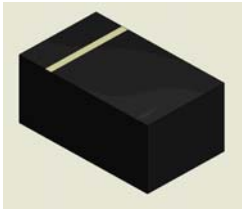




CD4448WQR

100mA 80V

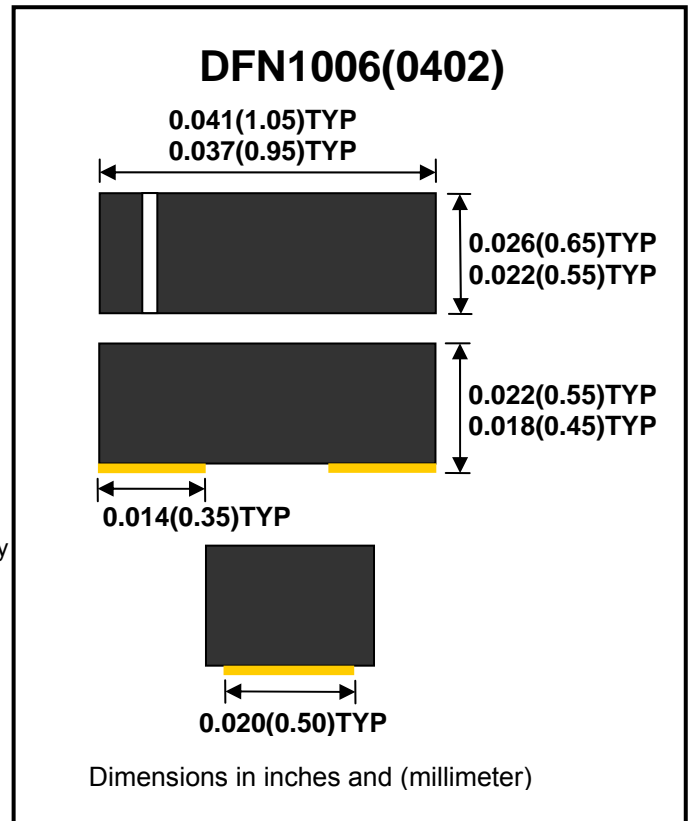


Features

- Designed for mounting on small surface
- Extremely thin/leadless package
- Low leakage current
- High mounting capability, strong surge withstand, high reliability
- Lead free and RoHS compliance components

MECHANICAL CHARACTERISTICS

- Case: DFN1006 (0402) mold package
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- Marking Code: Cathode band
- Mounting position: Any
- Weight: 0.001 gram(approx.)



Maxim Rating And ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

Parameter	Condition	Symbol	Min	Typ	Max	Unit
Repetitive peak reverse voltage		V _{RRM}			90	V
Reverse voltage		V _R			80	V
Average forward current		I _o			100	mA
Forward current surge peak	8.3ms single half sine-wave superimposed on rate load(JEDEC method)	I _{FSM}		1000		mA
Repetitive peak forward current		I _{FRM}			225	mA
Power Dissipation		P _D			125	mW
Storage/Operation temperature		T _{Sgt}	-55		+125	°C
Junction temperature		T _J			+125	°C
Forward voltage	I _F =100mA	V _F			1	V
Reverse current	V _R =80V	I _R			0.1	uA
Capacitance between terminals	f = 1 MHz, and 10 VDC reverse voltage	C _T			3	pF
Reverse recovery time	V _R = 6V ,I _F =10 mA, R _L =50 ohms	T _{rr}			4	nS



Typical Characteristics

Fig. 1 - Forward characteristics

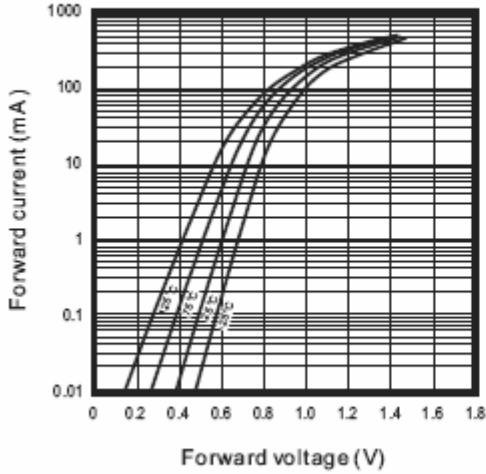


Fig. 2 - Reverse characteristics

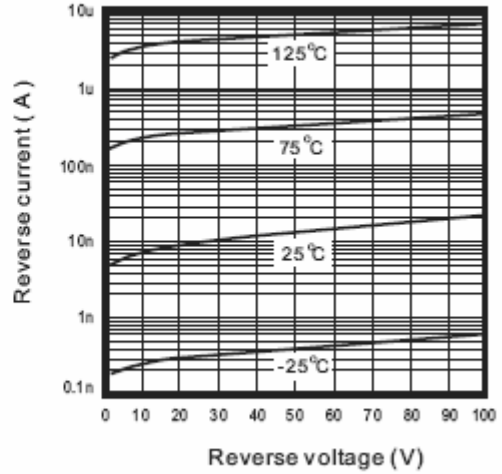


Fig. 3 - Capacitance between terminals characteristics

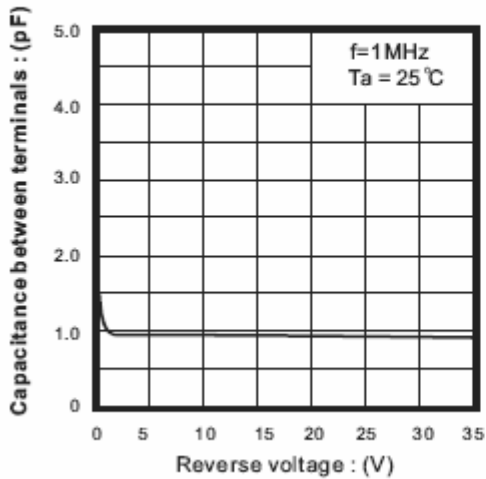
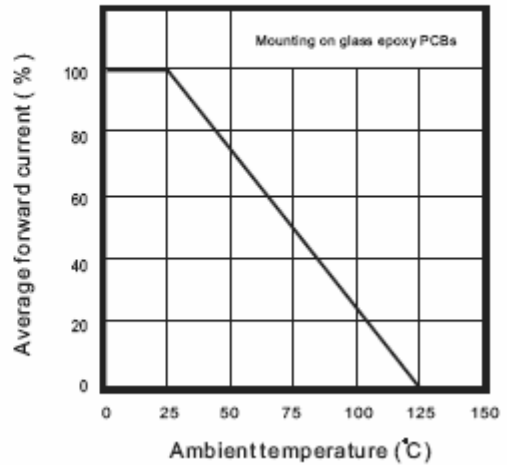


Fig. 4 - Current derating curve





Soldering Condition

Soldering Condition & Caution

<p>■ Recommended Soldering Condition (Refer to IPC/JEDEC J-STD-020D 4-1&5.2)</p>			
Recommended Profile Condition	Sn-Pb Soldering	Leadfree Soldering	Wave Soldering
Ramp-up rate (from pre-heat stage)	<3°C/s	<3°C/s	$\Delta T < 150^\circ\text{C}$
Pre-heat Temperature & Time	100-150 °C 60-120s	150-200 °C 60-120s	100-150 °C 60-120s
Soldering Temperature & Time	183 °C 60-150s	217 °C 60-150s	260±5°C 5±2s
Peak Temperature	230±5°C <260°C	245±5°C <260°C	260±5°C
Time within 5°C of peak temperature	10-20s	20-30s	-
Ramp-down rate	<6°C/s	<6°C/s	<6°C/s
Time 25°C to peak temperature	<6min	<8min	-
<p>Manual Soldering: Approx. 350°C for 3s, avoid solder iron tip direct touch the components body</p>			

Recommended Soldering Profile

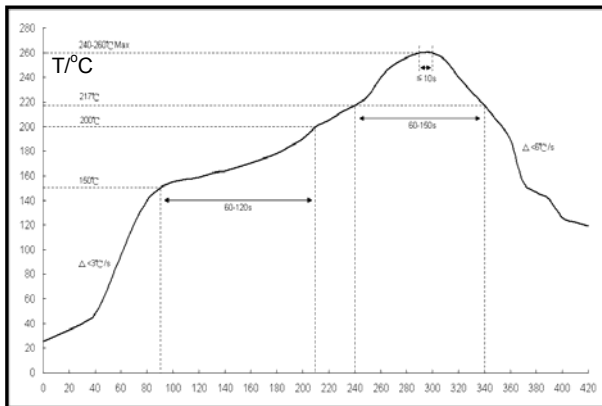


Fig1: Reflow soldering profile for lead-free solder (SnAuCu)

