

2A, 200V-1000V Fast Recovery Surface Mount Rectifier

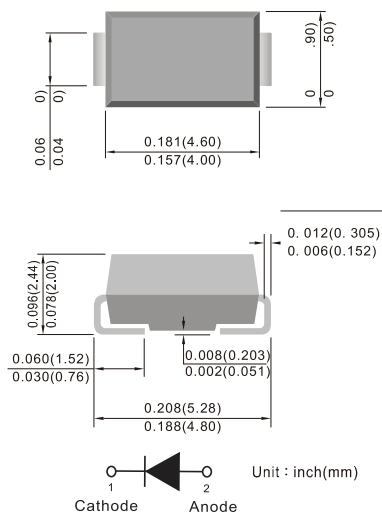
Features

- Glass passivated junction chip
- Ideal for automated placement
- Fast switching for high efficiency
- Comply with RoHS standard, halogen-free

Mechanical Data

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

SMA/DO-214AC



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

Parameter		Symbol	RS2DA	RS2GA	RS2JA	RS2KA	RS2MA	Unit
Repetitive peak reverse voltage		V_{RRM}	200	400	600	800	1000	V
Reverse voltage, total rms value		$V_{R(RMS)}$	140	280	420	560	700	V
DC blocking voltage		V_{DC}	200	400	600	800	1000	V
Forward current		I_F	2					A
Surge peak forward current single half sine-wave superimposed on rated load per diode	8.3 ms at $T_A=25^\circ\text{C}$	I_{FSM}	50					A
	1.0 ms at $T_A=25^\circ\text{C}$		124					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	Typ	Unit
Junction-to-lead thermal resistance per diode	$R_{\theta JL}$	14	$^\circ\text{C/W}$
Junction-to-ambient thermal resistance per diode	$R_{\theta JA}$	86	$^\circ\text{C/W}$
Junction-to-case thermal resistance per diode	$R_{\theta JC}$	23	$^\circ\text{C/W}$

Note: Units mounted on PCB (5mm x 5mm Cu pad test board)

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

Parameter		Conditions	Symbol	Typ	MAX	Unit
Forward voltage per diode ⁽¹⁾	RS2DA to RS2GA	I _F = 1A, T _J = 25°C	V _F	1.01	-	V
		I _F = 2A, T _J = 25°C		1.11	1.3	V
		I _F = 1A, T _J = 125°C		0.87	-	V
		I _F = 2A, T _J = 125°C		0.98	1.12	V
	RS2JA	I _F = 1A, T _J = 25°C		1.02	-	V
		I _F = 2A, T _J = 25°C		1.12	1.3	V
		I _F = 1A, T _J = 125°C		0.91	-	V
		I _F = 2A, T _J = 125°C		1.01	1.07	V
	RS2KA to RS2MA	I _F = 1A, T _J = 25°C		0.95	-	V
		I _F = 2A, T _J = 25°C		1.03	1.3	V
		I _F = 1A, T _J = 125°C		0.81	-	V
		I _F = 2A, T _J = 125°C		0.90	1.03	V
Reverse current @ rated V _R per diode ⁽²⁾		T _J = 25°C	I _R	-	5	μA
		T _J = 125°C		-	100	μA
Reverse recovery time	RS2DA to RS2GA	I _F =0.5A,I _R =1.0A, I _{rr} =0.25A	t _{rr}	-	150	ns
	RS2JA			-	250	ns
	RS2KA to RS2MA			-	500	ns
Junction capacitance per diode	RS2DA to RS2GA	1 MHz, V _R =4.0V	C _J	14	-	pF
	RS2JA			13	-	pF
	RS2KA to RS2MA			10	-	pF

Notes:

