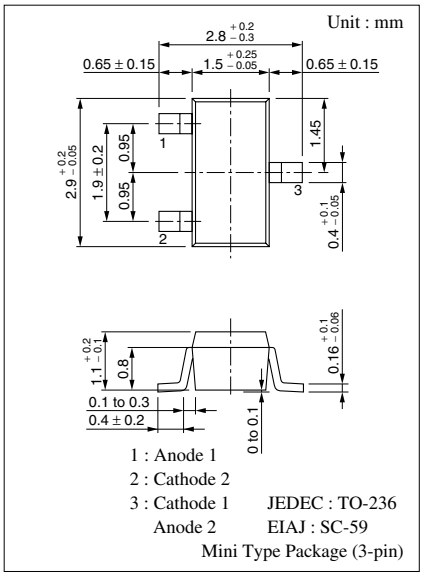
MA3X791

Silicon epitaxial planar type

For super-high speed switching circuit
For small current rectification

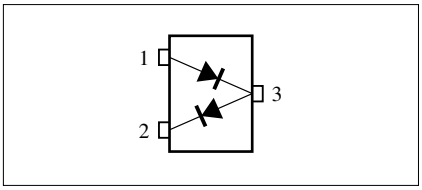
■ Features

- Two MA3X786s are contained in one package (series connection)
- Allowing to rectify under ($I_{F(AV)}$ = 100 mA) condition
- Optimum for high-frequency rectification because of its short reverse recovery time (t_{rr})
- Low V_F (forward rise voltage), with high rectification efficiency



Marking Symbol: M4A

Internal Connection



■ Absolute Maximum Ratings T_a = 25°C

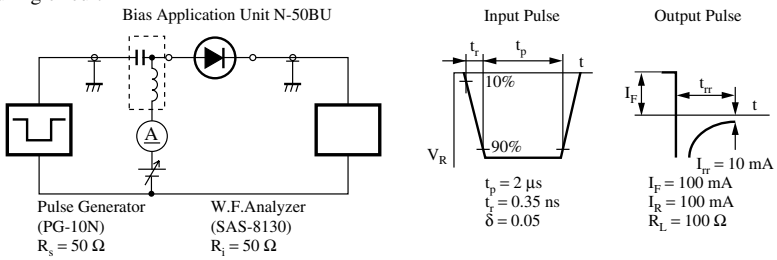
Parameter		Symbol	Rating	Unit
Reverse voltage (DC)		V_R	30	V
Repetitive peak reverse voltage		V_{RRM}	30	V
Peak forward current	Single	I_{FM}	300	mA
	Series*2		200	
Average forward current	Single	$I_{F(AV)}$	100	mA
	Series*2		70	
Non-repetitive peak forward surge current*1		I_{FSM}	1	A
Junction temperature		T_j	125	°C
Storage temperature		T_{stg}	−55 to +125	°C

Note) *1 : The peak-to-peak value in one cycle of 50 Hz sine-wave (non-repetitive)
*2 : Value per chip

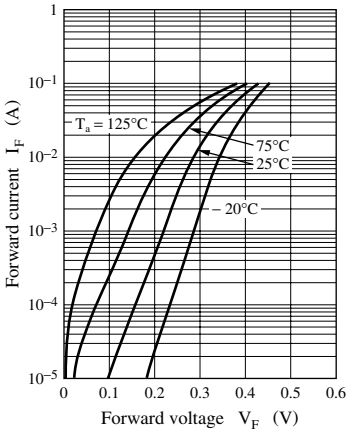
■ Electrical Characteristics T_a = 25°C

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_R	V_R = 30 V			15	μA
Forward voltage (DC)	V_F	I_F = 100 mA			0.55	V
Terminal capacitance	C_t	V_R = 0 V, f = 1 MHz		20		pF
Reverse recovery time*	t_{rr}	I_F = I_R = 100 mA I_{rr} = 10 mA, R_L = 100 Ω		2		ns

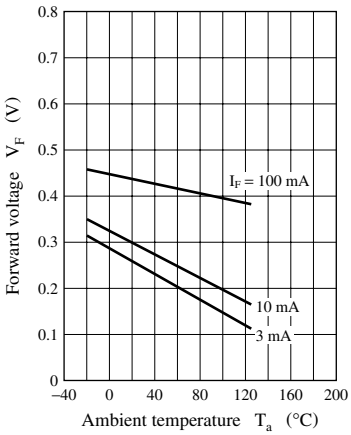
Note) 1. Schottky barrier diode is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
2. Rated input/output frequency: 250 MHz
3. * : t_{rr} measuring circuit



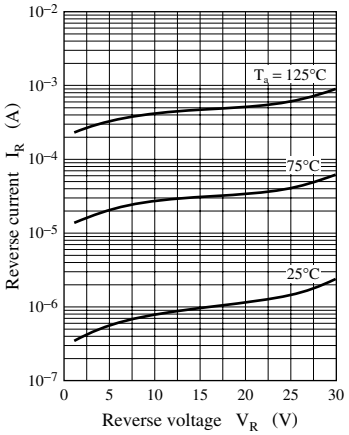
I_F — V_F



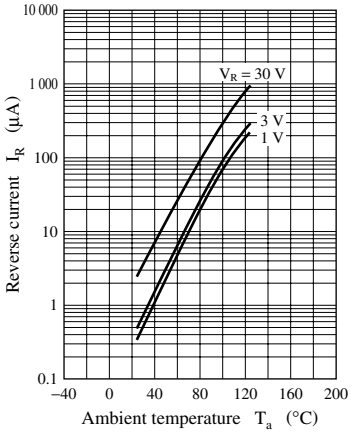
V_F — T_a



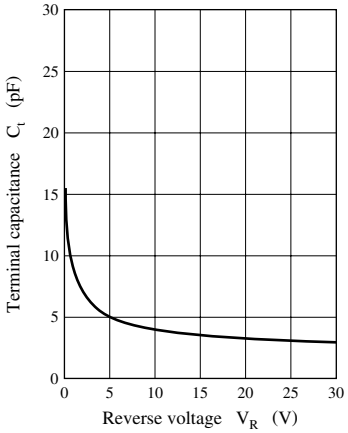
I_R — V_R



I_R — T_a



C_t — V_R



$I_{F(surge)}$ — t_W