

■ Features

- Glass passivated junction chip
- Ideal for automated placement
- Super fast recovery time for high efficiency
- Comply with RoHS standard, halogen-free

■ Mechanical Data

- package:SMB/DO-214AA
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

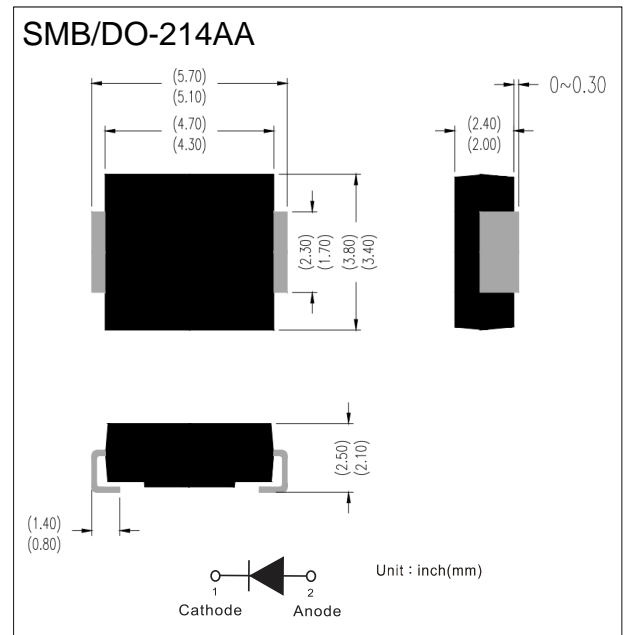
■ Absolute Maximum Ratings($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	UNIT
Repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Reverse voltage, total rms value	$V_{R(RMS)}$	30	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Forward current	$I_{F(AV)}$	3								A
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load per diode	I_{FSM}	100								A
Junction temperature	T_J	- 55 to +150								$^\circ\text{C}$
Storage temperature	T_{STG}	- 55 to +150								$^\circ\text{C}$

■ Thermal Performance($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	24	$^\circ\text{C/W}$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	84	$^\circ\text{C/W}$
Junction-to-case thermal resistance	$R_{\theta JC}$	26	$^\circ\text{C/W}$

Note: Units mounted on recommended PCB (10mm x 10mm Cu pad test board)



Electrical Specifications ($T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER		CONDITIONS	SYMBOL	TYP	MAX	UNIT	
Forward voltage per diode ⁽¹⁾	ES3A ES3B ES3C ES3D	$I_F = 1.5\text{A}, T_J = 25^\circ\text{C}$	V_F	0.80	0.92	V	
	ES3F ES3G			0.90	1.04	V	
	ES3H ES3J			1.11	1.30	V	
	ES3A ES3B ES3C ES3D	$I_F = 3.0\text{A}, T_J = 25^\circ\text{C}$	V_F	0.86	1.00	V	
	ES3F ES3G			0.98	1.13	V	
	ES3H ES3J			1.24	1.45	V	
	ES3A ES3B ES3C ES3D	$I_F = 1.5\text{A}, T_J = 125^\circ\text{C}$	V_F	0.66	0.75	V	
				ES3F ES3G	0.73	0.85	V
				ES3H ES3J	0.85	0.98	V
	ES3A ES3B ES3C ES3D	$I_F = 3.0\text{A}, T_J = 125^\circ\text{C}$	V_F	0.73	0.84	V	
				ES3F ES3G	0.83	0.95	V
				ES3H ES3J	0.99	1.13	V
Reverse current @ rated V_R per diode ⁽²⁾		$T_J = 25^\circ\text{C}$	I_R	-	10	μA	
		$T_J = 125^\circ\text{C}$		-	100	μA	
Junction capacitance	ES3A ES3B ES3C ES3D	1 MHz, $V_R=4.0\text{V}$	C_J	46	-	pF	
	ES3F ES3G			41	-	pF	
	ES3H ES3J			34	-	pF	
Reverse recovery time		$I_F=0.5\text{A}, I_R=1.0\text{A}$ $I_{RR}=0.25\text{A}$	t_{rr}	-	35	ns	

