**Features:**

- n Ultrafast Reverse Recovery Time
- n Soft Reverse Recovery Characteristics
- n Low Reverse Recovery Loss
- n Low Forward Voltage
- n High Surge Current Capability
- n Low Inductance Package

Typical Applications

- n Inversion Welder
- n UPS
- n Chopper

V_{RRM}	Type & Outline
1200V	MRC300-12-229H3

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	$T_j(^{\circ}C)$	VALUE			UNIT
				Min	Type	Max	
$I_{F(AV)}$	Mean forward current	$T_C=110^{\circ}C$, Per Diode	150			300	A
$I_{F(RMS)}$	RMS forward current					471	A
$I_{F(AV)}$	Mean forward current	$T_C=120^{\circ}C, 20KHz$, Per Module	150			200	A
I_{RRM}	Repetitive peak current	at V_{RRM}	125			10	mA
I_{FSM}	Surge forward current	10ms half sine wave	45			2.7	kA
I^2t	I^2t for fusing coordination					36.45	10^3A^2s
V_{FM}	Peak forward voltage	$I_{FM}=300A$	25		2.8	3.1	V
			125		2.1	2.4	V
t_{rr}	Reverse recovery time	$I_F=1A, V_R=30V, di_F/dt=-200A/\mu s$			65		ns
t_{rr}	Reverse recovery time	$I_{FM}=300A, -di/dt=200A/\mu s, V_R=600V$	25		135		ns
			125		385		ns
$R_{th(j-c)}$	Thermal resistance Junction to case	Single side cooled				0.14	$^{\circ}C/W$
F_m	Terminal connection torque(M6)			4.5		6.0	N·m
	Mounting torque(M6)			4.5		6.0	N·m
V_{iso}	Isolation voltage	50Hz, R.M.S, $t=1min, I_{iso}:1mA(MAX)$		3000			V
T_{vj}	Junction temperature			-40		150	$^{\circ}C$
T_{stg}	Stored temperature			-40		125	$^{\circ}C$
W_t	Weight				165		g
Outline	229H3						

