

Switching Diodes

Panasonic**MA3V175E, MA3V176E (MA175WK, MA176WK)**

Silicon epitaxial planar type

For switching circuits

■ Features

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

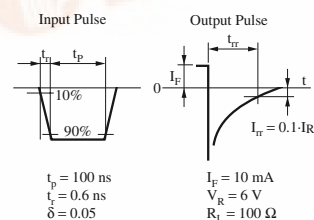
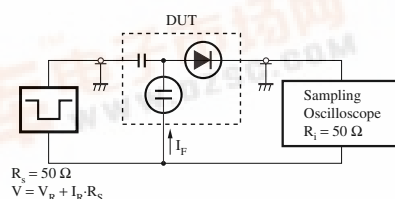
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Reverse voltage (DC)	MA3V175E V_R	40	V
	MA3V176E	80	
Peak reverse voltage	MA3V175E V_{RM}	40	V
	MA3V176E	80	
Forward current (DC)	Single I_F	100	mA
	Double	150	
Peak forward current	Single I_{FM}	225	mA
	Double	340	
Non-repetitive peak forward surge current*	Single I_{FSM}	500	mA
	Double	750	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

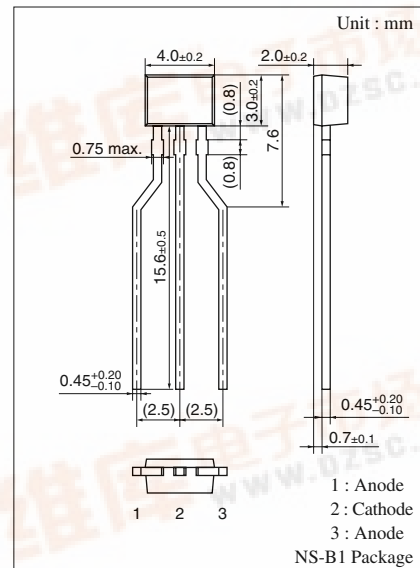
Note) * : $t = 1\text{ s}$ ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse current (DC)	MA3V175E I_R	$V_R = 35\text{ V}$			0.1	μA
	MA3V176E	$V_R = 75\text{ V}$			0.1	
Forward voltage (DC)	V_F	$I_F = 100\text{ mA}$			1.2	V
Reverse voltage (DC)	MA3V175E V_R	$I_R = 100\text{ }\mu\text{A}$	40			V
	MA3V176E		80			
Terminal capacitance	C_t	$V_R = 0\text{ V}, f = 1\text{ MHz}$			4	pF
Reverse recovery time*	t_{rr}	$I_F = 10\text{ mA}, V_R = 6\text{ V}$			3	ns
		$I_{rr} = 0.1 \cdot I_R, R_L = 100\Omega$				

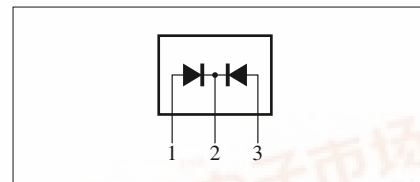
Note) 1. Rated input/output frequency: 100 MHz

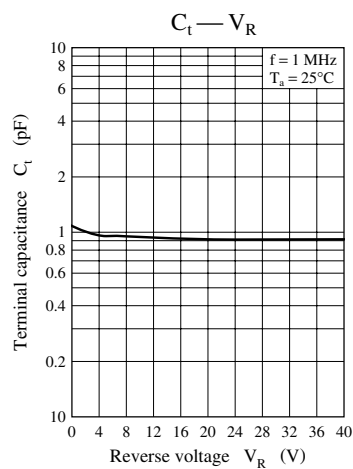
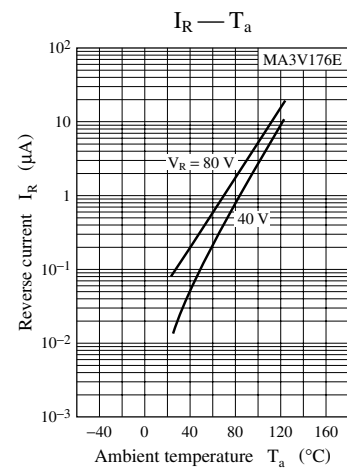
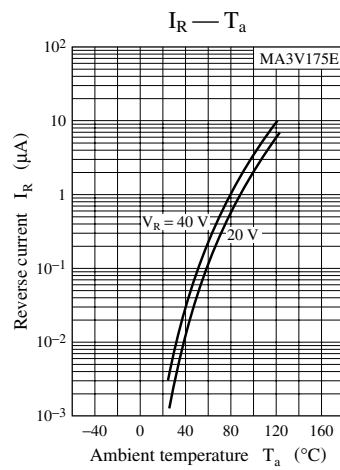
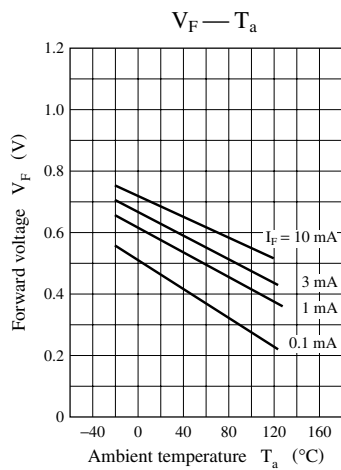
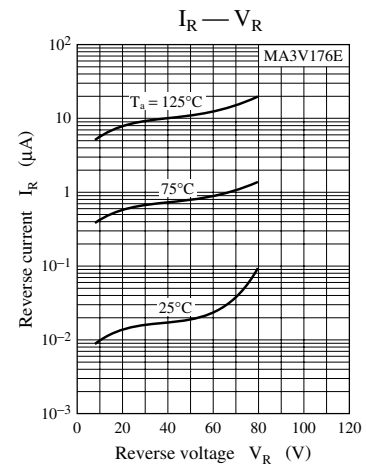
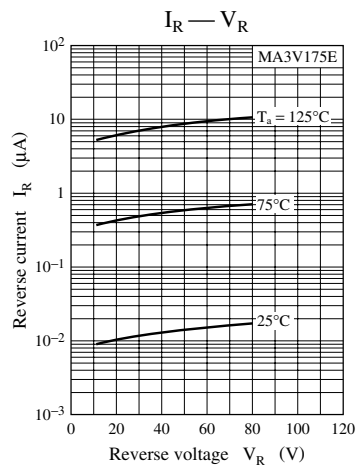
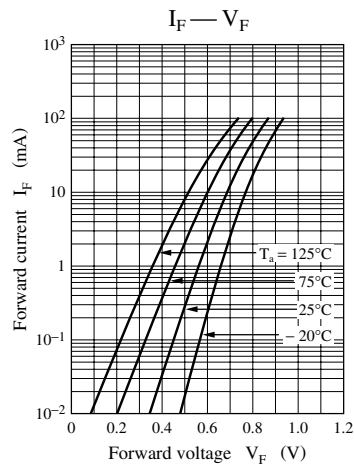
2. * : t_{rr} measuring circuit

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



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