Notes:

1. Pulse test with $PW=0.3\text{ ms}$
2. Pulse test with $PW=30\text{ ms}$



■ Characteristics Curves($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Forward Current Derating Curve

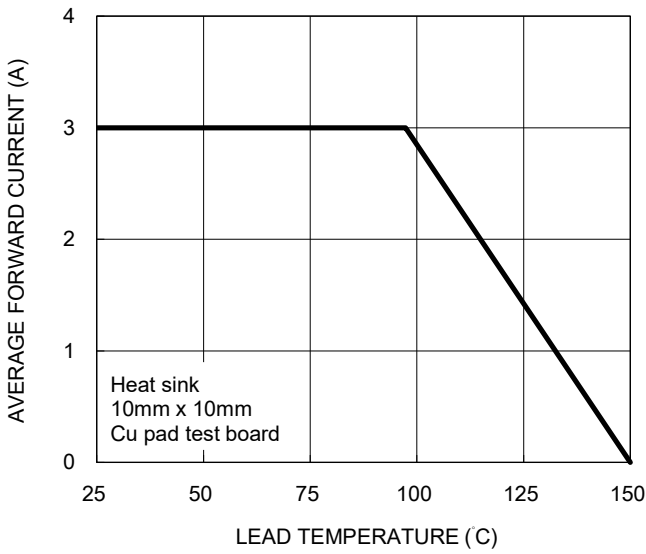


Fig.2 Typical Junction Capacitance

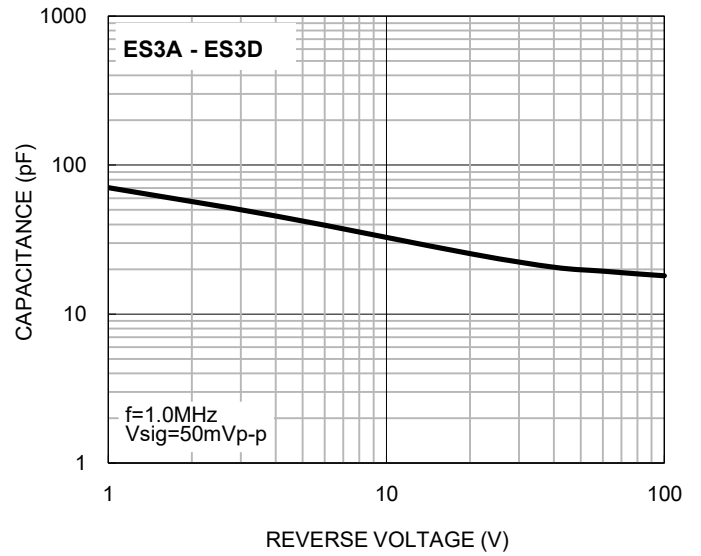