(1) Pul se test with $PW=0.3\text{ ms}$ (2) Pul se test with $PW=30\text{ ms}$

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

Fig.1 Forward Current Derating Curve

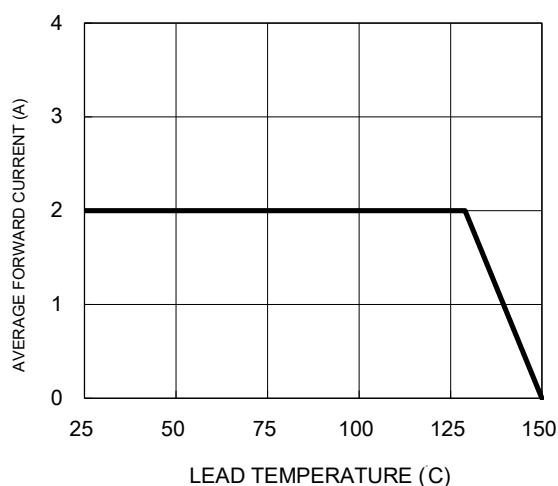


Fig.2 Typical Junction Capacitance

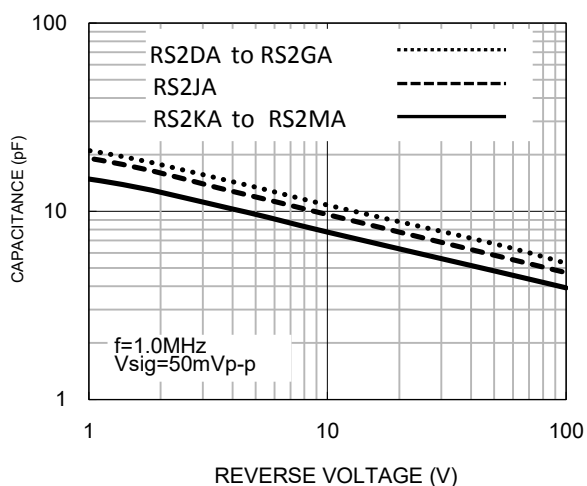




Fig.3 Typical Reverse Characteristics

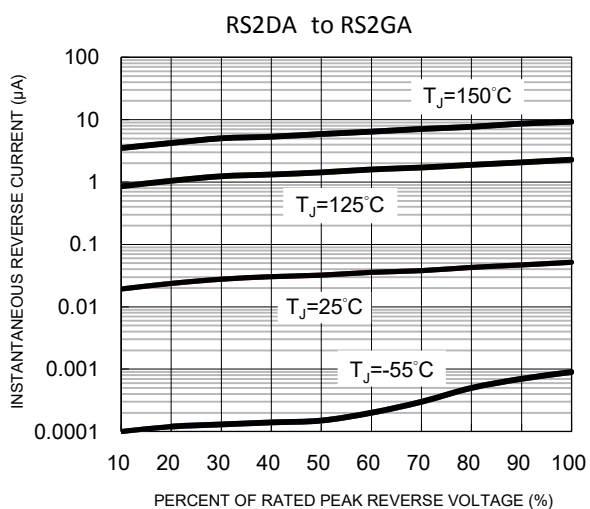


Fig.4 Typical Forward Characteristics

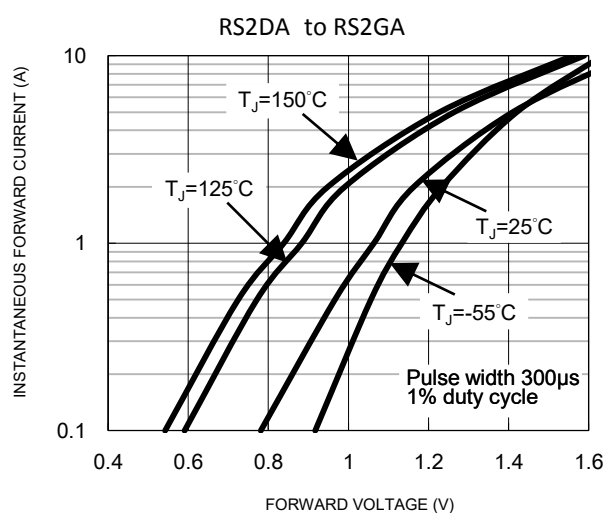


Fig.5 Typical Reverse Characteristics

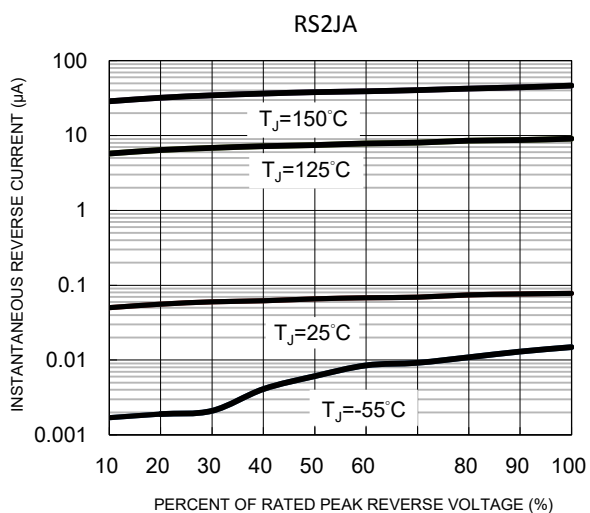


Fig.6 Typical Forward Characteristics

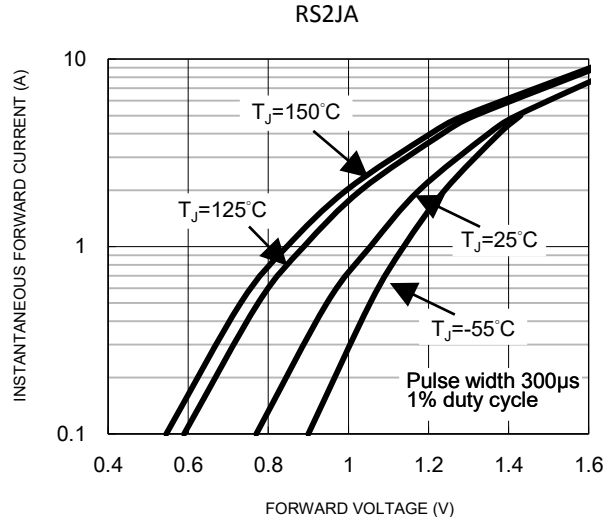


Fig.7 Typical Reverse Characteristics

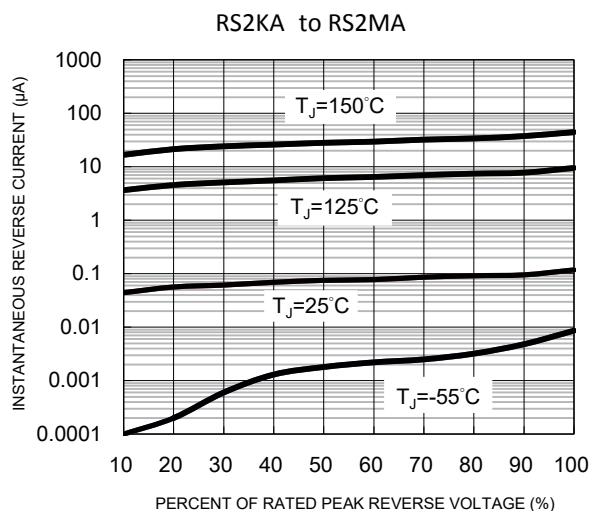


Fig.8 Typical Forward Characteristics

