

# FrelTec

Mathildenstr. 10A  
82319 Starnberg  
Germany

Fast Recover Rectifier  
2CL

## 2CL

## SPECIFICATION

683	2CL0_ xxxx	2CLX	B05
Type	Type	Package	Packing
683: Fast Recover Rectifier	2CL0_	2CL	B05: tape in box (paper tape) for 5k pc

All products according to RoHS (2015/863/EU)

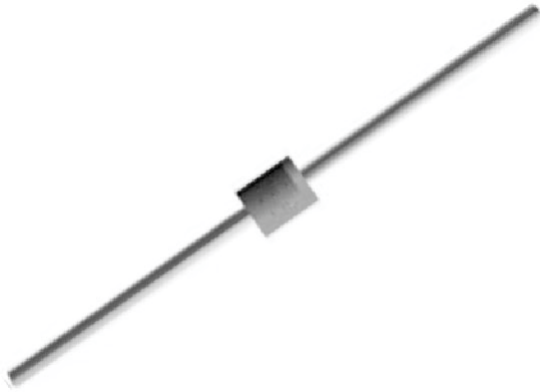
FrelTec

2CL

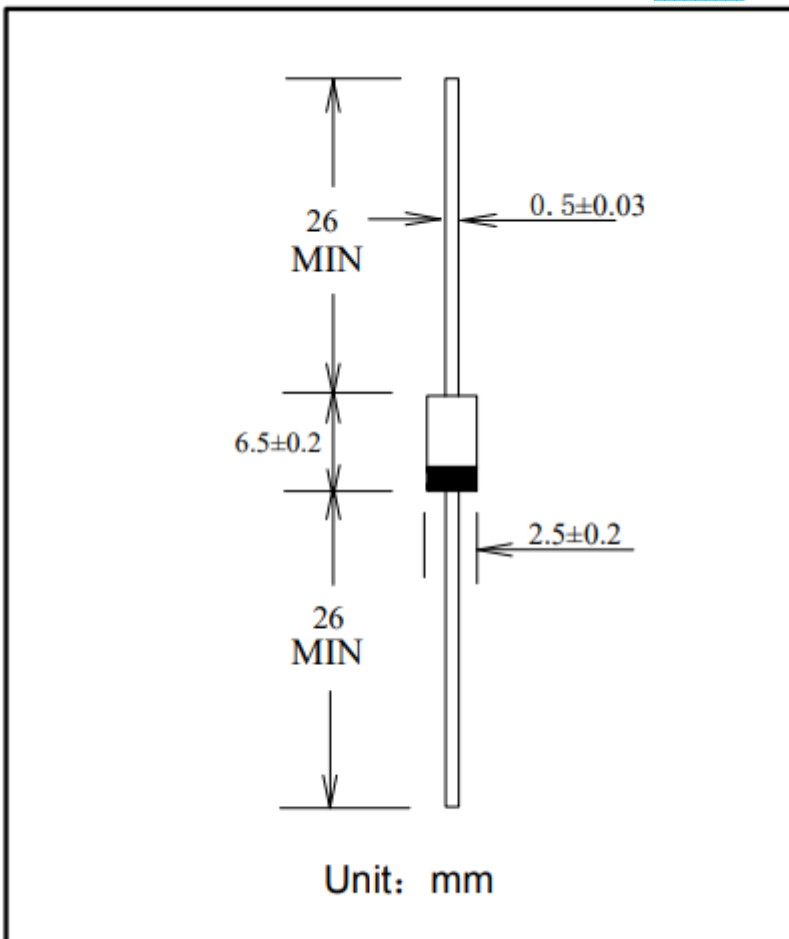
FrelTec  
Fast Recover Rectifier

2CL0\_

**PACKAGE OUTLINE**



FrelTec



## 2CL

## Maximum Ratings &amp; Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Parameter	Symbols	2CL03	2CL03S	2CL04	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	3		4	KV
Average Forward Current (50HZ half-sine wave, Resistance load $T_a=25^\circ\text{C}$ )	$I_{F(AV)}$	5			mA
Non-Repetitive Forward Surge Current (50HZ half-sine wave, 1/2 cycle, $T_a = 25^\circ\text{C}$ )	$I_{FSM}$	0.5			A
Ambient Temperature	$T_{amb}$	-40 --- +100			$^\circ\text{C}$
Maximum Junction Temperature	$T_{(vJ)}$	120			$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-40 --- +120			$^\circ\text{C}$

