $I_F=100A$, $di_F/dt=-200A/\mu s$	25		160		ns
I_{RM}	Reverse current				10		A
t_{rr}	Reverse recovery time		125		400		ns
I_{RM}	Reverse current				21		A
$R_{th(j-c)}$	Thermal resistance Junction to case	At 180° sine. Single side cooled per chip				0.40	$^{\circ}C/W$
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1min$		3000			V
F_m	Terminal connection torque(M5)			2.55		3.45	N·m
	Mounting torque(M6)			4.25		5.75	N·m
T_{vj}	Junction temperature			-40		150	$^{\circ}C$
T_{stg}	Stored temperature			-40		125	$^{\circ}C$
W_t	Weight				100		g
Outline	224H3						

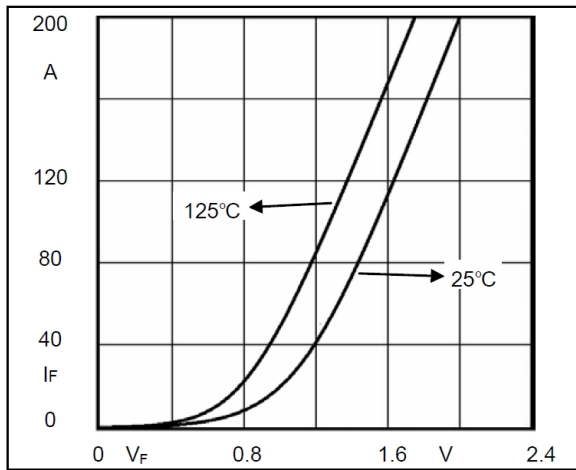


Fig1. Forward Voltage Drop vs Forward Current

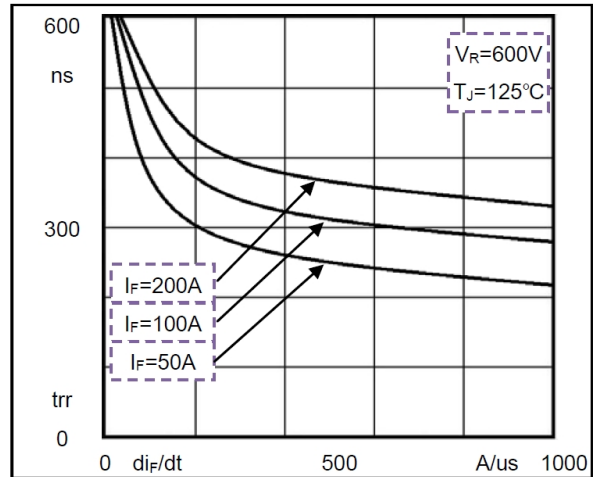


Fig2. Reverse Recovery Time vs di_F/dt

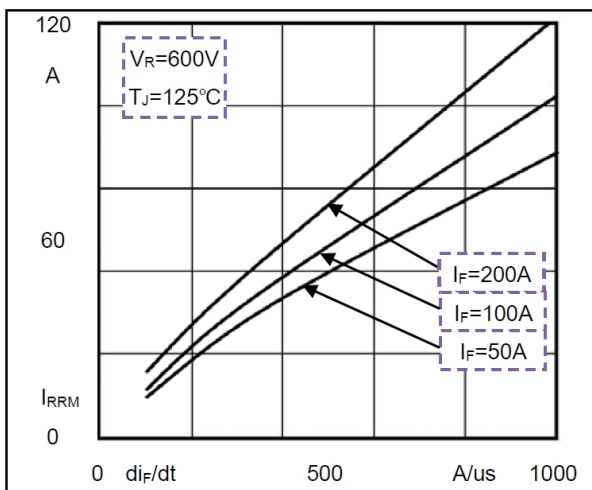


Fig3. Reverse Recovery Current vs di_F/dt

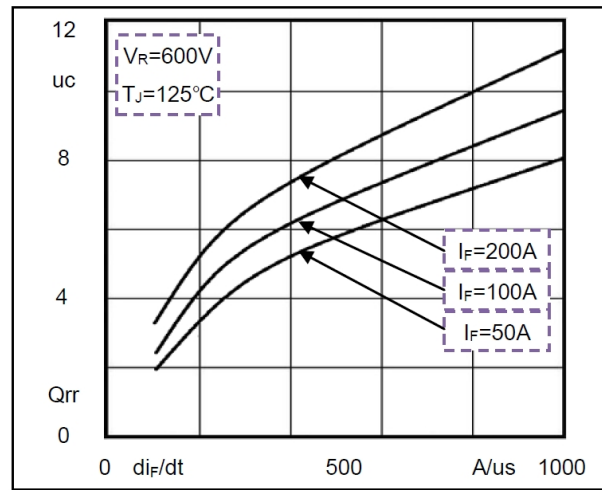
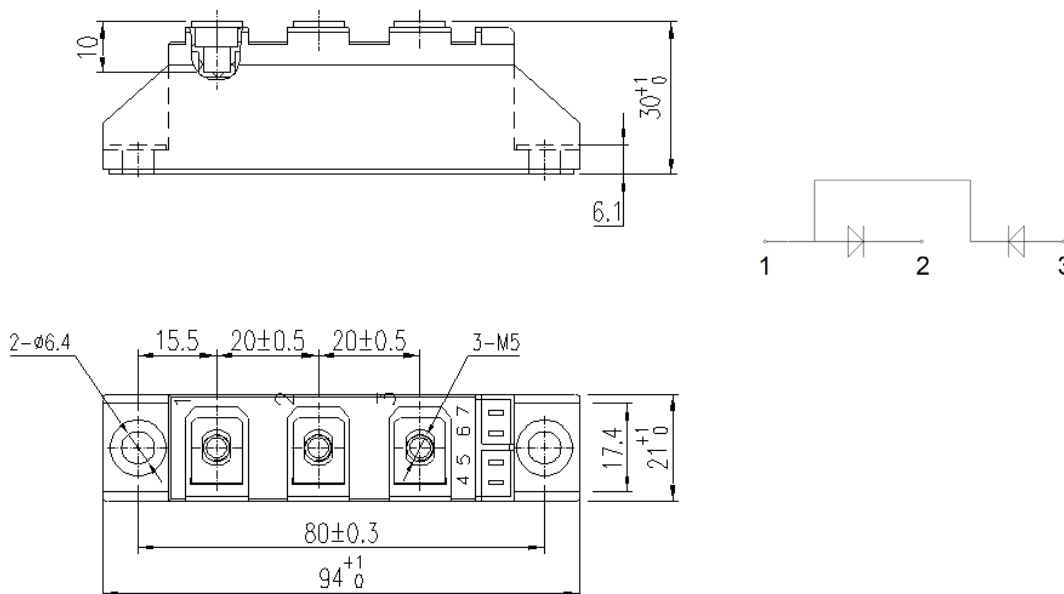


Fig4. Reverse Recovery Charge vs di_F/dt

Outline:



Unmarked dimensional tolerance: $\pm 0.5\text{mm}$

TECHSEM reserves the right to change specifications without notice.