



TAYCHIPST

SURFACE MOUNT SUPER FAST RECTIFIERS

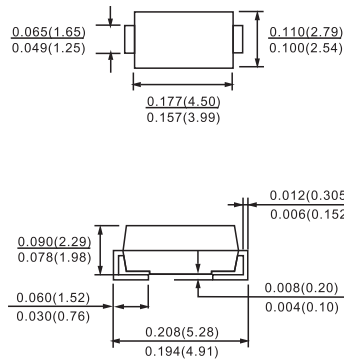
ES2A THRU ES2J

50V-600V 2.0A

Features

- For surface mount applications.
- Glass passivated junction.
- Low profile package.
- Easy pick and place.
- Built-in strain relief.
- Superfast recovery times for high efficiency.

DO-214AC(SMA)



Dimensions in inches and (millimeters)

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
I_o	Average Rectified Current .375" lead length @ $T_A = 110^\circ\text{C}$	2.0	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	50	A
P_D	Total Device Dissipation Derate above 25°C	1.66 13.3	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient**	75	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead**	20	$^\circ\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-50 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	-50 to +150	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.
Device mounted on FR-4 PCB 0.013 mm.

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Parameter	Device				Units
	2A	2B	2C	2D	
Peak Repetitive Reverse Voltage	50	100	150	200	V
Maximum RMS Voltage	35	70	105	140	V
DC Reverse Voltage (Rated V_R)	50	100	150	200	V
Maximum Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$		10 350			μA μA
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$, $I_R = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$		20			nS
Maximum Forward Voltage @ 2.0 A		0.90			V
Typical Junction Capacitance $V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$		18			pF



