

MA652

Silicon planer type (cathode common)

For high-frequency rectification

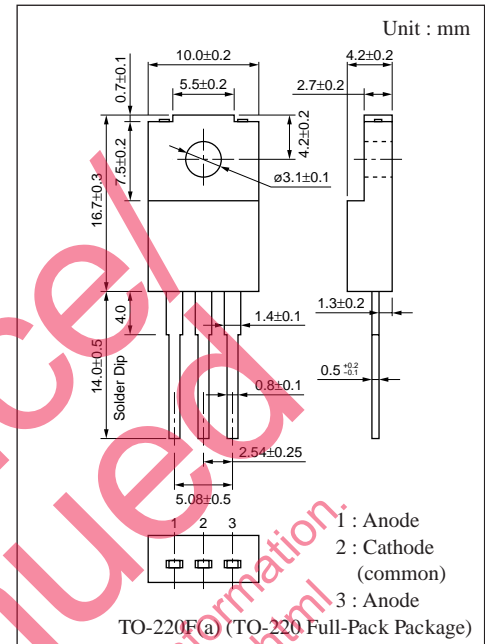
■ Features

- High reverse voltage V_R
- Low forward voltage V_F
- Fast reverse recovery time t_{rr}

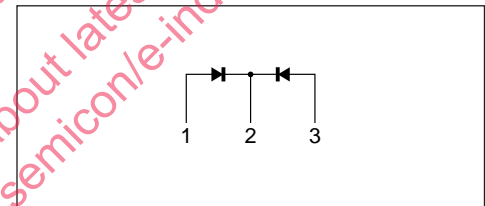
■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	200	V
Non-repetitive peak reverse voltage	V_{RSM}	200	V
Average forward current	$I_{F(AV)}$	20	A
Non-repetitive peak forward surge current	I_{FSM}^*	150	A
Junction temperature	T_j	-40 to +150	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +150	$^\circ\text{C}$

* Sine half wave : 10ms/cycle



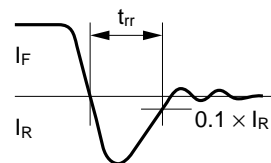
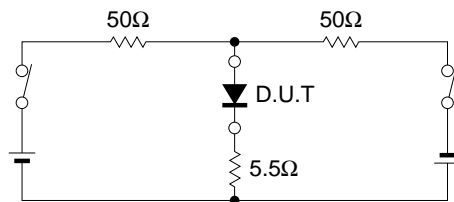
■ Internal Connection



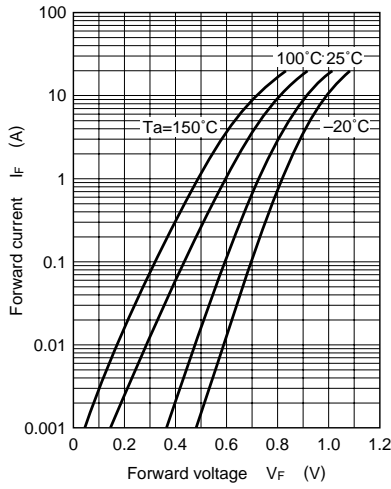
■ Electrical Characteristics ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Condition	min	typ	max	Unit
Repetitive peak reverse current	I_{RRM1}	$V_{RRM}=200\text{V}$, $T_c=25^\circ\text{C}$			100	μA
	I_{RRM2}	$V_{RRM}=200\text{V}$, $T_j=150^\circ\text{C}$			10	mA
Forward voltage (DC)	V_F	$I_F=10\text{A}$, $T_c=25^\circ\text{C}$			1	V
Reverse recovery time	t_{rr}^*	$I_F=1\text{A}$, $I_R=1\text{A}$			100	ns
Thermal resistance	$R_{th(j-c)}$				2.5	$^\circ\text{C/W}$
	$R_{th(j-a)}$				45	$^\circ\text{C/W}$

