

FSB025C40C/A/S-T23-H

List

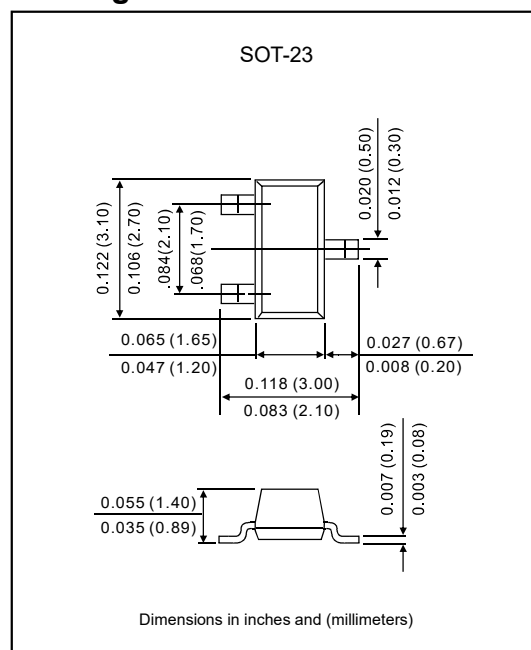
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FSB025C40C/A/S-T23-H**250mA 40V Small Signal
Schottky Diodes****Features**

- For low-loss, fast recovery, meter protection, bias isolation and clamping applications.
- Integrated diffused guard ring.
- Low forward voltage.
- Lead-free parts meet RoHS requirements.
- Halogen-free (IEC61249-2-21) .

Mechanical data

- Epoxy:UL94-V0 rated flame retardant.
- Case : Molded plastic, SOT-23.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026.
- Mounting Position : Any.

Package outline**Maximum ratings** (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

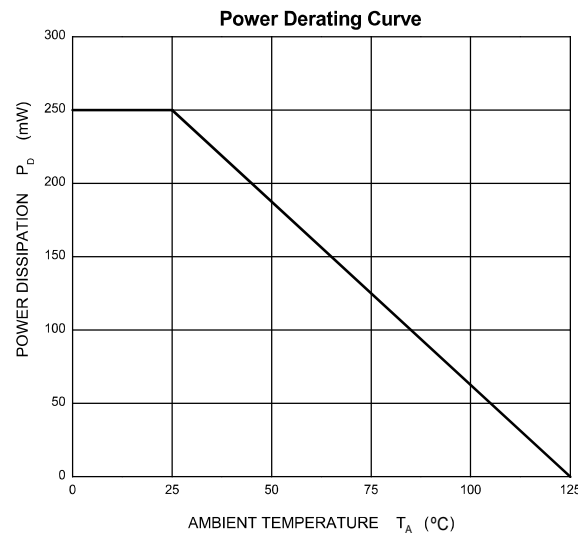
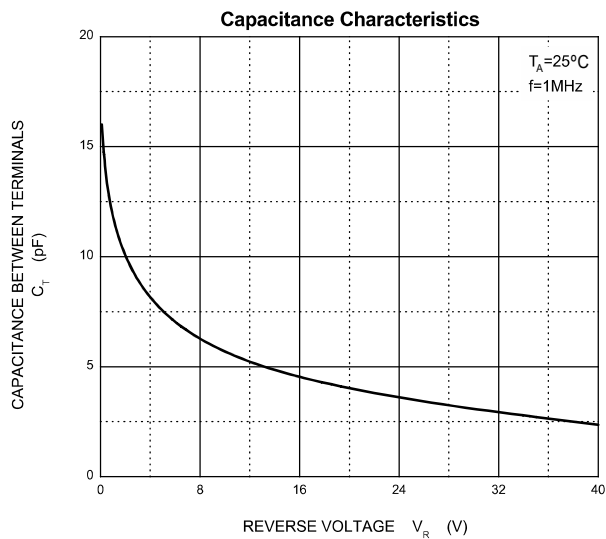
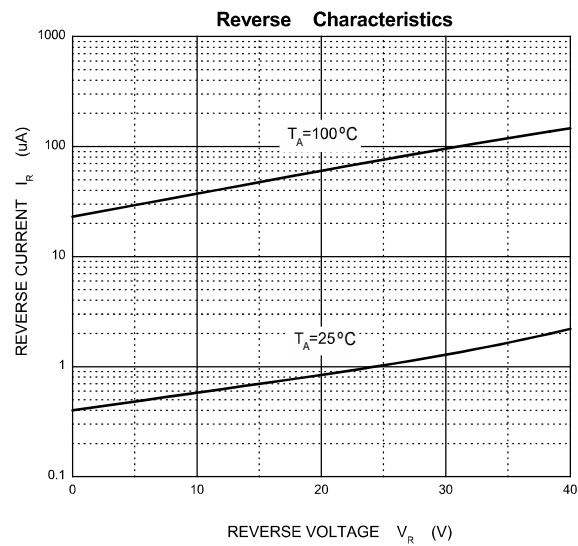
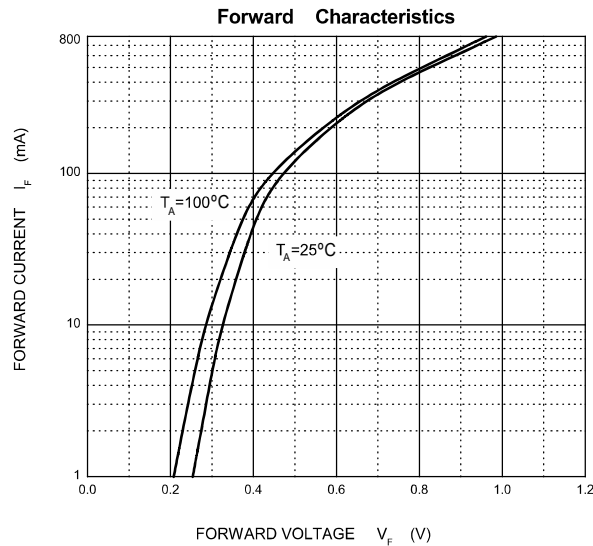
Parameter	Symbol	Ratings	Units
Peak reverse voltage	V_{RRM}	40	V
DC reverse voltage	V_R	40	V
Non-repetitive peak forward surge current @t=8.3ms	I_{FSM}	0.8	A
Forward current	I_F	0.25	A
Power dissipation	P_D	250	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	400	$^{\circ}\text{C/W}$
Operating junction temperature range	T_J	-40 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R=10\mu\text{A}$	V_{BR}	40			V
Forward voltage	$I_F=1\text{mA}$	V_F			350	mV
	$I_F=10\text{mA}$				430	
	$I_F=30\text{mA}$				520	
	$I_F=100\text{mA}$				750	
Reverse current	$V_R=25\text{V}$	I_R			2	μA
Capacitance between terminals	$V_R=1\text{V}$, $f=1.0\text{MHz}$	C_T		6		pF