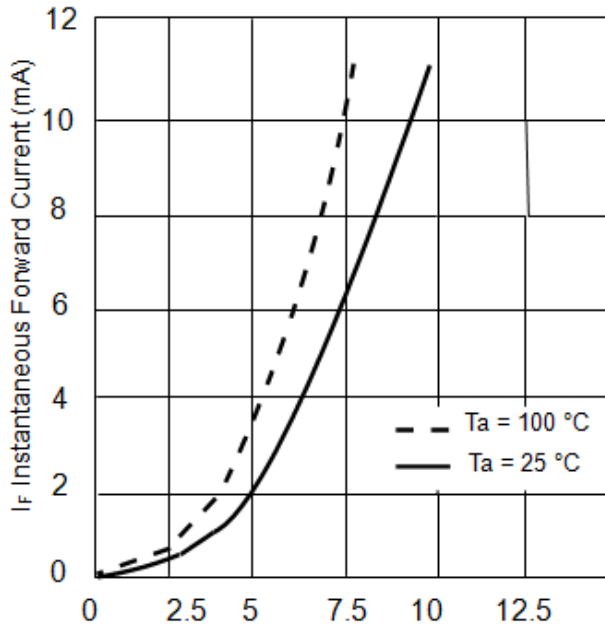
## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Parameter	Symbols	2CL03	2CL03S	2CL04	Unit
$I_F = 10\text{mA}$ Forward Voltage Drop	$V_F$	13		15	V
$V_R = V_{RRM}$ Normal Temperature Reverse Current	$I_{RM1}$	2			$\mu\text{A}$
$T_A = 100^\circ\text{C}$ $V_R = V_{RRM}$ High Temperature Reverse Current	$I_{RM2}$	5			$\mu\text{A}$
$I_F = 2\text{mA}, I_{rp} = 4\text{mA}$ Reverse Recovery Time 75% recovery	$t_{rr}$	100			nS

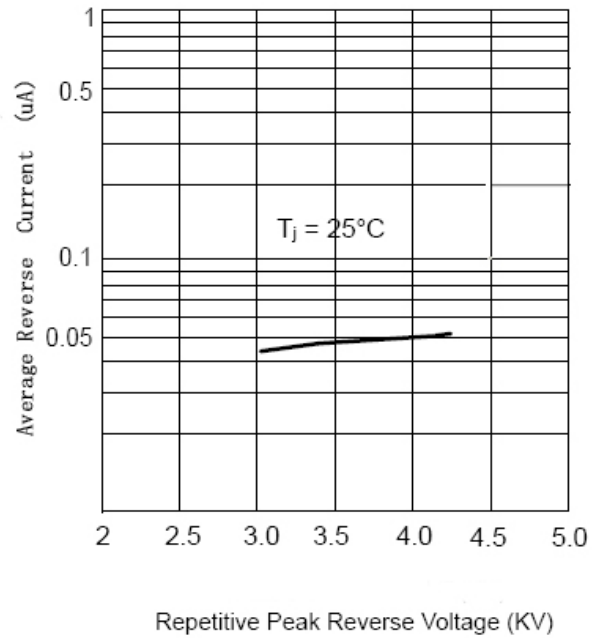
2CL  
2CL03  
Characteristics(Typical)

TYPICAL FORWARD CHARACTERISTIC

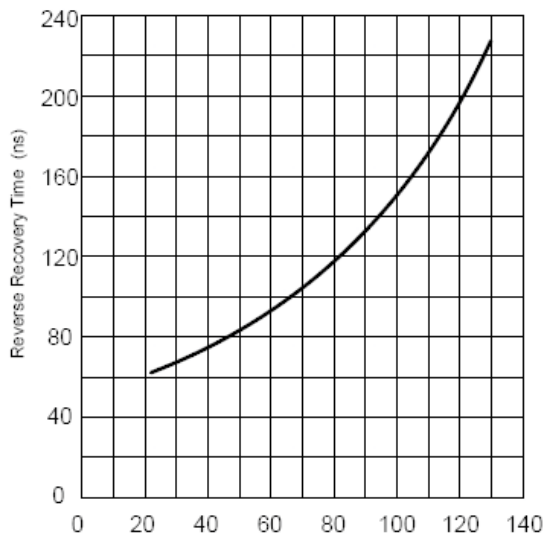


$V_F$  Instantaneous Forward Voltage (V)

REVERSE CHARACTERISTIC [VR-IR]

