

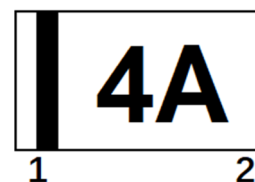
Features

- * Low forward voltage drop
- * Low reverse current
- * RoHS Compliant
- * REACH & SVHC Compliant
- * Halogen Compliant
- * DFN1006-2L Package

Package and Marking Diagram



DFN1006-2L



Top view

Circuit Diagram



Ordering Information

Part Number	Packaging	Reel Size
CTS05S40,L3F-CN	10000/Tape & Reel	7 inch

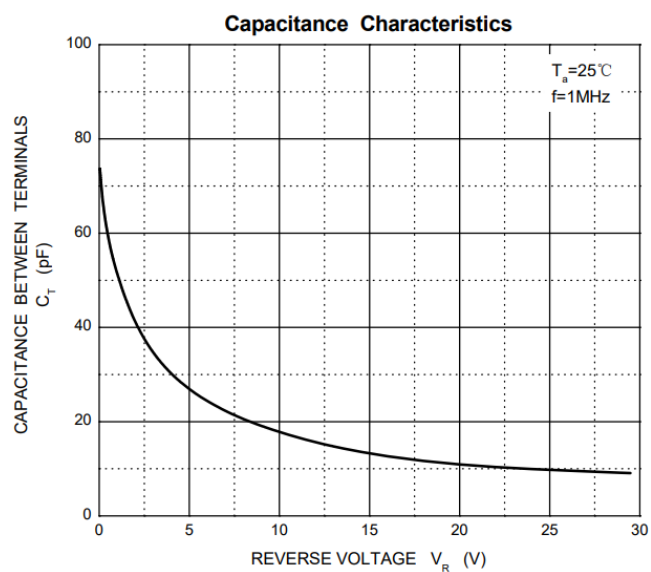
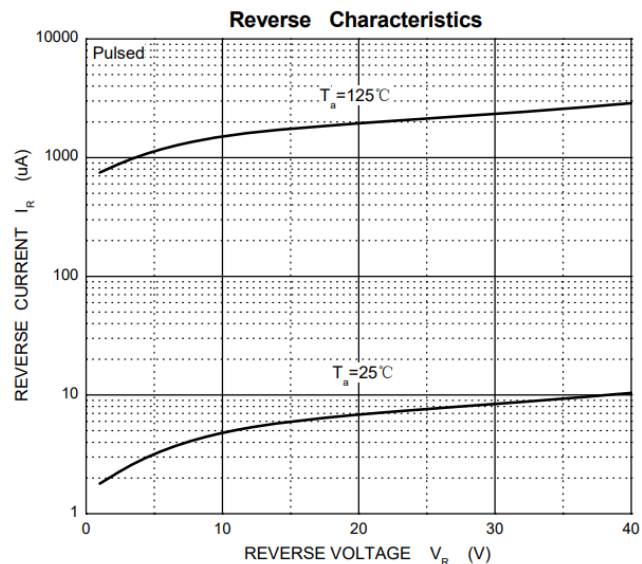
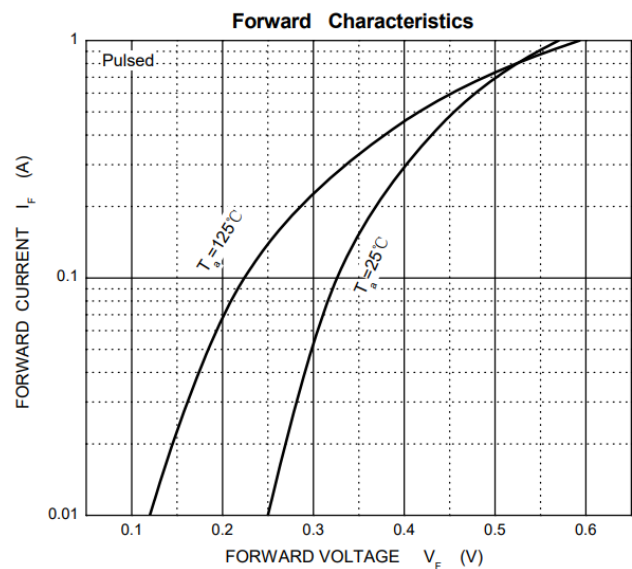
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	40	V
DC blocking voltage	V_R	40	V
RMS reverse voltage	$V_{R(RMS)}$	28	V
Continuous forward current	I_O	1	A
Non-repetitive peak forward current @ $t=8.3\text{ms}$	I_{FSM}	7	A
Power dissipation	P_D	500	mW
Junction temperature	T_J	-40 to +125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$

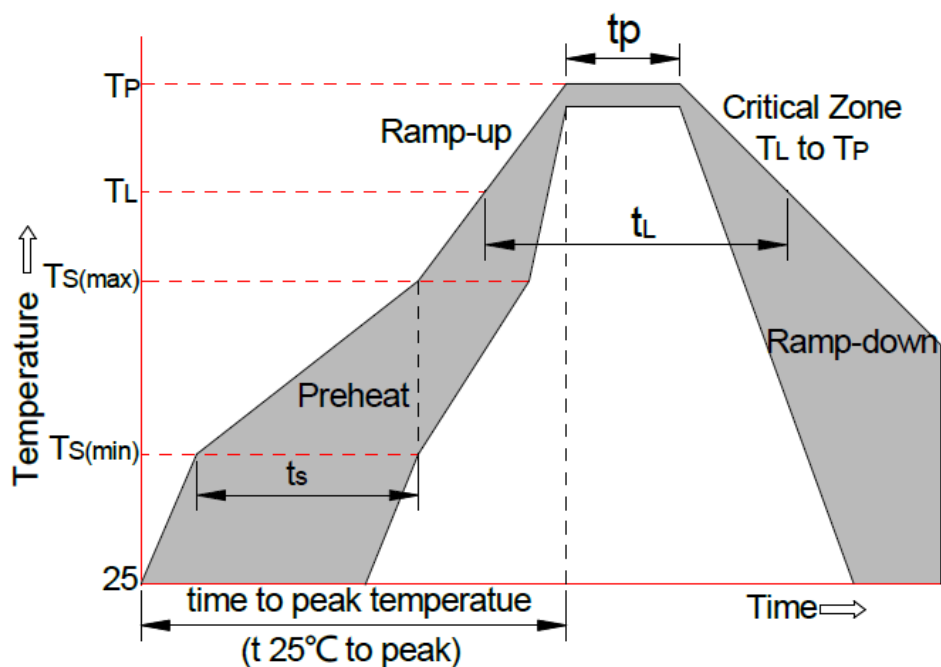
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_{BR}	$I_T = 1\text{mA}$	40			V
Reverse current	I_R	$V_R = 40\text{V}$		10	40	μA
Forward voltage	V_F	$I_F = 0.1\text{A}$		330	380	mV
Forward voltage	V_F	$I_F = 0.5\text{A}$		450	490	mV
Forward voltage	V_F	$I_F = 1\text{A}$		570	610	mV
Diode capacitance	C_D	$V_R = 10\text{V}, f = 1\text{MHz}$		19		pF

Typical Performance Characteristics

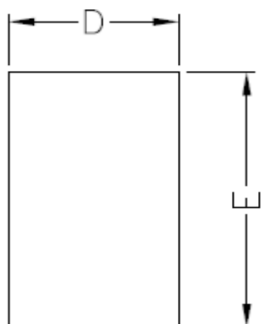


Soldering Parameters



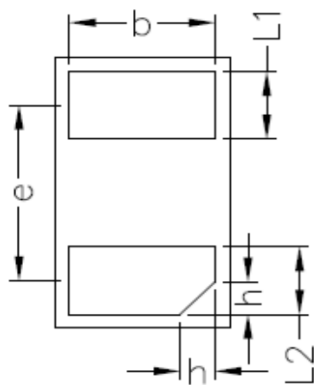
Reflow Conditions		Pb-Free Assembly
Pre-heat	-Temperature Min (T_S (min))	+150°C
	-Temperature Max (T_S (max))	+200°C
	-Time (Min to Max) (t_s)	60-180 secs
Average ramp up rate(Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{S(max)}$ to T_L -Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature (T_L) (Liquid us)	+217°C
	-Temperature (t_L)	60-150 secs
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6 °C/secs. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C

DFN1006-2L Package Outline Drawing

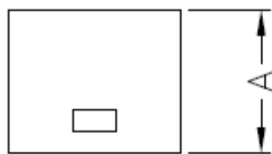


TOP VIEW

SYM	DIMENSIONS					
	MILLIMETERS			INCHES		
	Min	Typ	Max	Min	Typ	Max
A	0.50	0.55	0.60	0.020	0.022	0.024
D	0.55	0.60	0.65	0.022	0.024	0.026
E	0.95	1.00	1.05	0.037	0.039	0.041
L1	0.20	0.25	0.30	0.008	0.010	0.012
L2	0.20	0.25	0.30	0.008	0.010	0.012
b	0.45	0.50	0.55	0.018	0.020	0.022
e	0.65 BSC			0.026 BSC		
h	0.07	0.12	0.17	0.003	0.005	0.007

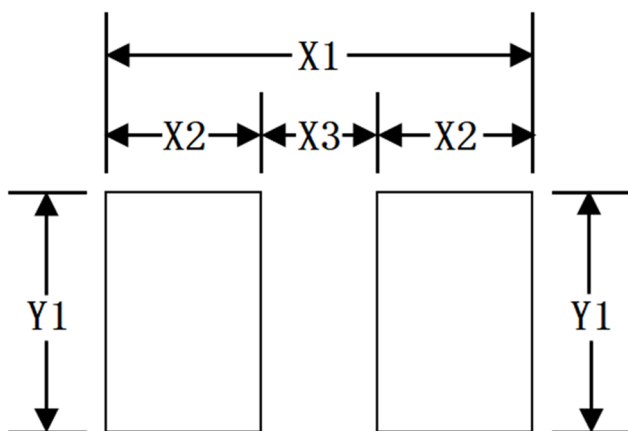


BOTTOM VIEW



SIDE VIEW

Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
X1	1.10	0.044
X2	0.40	0.016
X3	0.30	0.012
Y1	0.60	0.024

Note:

1. General tolerance: ± 0.05 mm or ± 0.002 inch.
2. The land pattern is for reference purposes only.

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