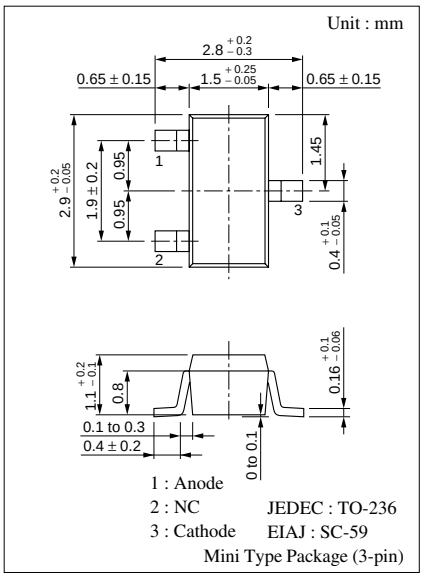
MA3X787 (MA787)

Silicon epitaxial planar type

For super-high speed switching circuit
For small current rectification

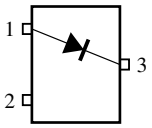
■ Features

- 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
- Reverse voltage V_R (DC value) = 50 V guaranteed



Marking Symbol: M3U

Internal Connection



■ Absolute Maximum Ratings T_a = 25°C

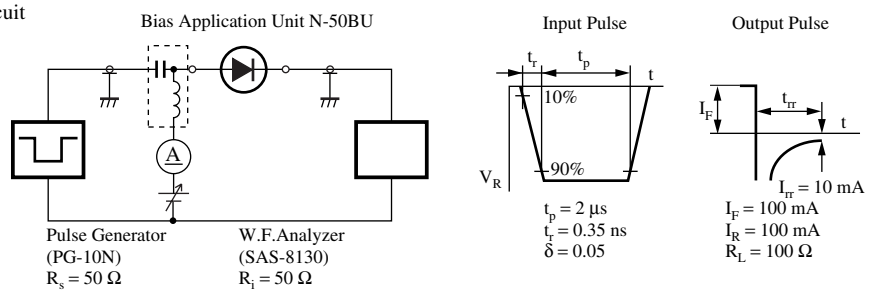
Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	V_R	50	V
Repetitive peak reverse voltage	V_{RRM}	50	V
Peak forward current	I_{FM}	300	mA
Average forward current	$I_{F(AV)}$	100	mA
Non-repetitive peak forward surge current*	I_{FSM}	1	A
Junction temperature	T_j	125	°C
Storage temperature	T_{stg}	−55 to +125	°C

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

■ Electrical Characteristics T_a = 25°C

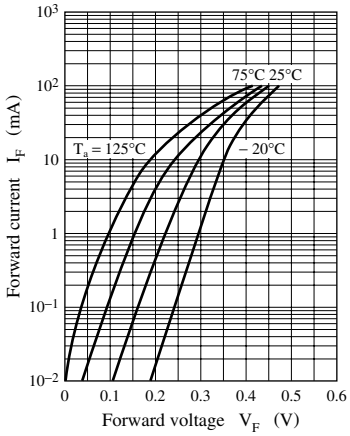
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	I_R	V_R = 50 V			30	μA
Forward voltage (DC)	V_F	I_F = 100 mA			0.55	V
Terminal capacitance	C_t	V_R = 0 V, f = 1 MHz		25		pF
Reverse recovery time*	t_{rr}	I_F = I_R = 100 mA I_{rr} = 10 mA, R_L = 100 Ω		3		ns

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: 200 MHz
3. * : t_{rr} measuring circuit

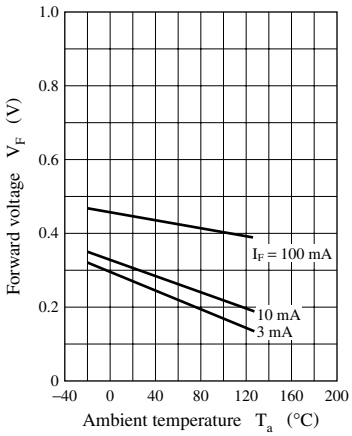


Note) The part number in the parenthesis shows conventional part number.

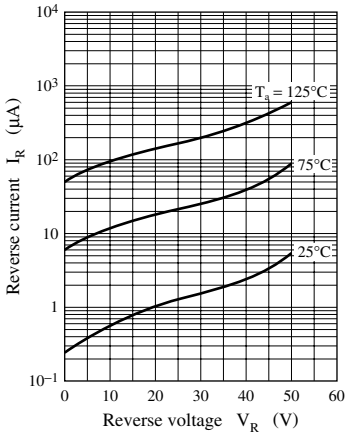
I_F — V_F



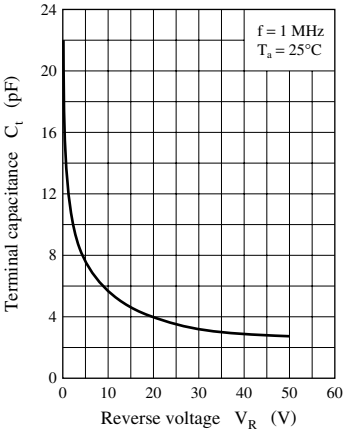
V_F — T_a



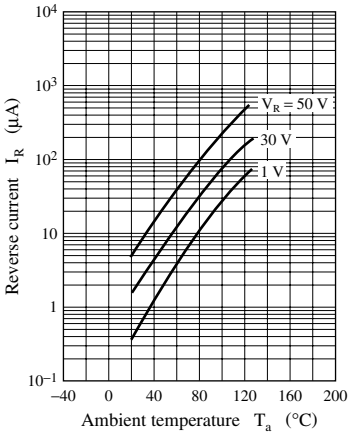
I_R — V_R



C_t — V_R



I_R — T_a



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