

# MA3V175E, MA3V176E (MA175WK, MA176WK)

Silicon epitaxial planar type

For switching circuits

## ■ Features

- Short reverse recovery time  $t_{rr}$
- Small terminal capacitance,  $C_t$

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

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	$V_R$	40	V
		80	
Peak reverse voltage	$V_{RM}$	40	V
		80	
Forward current (DC)	Single	$I_F$	mA
	Double	150	
Peak forward current	Single	$I_{FM}$	mA
	Double	340	
Non-repetitive peak forward surge current*	Single	$I_{FSM}$	mA
	Double	750	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

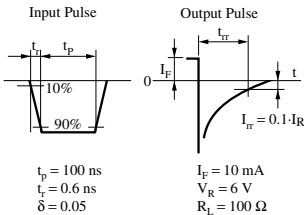
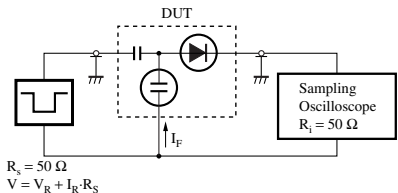
Note) \* :  $t = 1 \text{ s}$

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

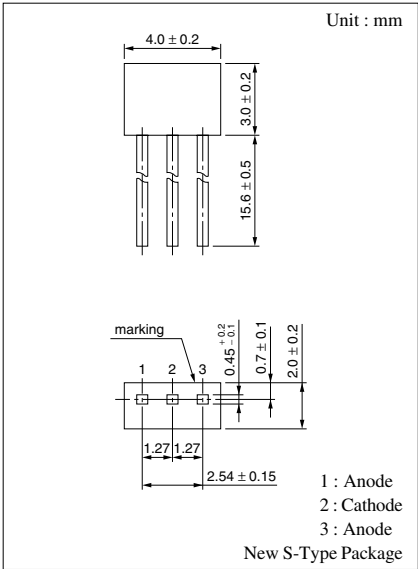
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	$I_R$	$V_R = 35 \text{ V}$			0.1	$\mu\text{A}$
		$V_R = 75 \text{ V}$			0.1	
Forward voltage (DC)	$V_F$	$I_F = 100 \text{ mA}$			1.2	V
Reverse voltage (DC)	$V_R$	$I_R = 100 \mu\text{A}$	40			V
			80			
Terminal capacitance	$C_t$	$V_R = 0 \text{ V}, f = 1 \text{ MHz}$			4	pF
Reverse recovery time*	$t_{rr}$	$I_F = 10 \text{ mA}, V_R = 6 \text{ V}$ $I_{rr} = 0.1 \cdot I_R, R_L = 100 \Omega$			3	ns

Note) 1. Rated input/output frequency: 100 MHz

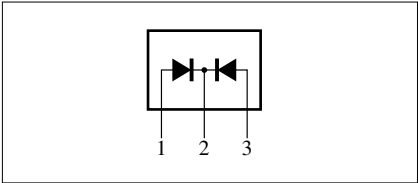
2. \* :  $t_{rr}$  measuring circuit

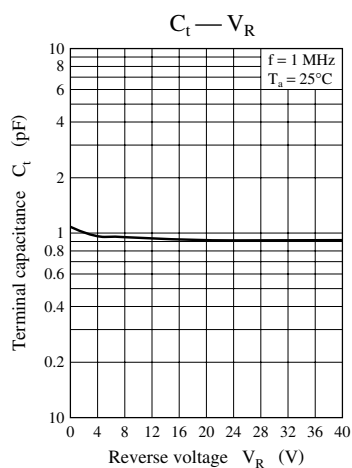
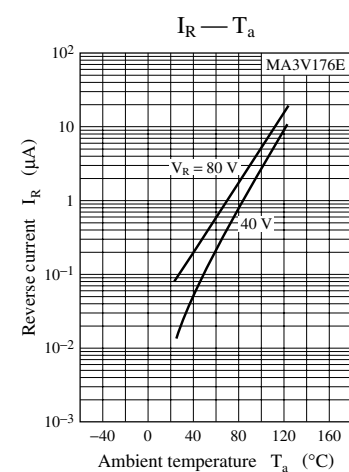
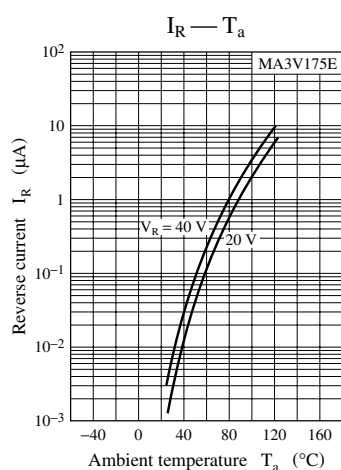
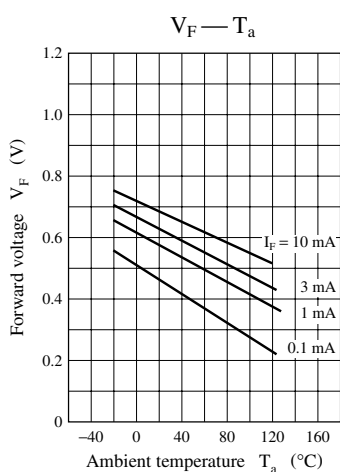
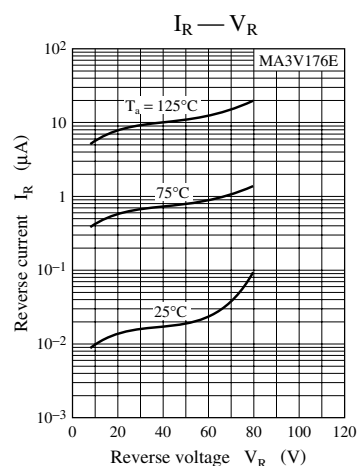
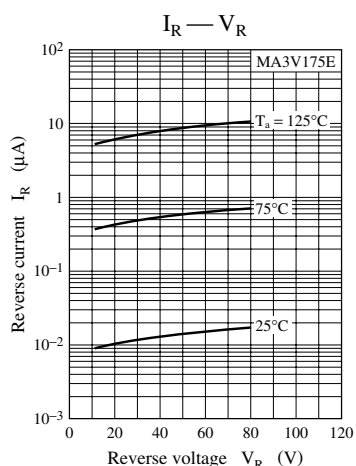
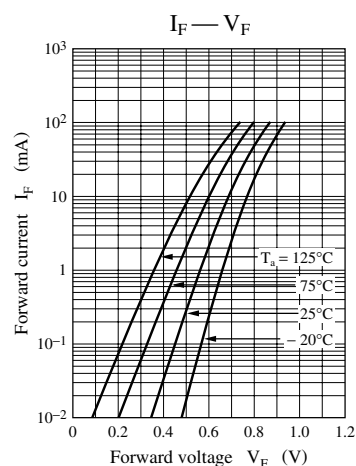


Note) The part numbers in the parenthesis show conventional part number.



## Internal Connection





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