

MA3D689 (MA6D89)

Silicon planar type

For high-frequency rectification

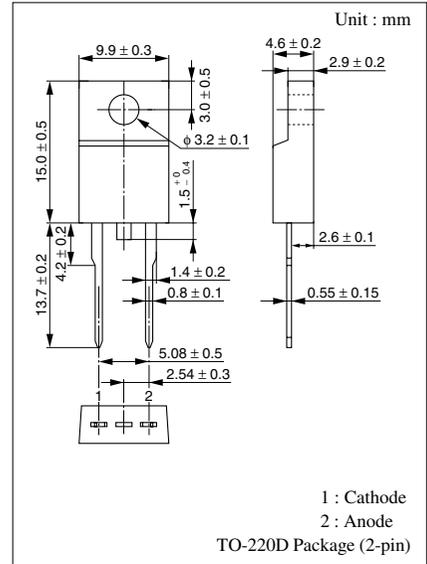
■ Features

- Low forward rise voltage V_F
- Fast reverse recovery time t_{rr}
- TO-220D (Full-pack package) with high dielectric breakdown voltage > 5.0 kV
- Easy-to-mount, caused by its V cut lead end

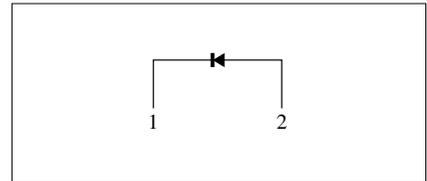
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	200	V
Non-repetitive peak reverse surge voltage	V_{RSM}	20	V
Average forward current	$I_{F(AV)}$	2.5	A
Peak forward current	I_{FM}	5	A
Non-repetitive peak forward surge current*	I_{FSM}	20	A
Junction temperature	T_j	-40 to +150	$^\circ\text{C}$
Storage temperature	T_{stg}	-40 to +150	$^\circ\text{C}$

Note) * : Half sine-wave; 10 ms/cycle



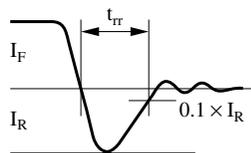
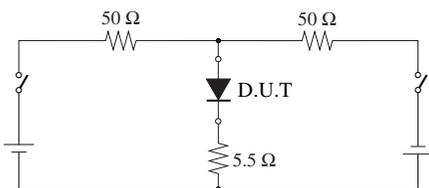
Internal Connection



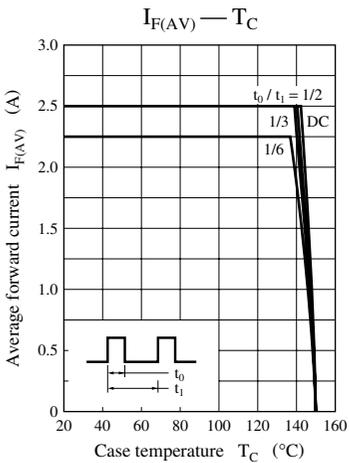
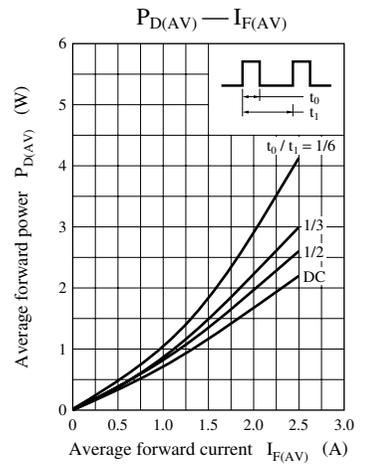
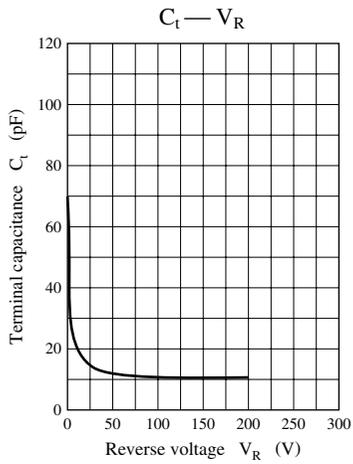
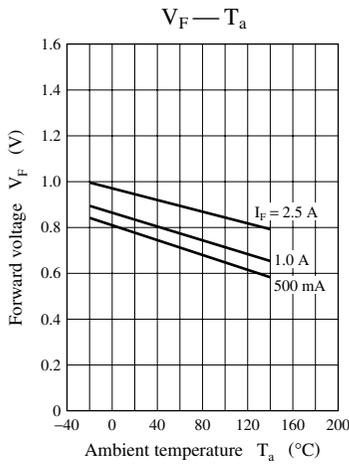
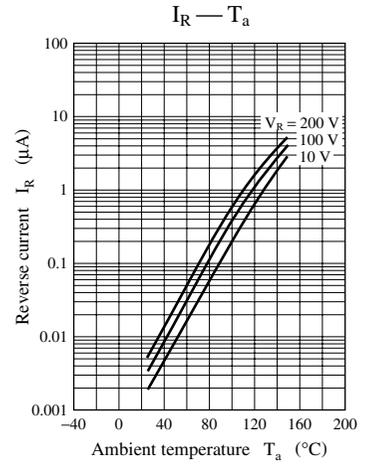
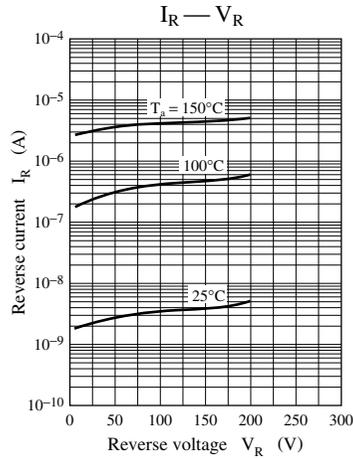
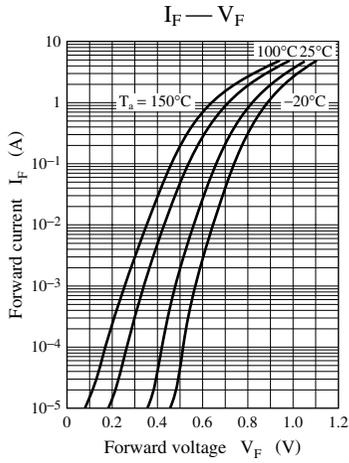
■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Repetitive peak reverse current	I_{RRM1}	$V_{RRM} = 200$ V, $T_C = 25^\circ\text{C}$			20	μA
	I_{RRM2}	$V_{RRM} = 200$ V, $T_j = 150^\circ\text{C}$			2	mA
Forward voltage (DC)	V_F	$I_F = 2.5$ A, $T_C = 25^\circ\text{C}$			0.98	V
Reverse recovery time*	t_{rr}	$I_F = 1$ A, $I_R = 1$ A			40	ns
Thermal resistance	$R_{th(j-c)}$				4	$^\circ\text{C/W}$
	$R_{th(j-a)}$				63	$^\circ\text{C/W}$

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



Note) The part number in the parenthesis shows conventional part number.



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