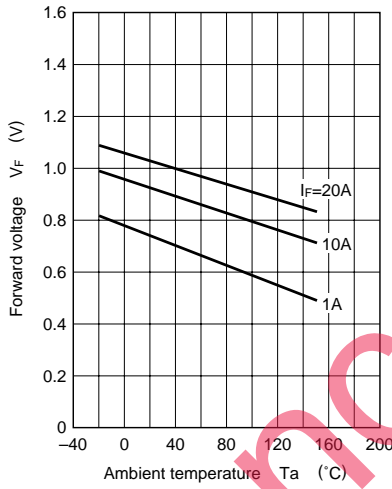
- Note
1. Rated input/output frequency : 10MHz
 2. Tightening torque-max 8kg/cm
 3. * t_{rr} measuring circuit



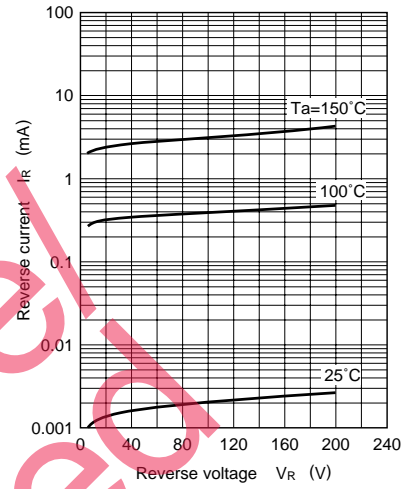
$I_F - V_F$



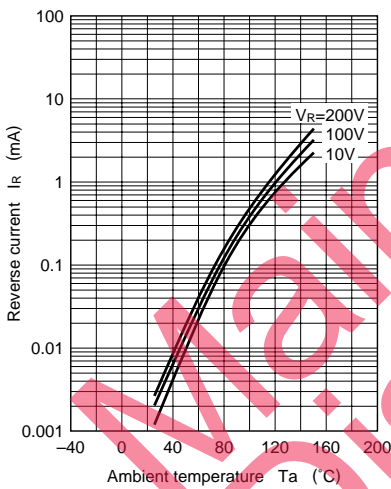
$V_F - T_a$



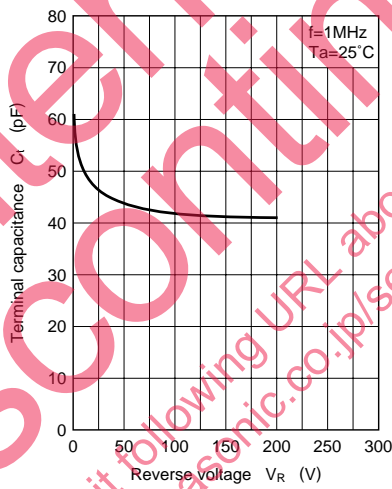
$I_R - V_R$



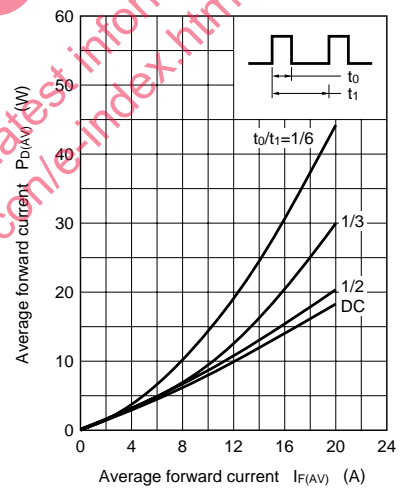
$I_R - T_a$



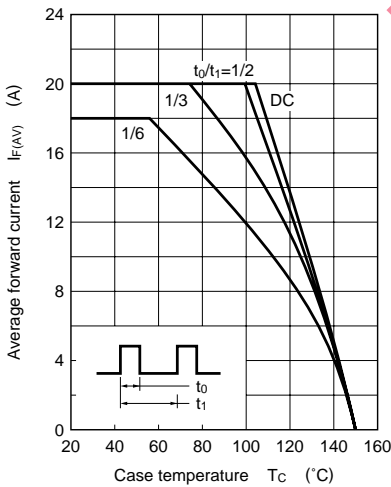
$C_T - V_R$



$P_{D(AV)} - I_{F(AV)}$



$I_{F(AV)} - T_C$



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