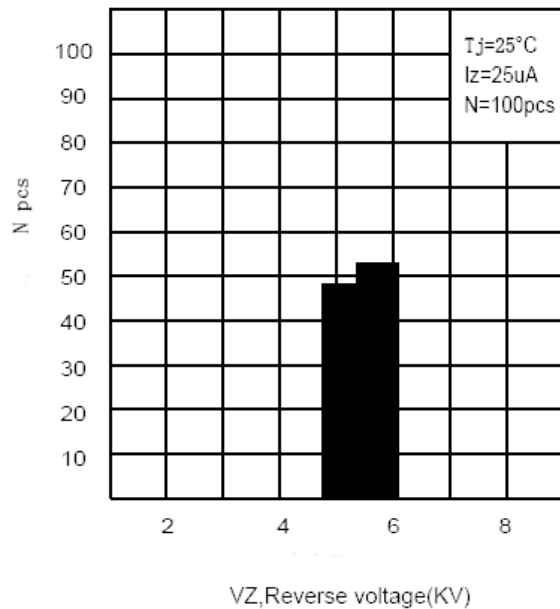


REVERSE RECOVERY TIME CHARACTERISTIC [Ta-Trr]



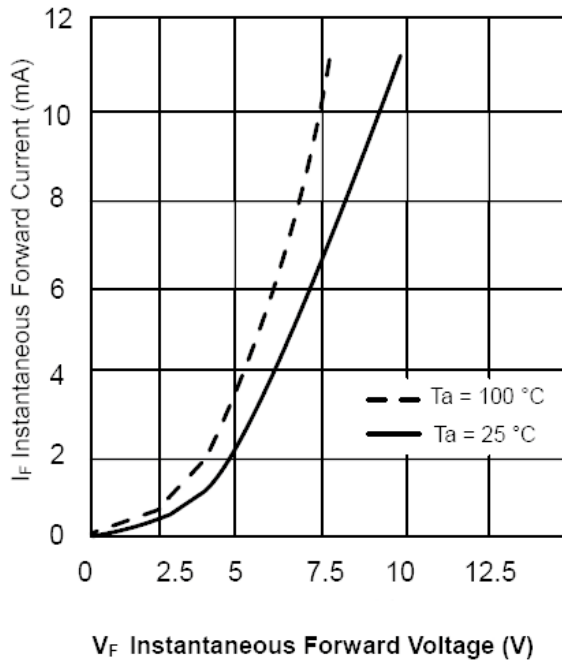
$T_{amb}$ , ambient temperature ( $^\circ\text{C}$ )

REVERSE VOLTAGE CHARACTERISTIC DISTRIBUTION

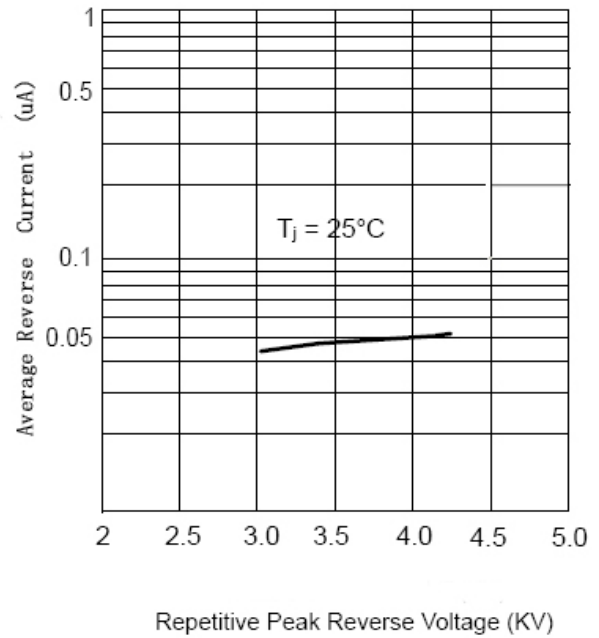


2CL  
2CL03S  
Characteristics(Typical)

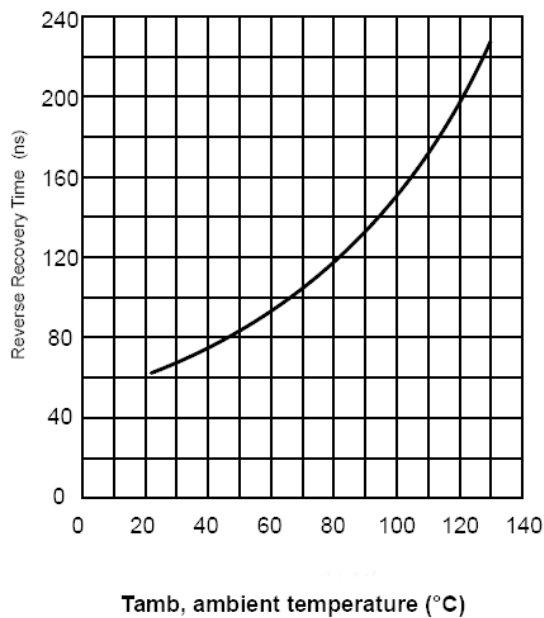
TYPICAL FORWARD CHARACTERISTIC



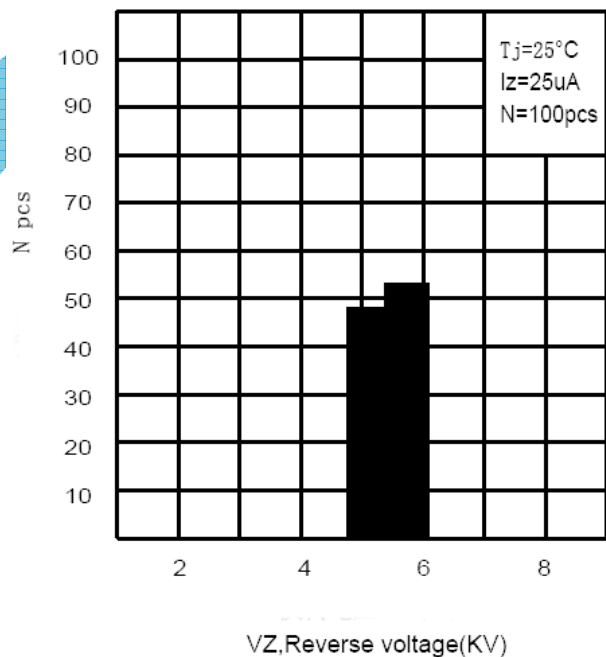
REVERSE CHARACTERISTIC [VR-IR]



REVERSE RECOVERY TIME CHARACTERISTIC [Ta-Trr]

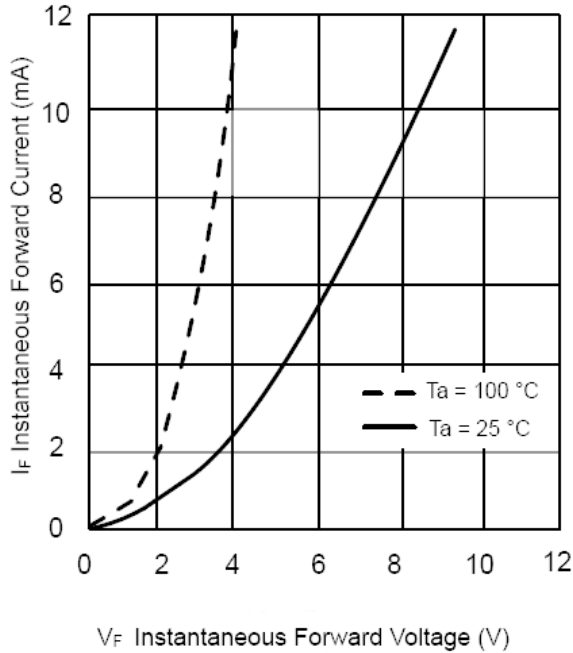


REVERSE VOLTAGE CHARACTERISTIC DISTRIBUTION

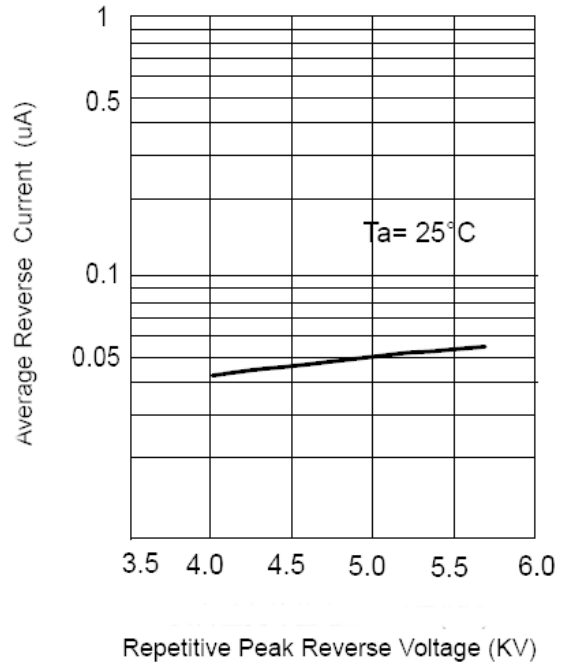


2CL  
2CL04  
Characteristics(Typical)

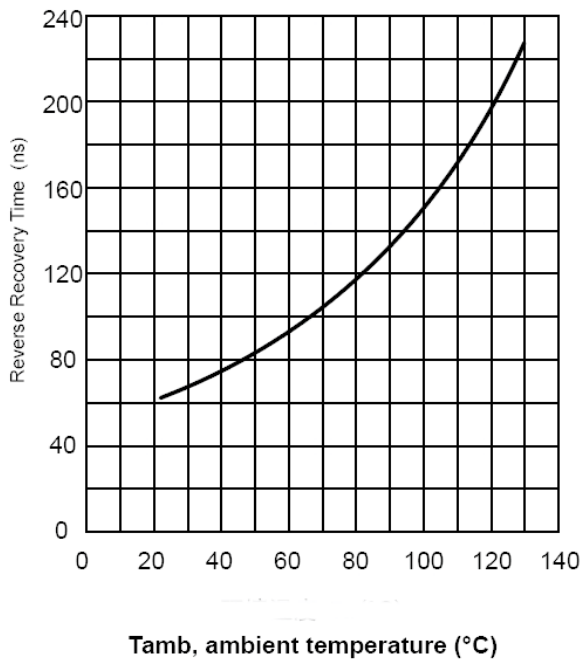
TYPICAL FORWARD CHARACTERISTIC



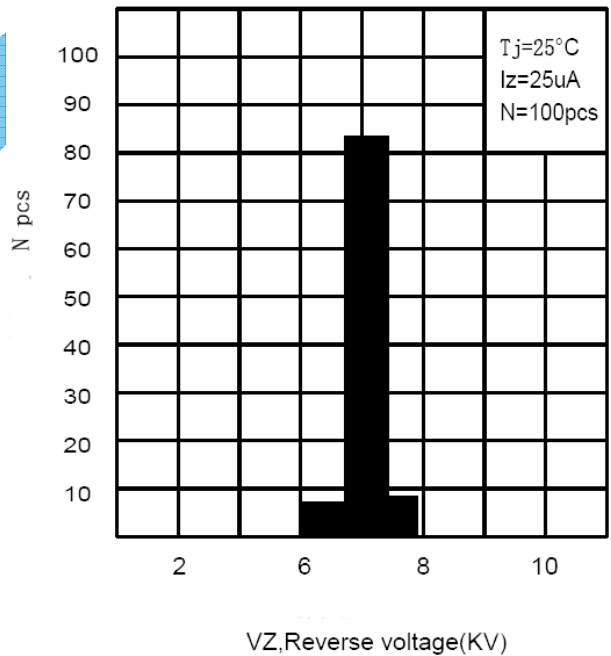
REVERSE CHARACTERISTIC [VR-IR]



REVERSE RECOVERY TIME CHARACTERISTIC [Ta-Trr]

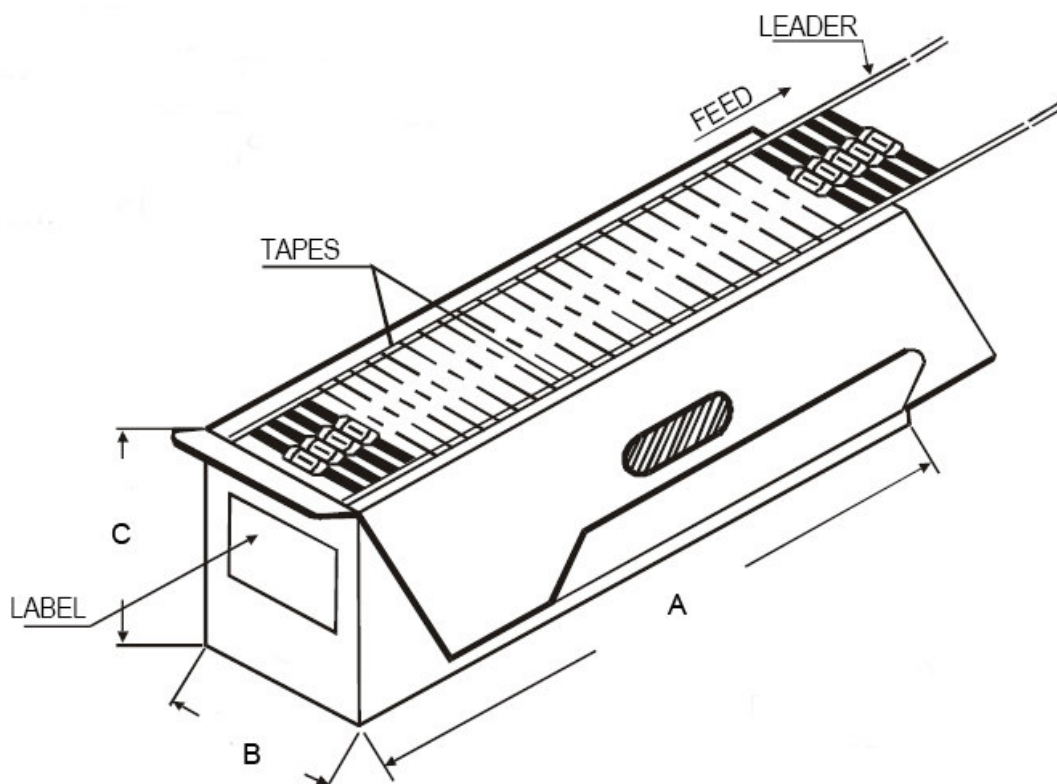


REVERSE VOLTAGE CHARACTERISTIC DISTRIBUTION



## 2CL

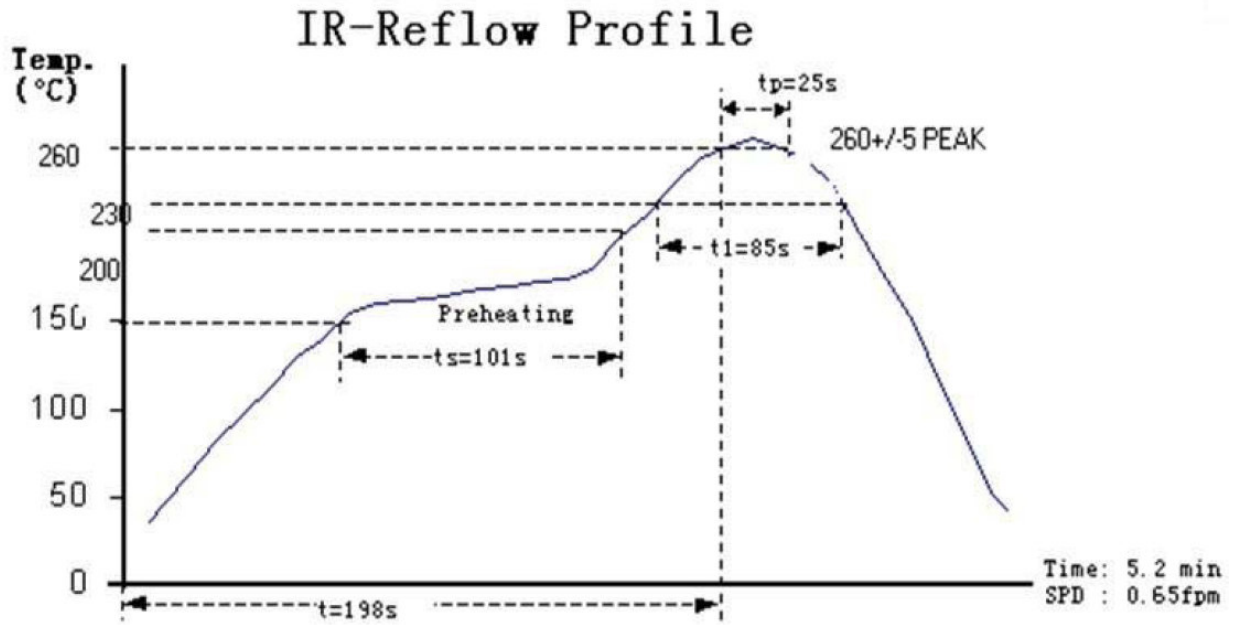
This axial-lead component's packaging requirements use in automatic testing and assembly equipment. And this standard practices for lead-tape packaging of axial-lead components meets the requirements of EIA Standard RS-296-D "Lead-taping of Components on Axial Lead Configuration for Automatic Insertion".

**Tape & Ammo Outline****Stock period**

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 0-35°C and a relative humidity 35-75%RH



# Lead Free Reflow Soldering Profile



Freltec

## 2CL

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