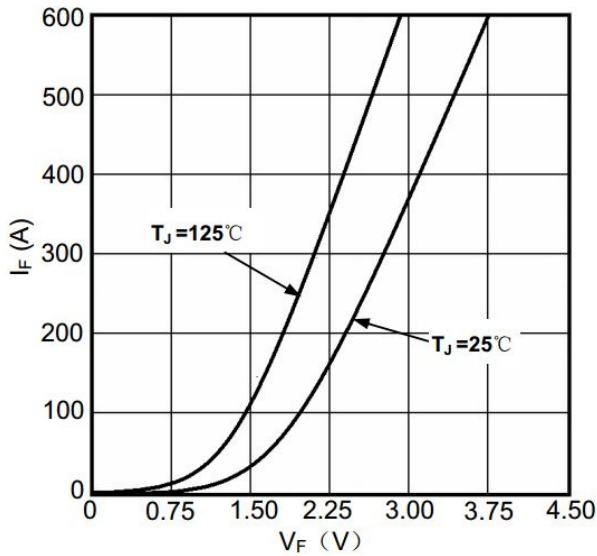


Figure1. Forward Voltage Drop vs Forward Current

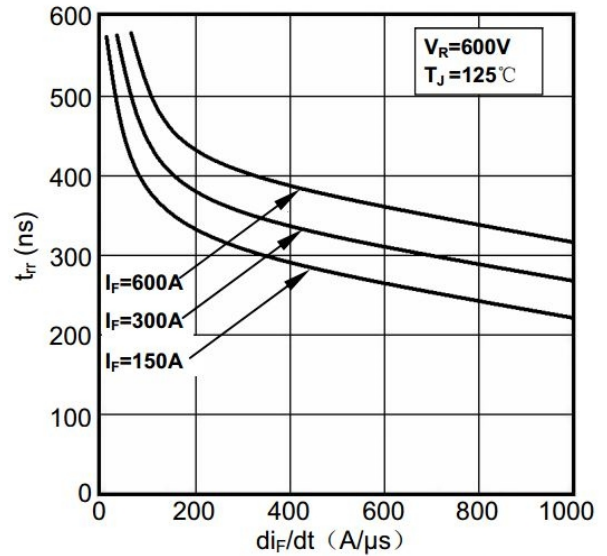


Figure2. Reverse Recovery Time vs di_F/dt

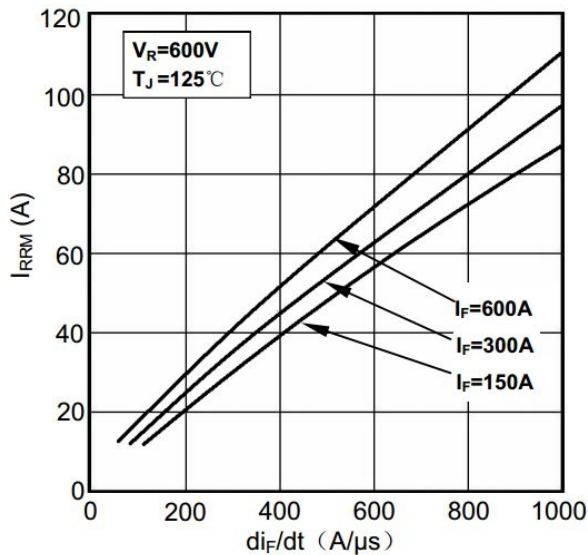


Figure3. Reverse Recovery Current vs di_F/dt

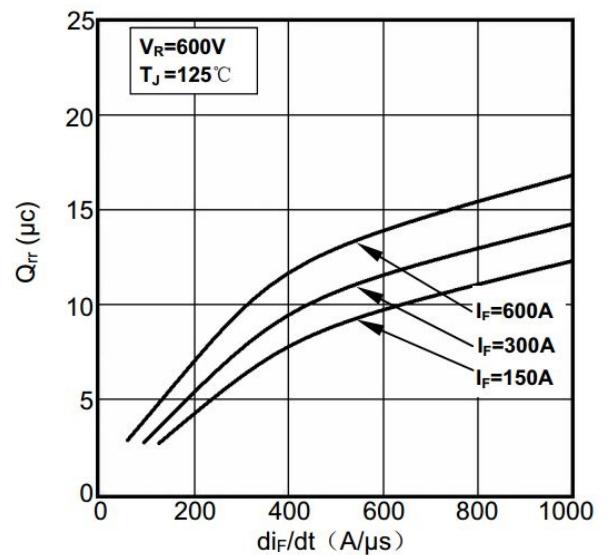


Figure4. Reverse Recovery Charge vs di_F/dt

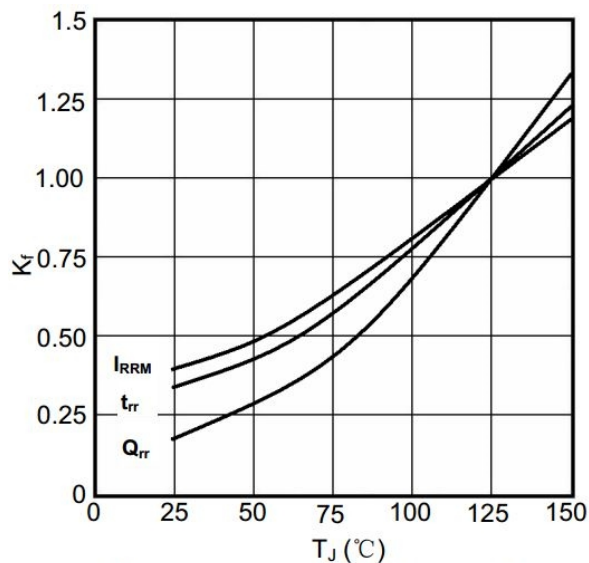


Figure5. Dynamic Parameters vs Junction Temperature

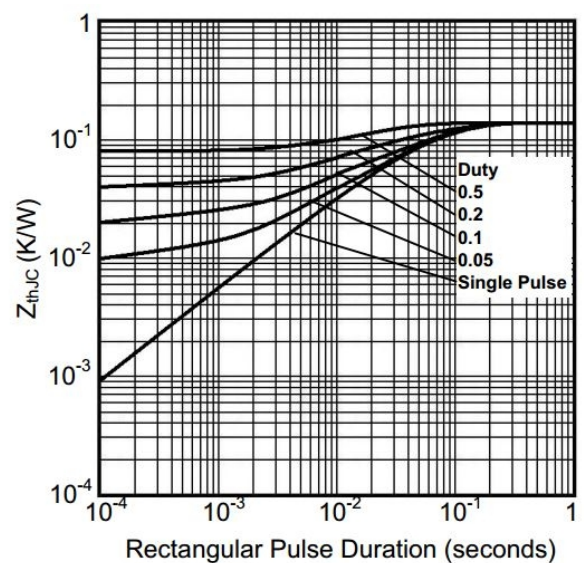
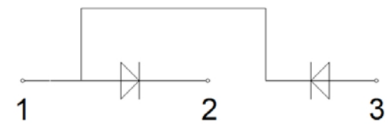
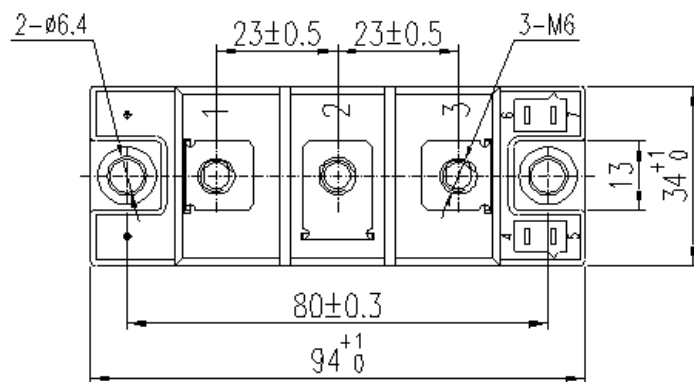
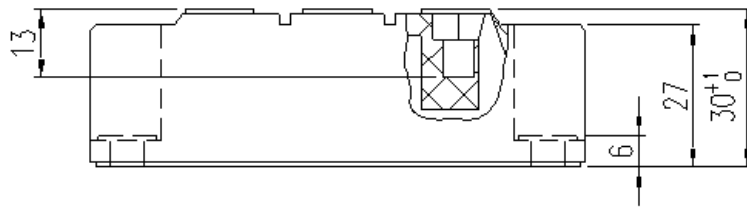


Figure6. Transient Thermal Impedance

Outline:



Unmarked dimensional tolerance: ± 0.5 mm

TECHSEM reserves the right to change specifications without notice.