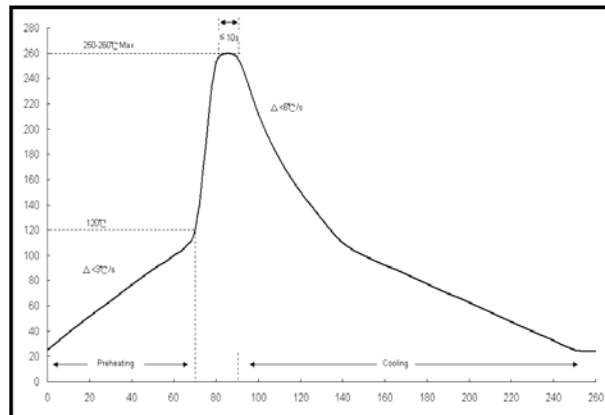
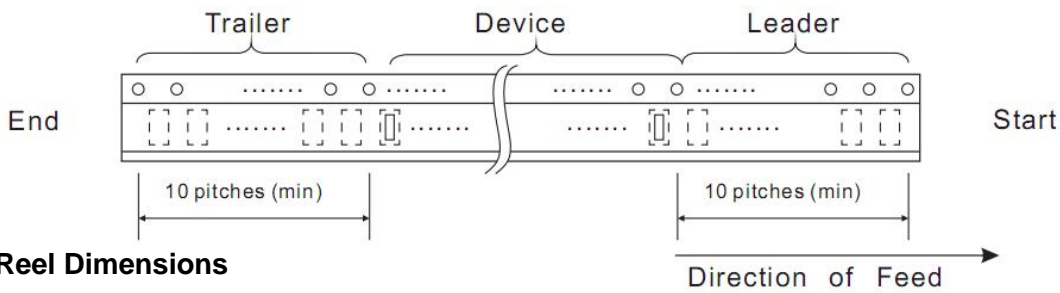
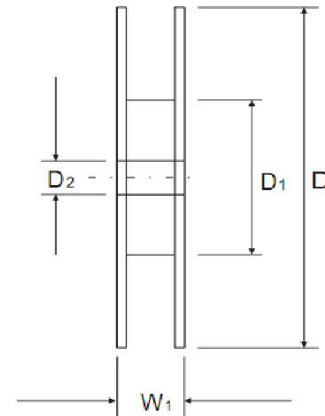
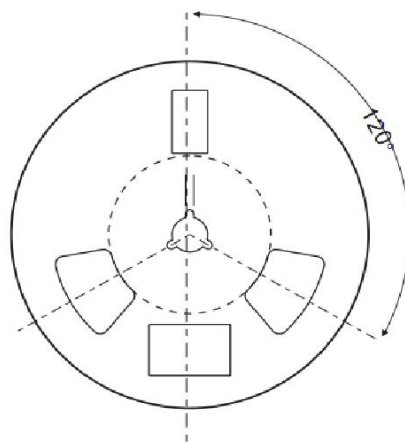
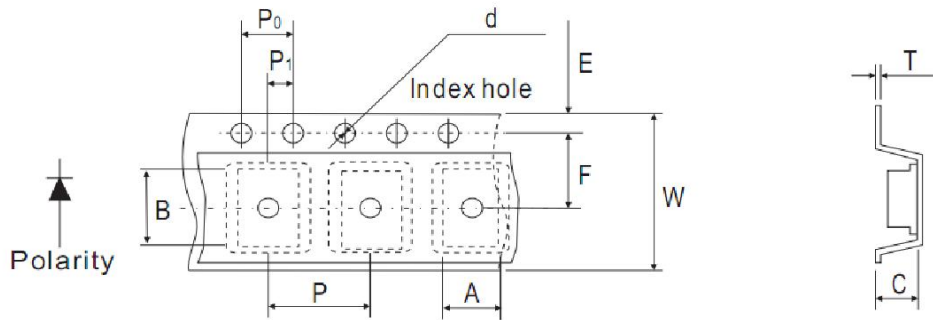


Fig2: Wave soldering profile



Packing Specification



Tape & Reel Dimensions

Package	Unit	A	B	C	d	D	D1	D2
DFN1006	mm	0.67±0.10	1.12±0.10	0.60±0.10	1.50±0.10	178±1	60MIN	13.0±0.20
	inch	0.026±0.004	0.044±0.004	0.024±0.004	0.060±0.004	7.008±0.04	2.362MIN	0.512±0.008

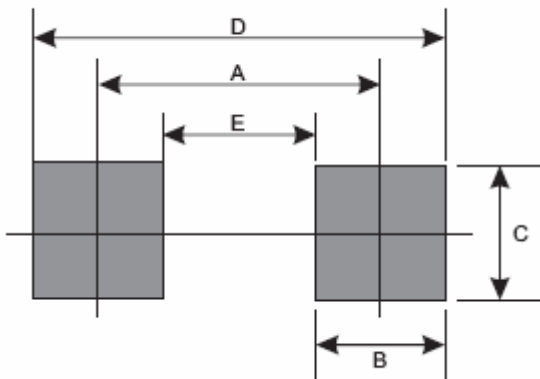
package	Unit	E	F	P	P0	P1	T	W	W1
DFN1006	mm	1.75±0.10	3.5±0.10	4.0±0.10	4.0±0.10	2.0±0.10	0.22±0.03	8.0±0.10	13.5MAX
	inch	0.069±0.004	0.138±0.004	0.157±0.004	0.157±0.004	0.079±0.004	0.009±0.002	0.315±0.004	0.531MAX



Standard Package

Package	Reel Size	Qty/Reel
DFN1006	7"	5000 pcs

RECOMMENDED SOLDERING FOOTPRINT



Reflow Soldering

Product Size	Dimension/ mm				
	A	B	C	D	E
DFN1006	0.750	0.500	0.700	1.250	0.250
	0.030"	0.020"	0.028"	0.049"	0.010"

Marking Code

Part Number	Marking Code
CD4448WQR	Cathode band



DISCLAIMERS

These products are not designed for use in applications where any failure or malfunction may result in personal injury, death or severe property or environmental damage such as medical, military, aircraft, space or life support equipments.