Fig.3 Typical Reverse Characteristics

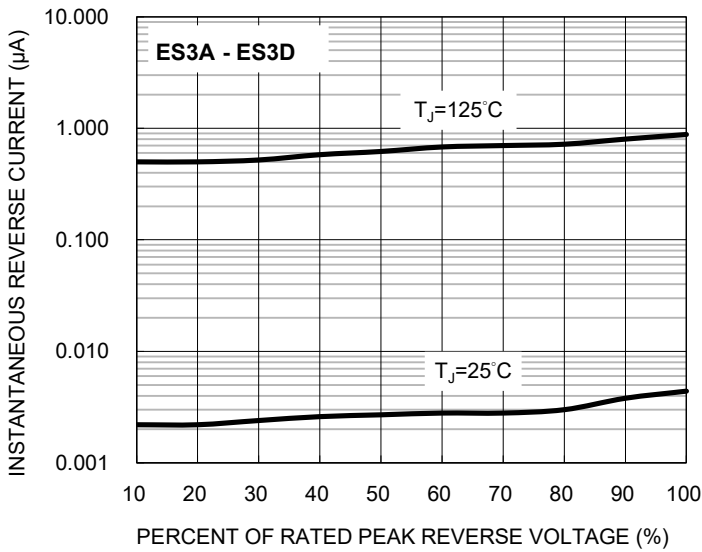


Fig.4 Typical Forward Characteristics

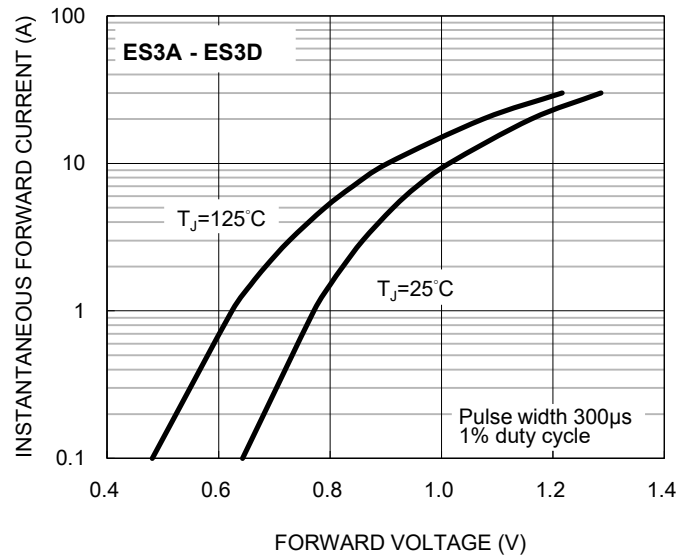


Fig.5 Typical Junction Capacitance

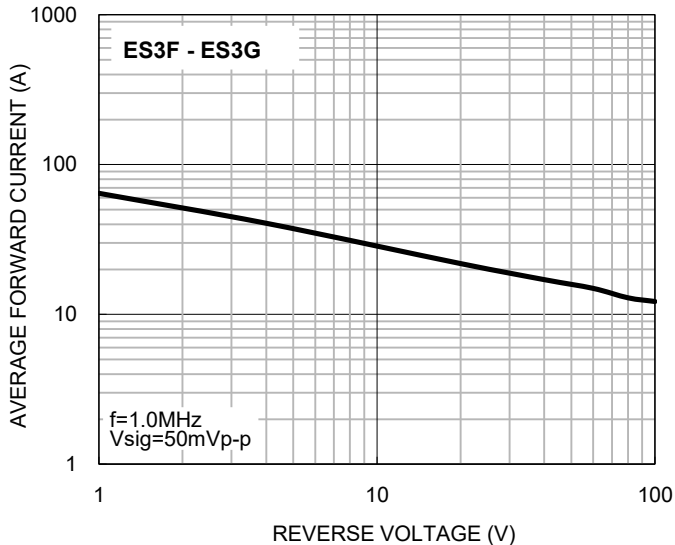


Fig.6 Typical Reverse Characteristics