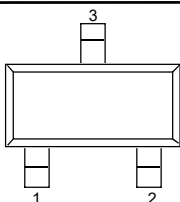
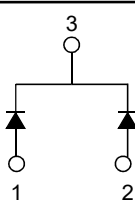
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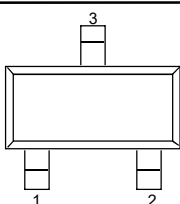
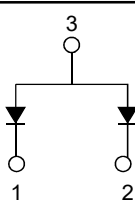
Rating and characteristic curves

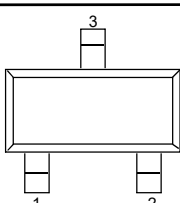
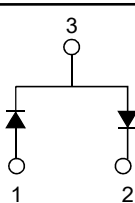


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Pinning information

Type number	Simplified outline	Symbol
FSB025C40C-T23-H		

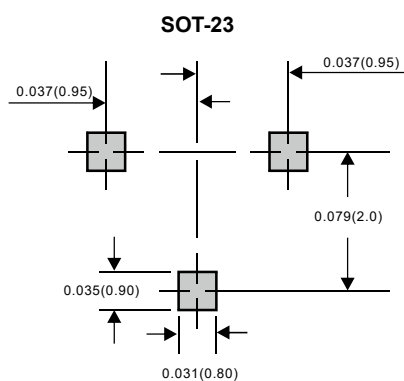
Type number	Simplified outline	Symbol
FSB025C40A-T23-H		

Type number	Simplified outline	Symbol
FSB025C40S-T23-H		

Marking

Type number	Marking code
FSB025C40C-T23-H	65S
FSB025C40A-T23-H	66S
FSB025C40S-T23-H	64S

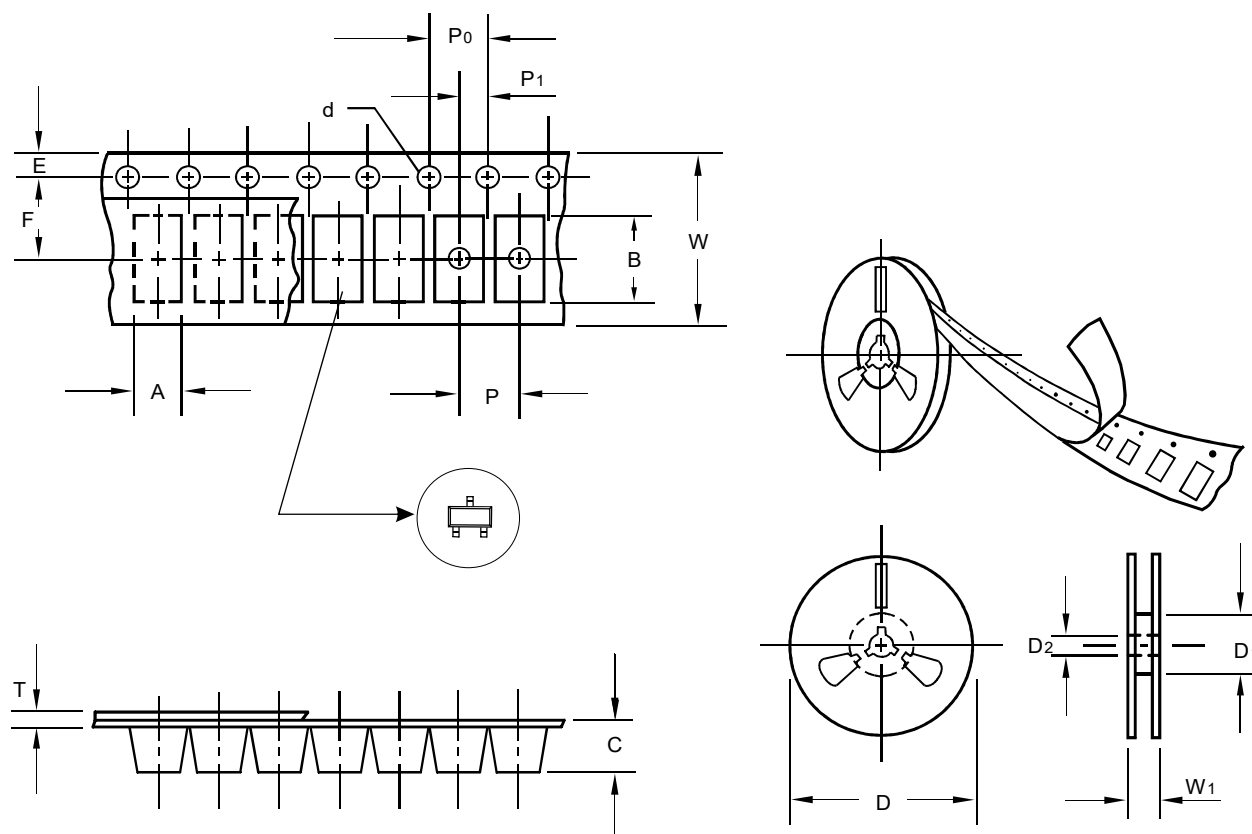
Suggested solder pad layout



Dimensions in inches and (millimeters)

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Packing information



unit:mm

Item	Symbol	Tolerance	SOT-23
Carrier width	A	0.1	3.15
Carrier length	B	0.1	2.77
Carrier depth	C	0.1	1.22
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D1	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	8.00
Reel width	W1	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

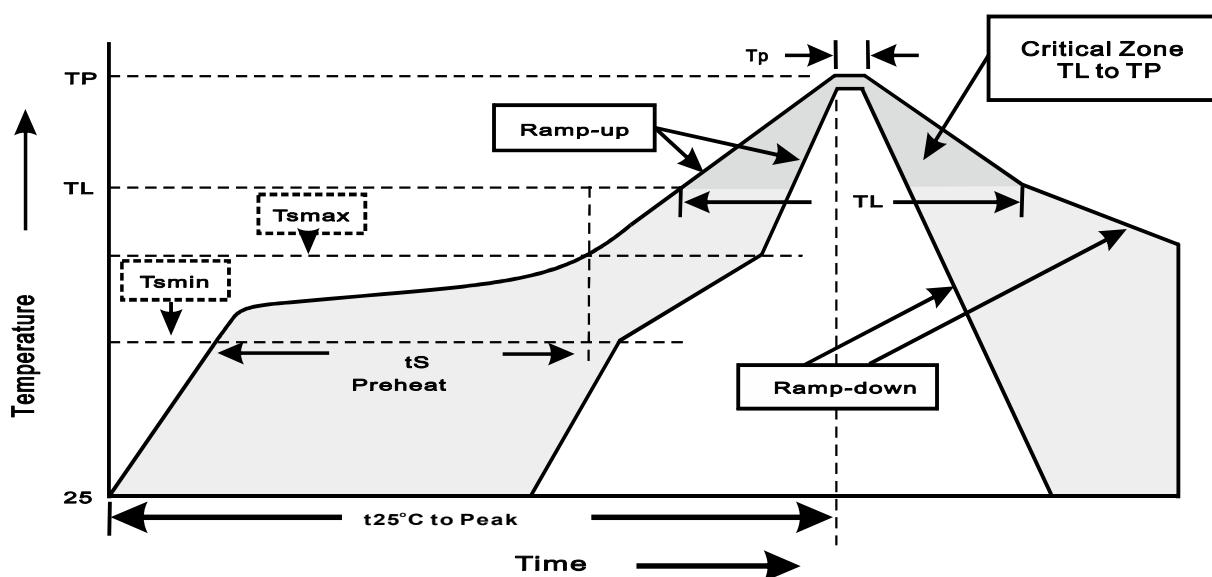
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Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)
SOT-23	7"	3,000	4.0	30,000	183*123*183	178	382*257*387	240,000

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{sm}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes