

**SCHOTTKY BARRIER SOLAR RECTIFIER**

**VOLTAGE 40 and 45 Volts CURRENT 12 Amperes**

**FEATURES**

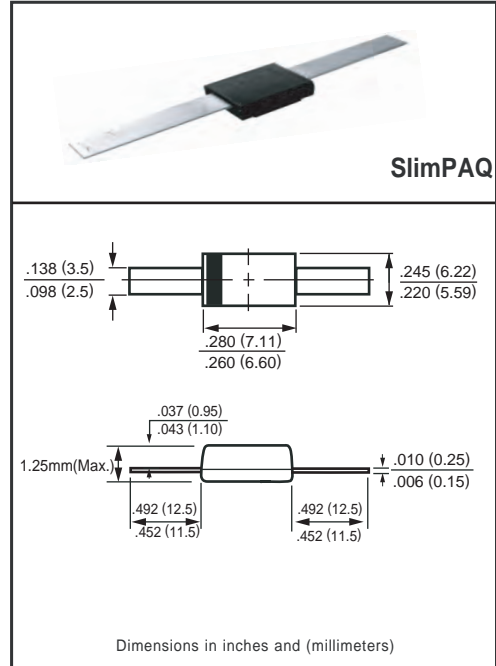
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High surge capability
- \* High reliability
- \* Ideal for solar panel PV application such as By-Pass diode

**MECHANICAL DATA**

- \* Case: Slim PAQ
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.



**MAXIMUM RATINGS** (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SPKC1240F	SPKC1245F	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	40	45	Volts
Maximum RMS Voltage	VRMS	28	31.5	Volts
Maximum DC Blocking Voltage	VDC	40	45	Volts
Maximum DC Forward Current @TL=125°C(Note 1)	Io	12		Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	300		Amps
Typical Current Square Time	I²T	373.3		A²S
Typical Thermal Resistance	RθJC	7.6		°C/W
	RθJA	15.0		
	RθJL	3.8		
Operating Temperature Range	TJ	175(Tj≤200C in Bypass Mode)		°C
Storage Temperature Range	TSTG	-55 to + 175		°C

**ELECTRICAL CHARACTERISTICS**(@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SPKC1240F	SPKC1245F	UNITS
Maximum Instantaneous Forward Voltage at 12 A DC	VF	@ TA = 25°C	.55	Volts
		@ TA = 75°C	.47	
Maximum Average Reverse Current at Rated DC Blocking Voltage	IR	@ TA = 25°C	100	uA
		@ TA = 75°C	2.5	

NOTES : 1. Heat-sink mounted 10mm max from body  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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REV: A

RATING AND CHARACTERISTICS CURVES ( SPKC1240F SPKC1245F )

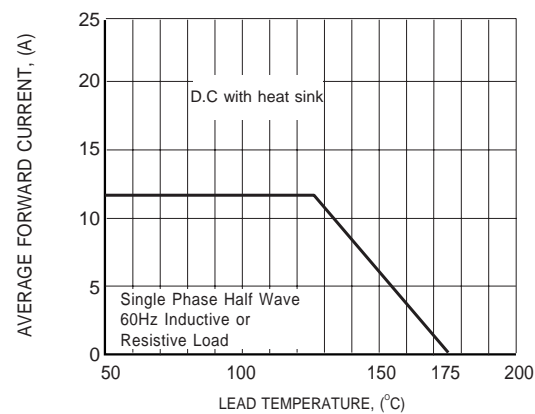


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

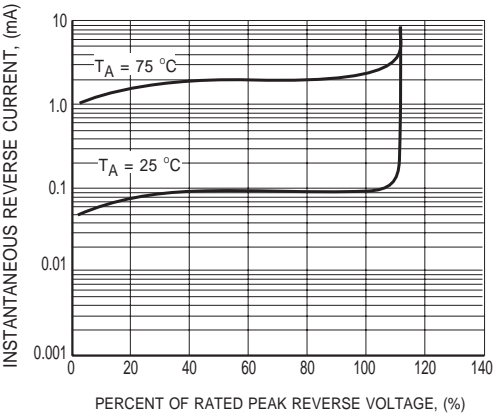


FIG.2 TYPICAL REVERSE CHARACTERISTICS

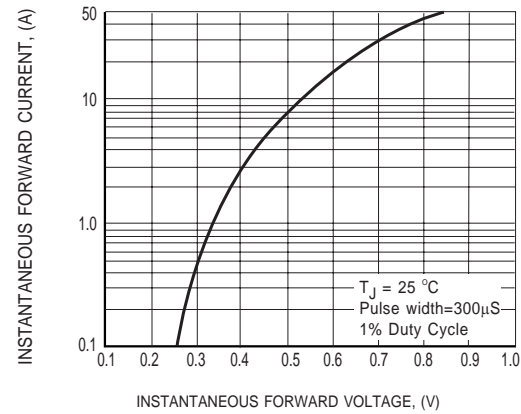


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

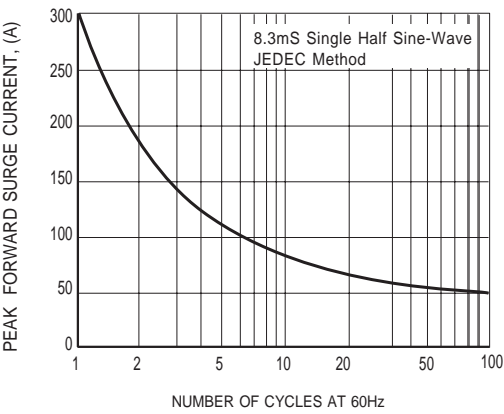
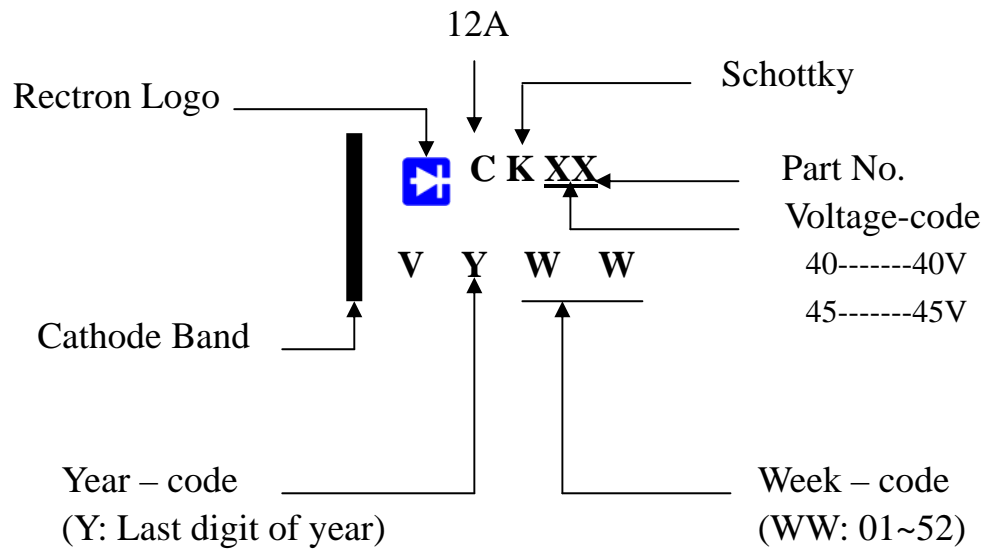


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Marking Description



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