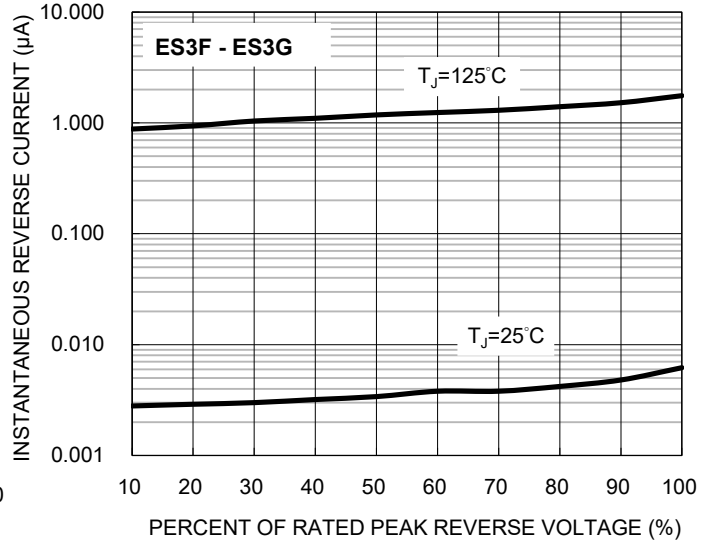




Fig.7 Typical Forward Characteristics

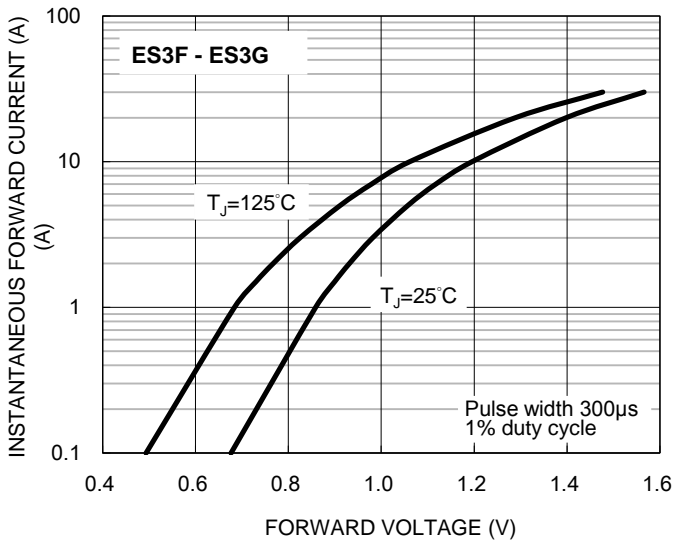


Fig.8 Typical Junction Capacitance

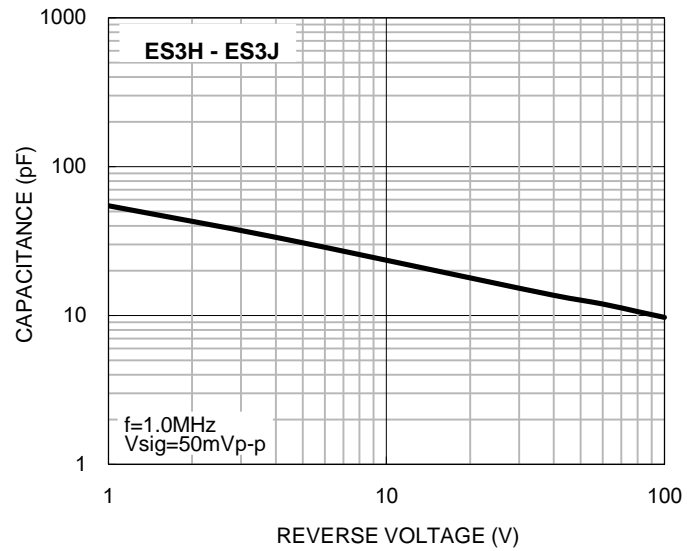


Fig.9 Typical Reverse Characteristics

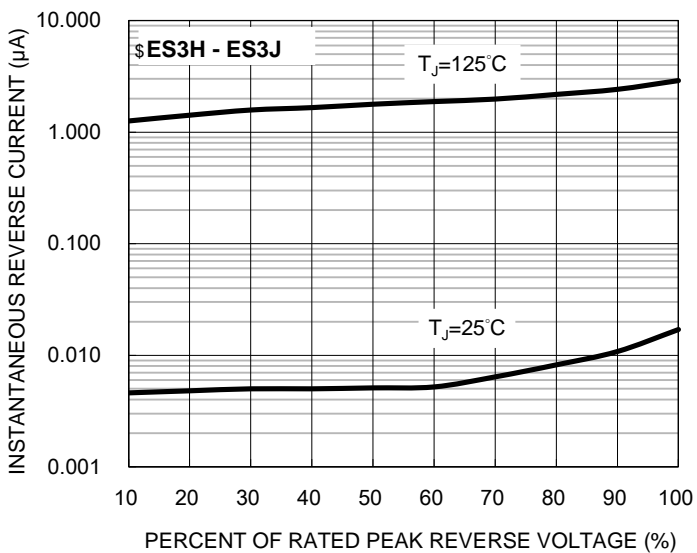


Fig.10 Typical Forward Characteristics