TAYCHIPST

SURFACE MOUNT SUPER FAST RECTIFIERS

ES2A THRU ES2J

50V-600V 2.0A

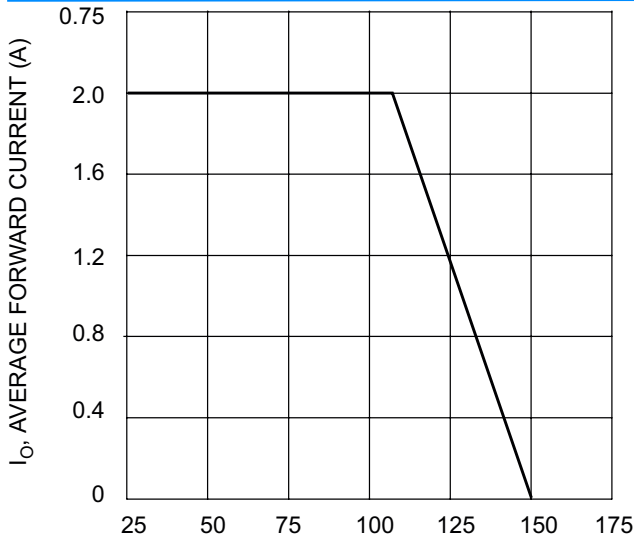


Fig. 1 Forward Current Derating Curve

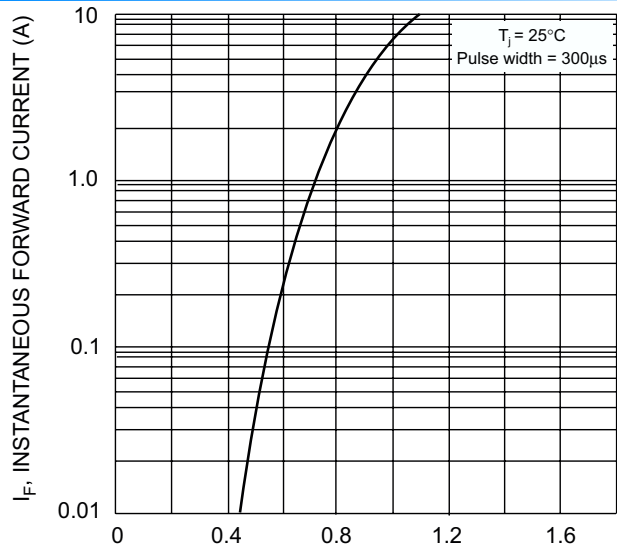


Fig. 2 Typical Forward Characteristics

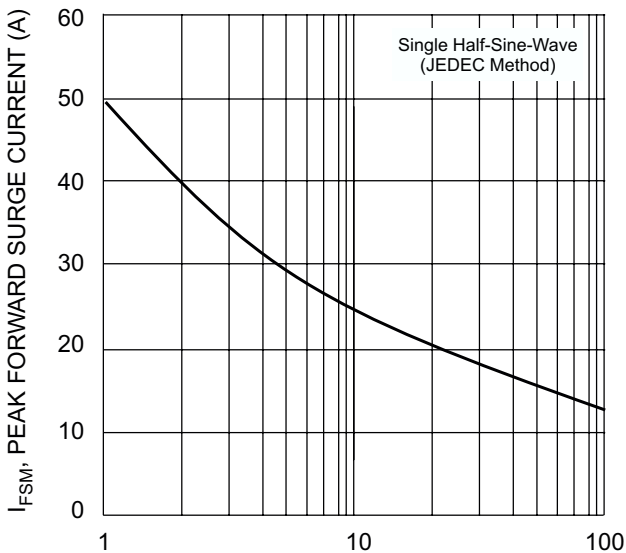


Fig. 3 Surge Current Derating Curve

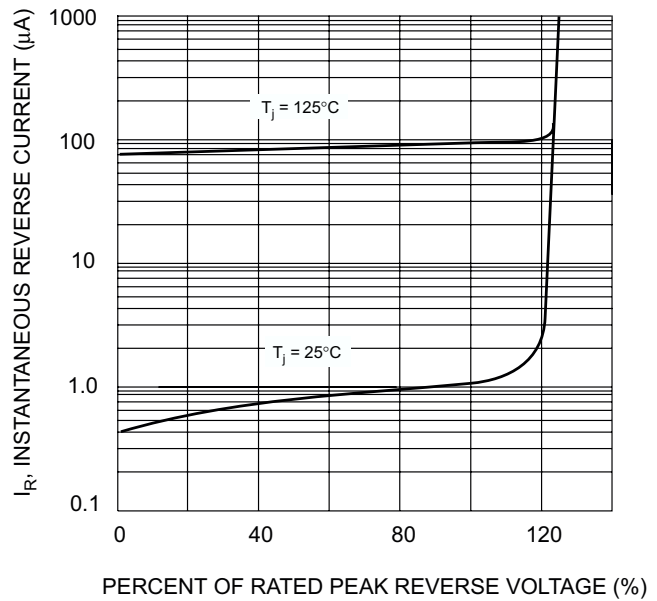
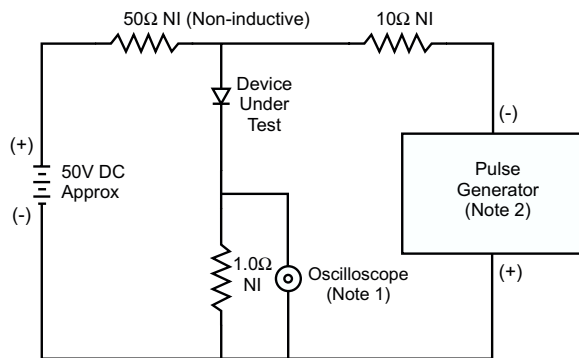
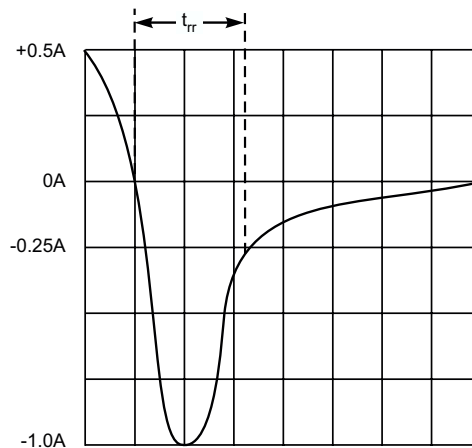


Fig. 4 Typical Reverse Characteristics



Notes:
 1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit