



K22 THRU K220

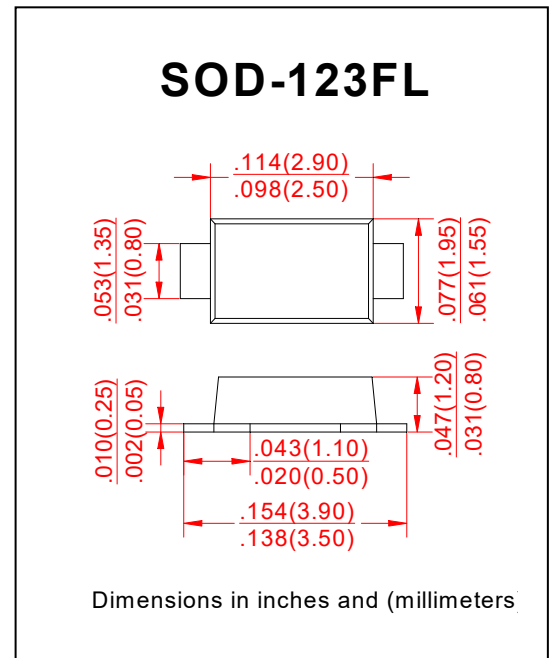
VOLTAGE RANGE
20 to 200 Volts
CURRENT
2.0 Ampere

Features

- Low profile surface mount package
- Built-in strain relief
- High switching speed
- Low voltage drop, high efficiency
- For use in low voltage high frequency inverters, Free willing, and polarity protection applications
- Guarding for over voltage protection

Mechanical Data

- Case: Transfer molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead :Solder plated, solderable per MIL-STD-750 method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.00063ounce, 0.018grams



Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

TYPE NUMBER	SYMBOL	K22	K24	K25	K26	K28	K210	K215	K220	UNIT	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V_{RMS}	14	28	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	V_{DC}	20	40	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at T_L see figure 1 $T_L = 105^\circ C$	$I_{(AV)}$	2.0								Amps	
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50								Amps	
Maximum Instantaneous Forward Voltage @ 2.0A(Note1)	V_F	0.55	0.70	0.85	0.90						Volts
Maximum DC Reverse Current at rated DC Blocking Voltage per element	$T_A = 25^\circ C$	0.5							0.05	mA	
	$T_A = 100^\circ C$	20.0				5.0		1.0			
Diode junction capacitance (Note 3)	C_J	260				150				pF	
Operating Junction Temperature (Note 2)	T_J	(-55 to +150)				(-55 to +175)				$^\circ C$	
Storage Temperature Range	T_{STG}	(-55 to +150)									$^\circ C$

Notes:

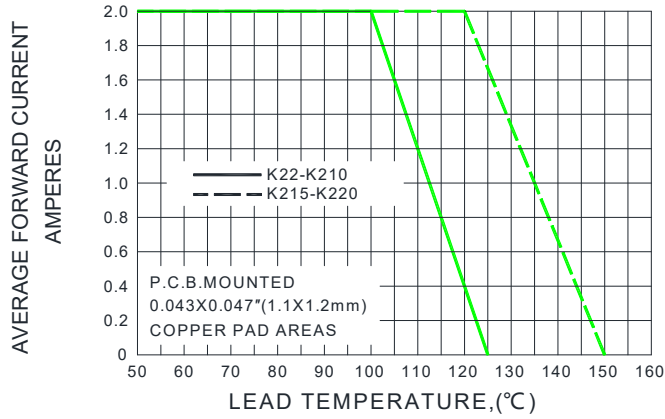
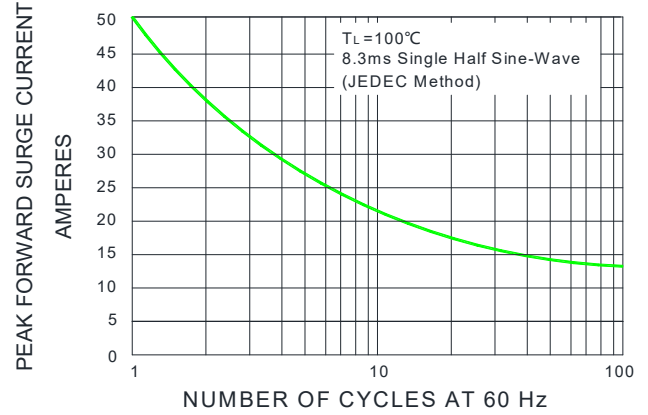
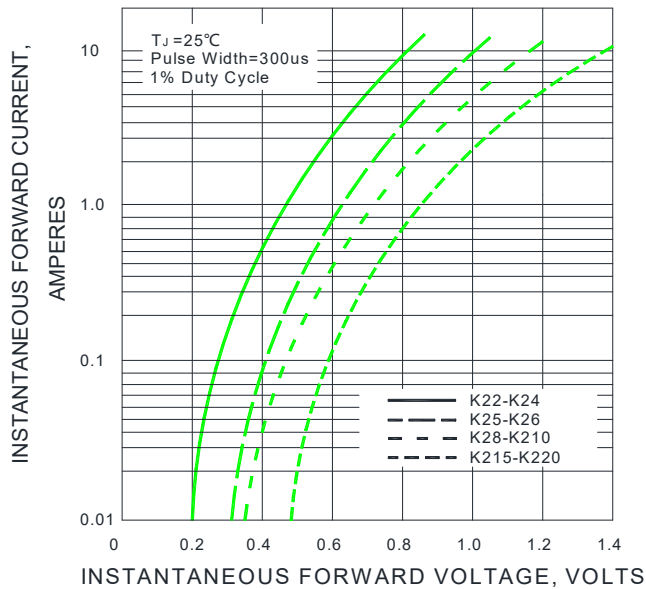
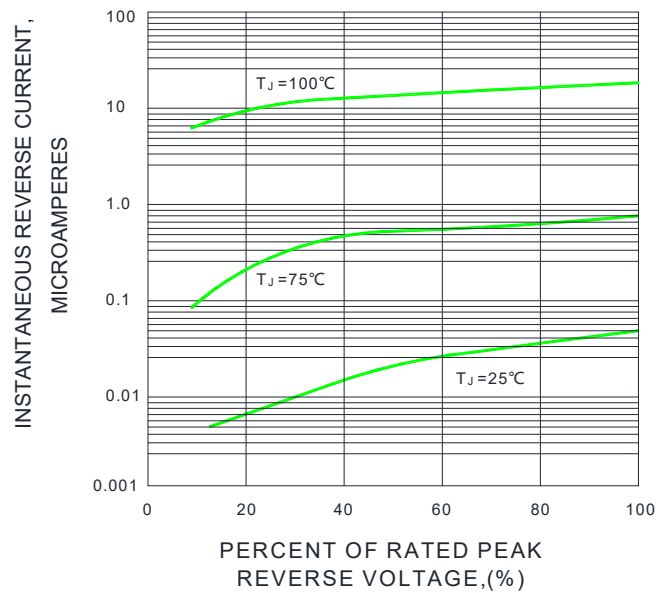
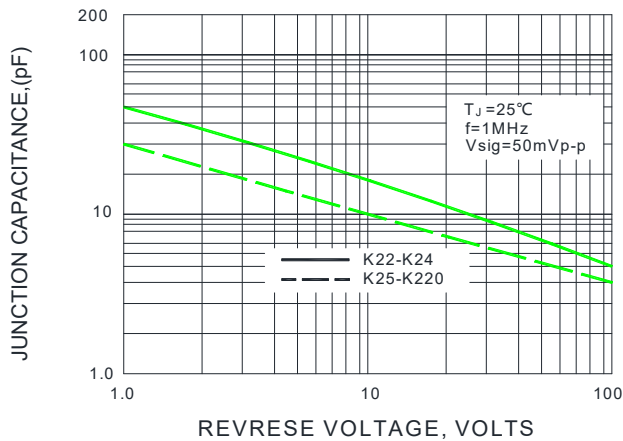
1. Pulse test:300 μ s pulse width,1% duty cycle.
2. PCB mounted with 0.043"×0.047"(1.10mm×1.20mm)copper pads.
3. f=1MHz and applied 4V DC reverse voltage.



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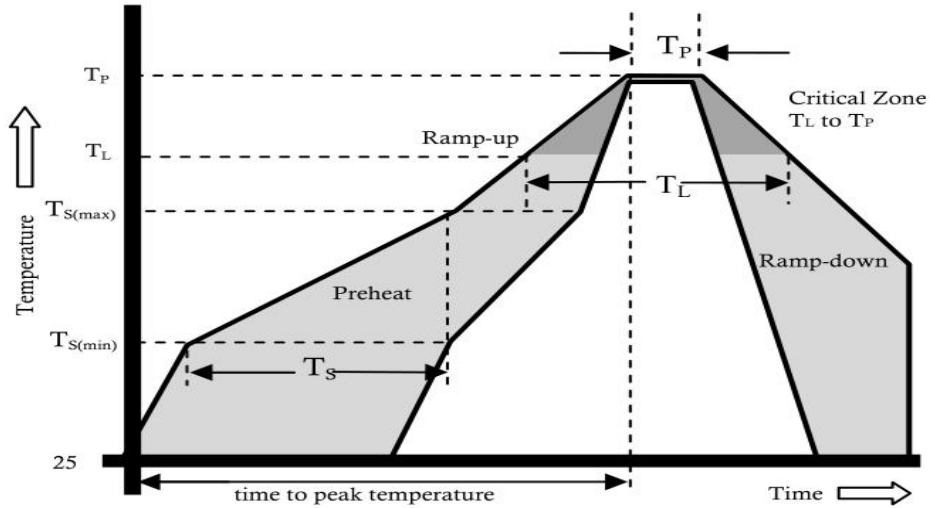
VOLTAGE RANGE**20 to 200 Volts****CURRENT****2.0 Ampere**

Ratings and Characteristic Curves (TA=25°C unless otherwise noted)

FIG.1-FORWARD CURRENT DERATING CURVE**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT****FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS****FIG.4-TYPICAL REVERSE CHARACTERISTICS****FIG.5-TYPICAL JUNCTION CAPACITANCE**



Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus 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)(Liquidus)	+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)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C